



The MSDS format adheres to the standards and regulatory requirements of the United States and may not meet regulatory requirements in other countries.

DuPont
Material Safety Data Sheet

Page 1

"SUVA" 134a AUTO
2188FR Revised 18-APR-2007

CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Material Identification

"SUVA" is a trademark of DuPont.

Corporate MSDS Number : DU000693
CAS Number : 811-97-2
Formula : CH2FCF3
CAS Name : 1,1,1,2-TETRAFLUOROETHANE

Tradenames and Synonyms

"SUVA" 134a
HFC 134a

Company Identification

MANUFACTURER/DISTRIBUTOR
DuPont Fluoroproducts
1007 Market Street
Wilmington, DE 19898

PHONE NUMBERS

Product Information : 1-800-441-7515 (outside the U.S.
302-774-1000)
Transport Emergency : CHEMTREC 1-800-424-9300 (outside U.S.
703-527-3887)
Medical Emergency : 1-800-441-3637 (outside the U.S.
302-774-1000)

COMPOSITION/INFORMATION ON INGREDIENTS

Components

Material	CAS Number	%
ETHANE, 1,1,1,2-TETRAFLUORO- (HFC-134a)	811-97-2	100

HAZARDS IDENTIFICATION

Potential Health Effects

INHALATION

ETHANE, 1,1,1,2-TETRAFLUORO-

(HAZARDS IDENTIFICATION - Continued)

Gross overexposure may cause: Central nervous system depression with dizziness, confusion, incoordination, drowsiness or unconsciousness. Irregular heart beat with a strange sensation in the chest, "heart thumping", apprehension, lightheadedness, feeling of fainting, dizziness, weakness, sometimes progressing to loss of consciousness and death. Suffocation, if air is displaced by vapors.

SKIN CONTACT

ETHANE, 1,1,1,2-TETRAFLUORO-

Immediate effects of overexposure may include: Frostbite, if liquid or escaping vapor contacts the skin.

EYE CONTACT

ETHANE, 1,1,1,2-TETRAFLUORO-

"Frostbite-like" effects may occur if the liquid or escaping vapors contact the eyes.

ADDITIONAL HEALTH EFFECTS

ETHANE, 1,1,1,2-TETRAFLUORO-

Increased susceptibility to the effects of this material may be observed in persons with pre-existing disease of the: central nervous system, cardiovascular system.

Carcinogenicity Information

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

FIRST AID MEASURES

First Aid

INHALATION

If high concentrations are inhaled, immediately remove to fresh air. Keep person calm. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

SKIN CONTACT

In case of contact, immediately flush skin with plenty of water for at least 15 minutes, while removing contaminated clothing and shoes. Call a physician. Wash contaminated clothing before reuse. Treat for frostbite if necessary by gently warming affected area.

EYE CONTACT

(FIRST AID MEASURES - Continued)

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

INGESTION

Ingestion is not considered a potential route of exposure.

Notes to Physicians

Because of possible disturbances of cardiac rhythm, catecholamine drugs, such as epinephrine, should only be used with special caution in situations of emergency life support.

FIRE FIGHTING MEASURES

Flammable Properties

Flash Point : No flash point

Flammable Limits in Air, % by Volume:
LEL : None per ASTM E681
UEL : None per ASTM E681
Autoignition : >743 C(>1369 F)

Fire and Explosion Hazards:

Cylinders may rupture under fire conditions. Decomposition may occur.

Contact of welding or soldering torch flame with high concentrations of refrigerant can result in visible changes in the size and color of torch flames. This flame effect will only occur in concentrations of product well above the recommended exposure limit, therefore stop all work and ventilate to disperse refrigerant vapors from the work area before using any open flames.

HFC-134a is not flammable in air at temperatures up to 100 deg. C (212 deg. F) at atmospheric pressure. However, mixtures of HFC-134a with high concentrations of air at elevated pressure and/or temperature can become combustible in the presence of an ignition source. HFC-134a can also become combustible in an oxygen enriched environment (oxygen concentrations greater than that in air). Whether a mixture containing HFC-134a and air, or HFC-134a in an oxygen enriched atmosphere become combustible depends on the inter-relationship of 1) the temperature 2) the pressure, and 3) the proportion of oxygen in the mixture. In general, HFC-134a should not be allowed to exist with air above atmospheric pressure or at high temperatures; or in an oxygen enriched environment. For example HFC-134a should NOT be mixed with air under pressure for leak testing or other purposes.

(FIRE FIGHTING MEASURES - Continued)

Experimental data have also been reported which indicate combustibility of HFC-134a in the presence of certain concentrations of chlorine.

Extinguishing Media

Use media appropriate for surrounding material.

Fire Fighting Instructions

Cool tank/container with water spray. Self-contained breathing apparatus (SCBA) may be required if cylinders rupture or release under fire conditions.

Water runoff should be contained and neutralized prior to release.

ACCIDENTAL RELEASE MEASURES

Safeguards (Personnel)

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Ventilate area, especially low or enclosed places where heavy vapors might collect. Remove open flames. Use self-contained breathing apparatus (SCBA) if large spill or leak occurs.

HANDLING AND STORAGE

Handling (Personnel)

Use with sufficient ventilation to keep employee exposure below recommended limits.

Handling (Physical Aspects)

HFC-134a should not be mixed with air for leak testing or used for any other purpose above atmospheric pressure. See Flammable Properties section. Contact with chlorine or other strong oxidizing agents should also be avoided.

Storage

Store in a clean, dry place. Do not heat above 52 C (126 F).

(HANDLING AND STORAGE - Continued)

Valve protection caps and valve outlet threaded plugs must remain in place unless container is secured with valve outlet piped to use point. Do NOT drag, slide or roll cylinders. Use a suitable hand truck for cylinder movement. Never attempt to lift cylinder by its cap. Use a pressure reducing regulator when connecting cylinder to lower pressure (>3000 psig) piping or systems. Do NOT heat cylinder. Use a check valve or trap in the discharge line to prevent hazardous back flow into the cylinder.

Cylinders should be stored upright and firmly secured to prevent falling or being knocked over. Separate full containers from empty containers. Storage area temperatures should not exceed 125 deg F (52 deg C) and should be free of combustible materials. Avoid area where salt or other corrosive materials are present. Avoid excessive inventory and storage time. Use a first-in first-out system. Keep accurate inventory records.

EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

Normal ventilation for standard manufacturing procedures is generally adequate. Local exhaust should be used when large amounts are released. Mechanical ventilation should be used in low or enclosed places. Refrigerant concentration monitors may be necessary to determine vapor concentrations in work areas prior to use of torches or other open flames, or if employees are entering enclosed areas.

Personal Protective Equipment

Impervious gloves and chemical splash goggles should be used when handling liquid.

Under normal manufacturing conditions, no respiratory protection is required when using this product.

Self-contained breathing apparatus (SCBA) is required if a large release occurs.

Exposure Guidelines

(STABILITY AND REACTIVITY - Continued)

Polymerization

Polymerization will not occur.

TOXICOLOGICAL INFORMATION

Animal Data

ETHANE, 1,1,1,2-TETRAFLUORO-

EYE:

A short duration spray of vapor produced very slight eye irritation.

SKIN:

Animal testing indicates this material is a slight skin irritant, but not a skin sensitizer.

INHALATION:

4 hour, ALC, rat: 567,000 ppm.

Single exposure caused: Cardiac sensitization, a potentially fatal disturbance of heart rhythm associated with a heightened sensitivity to the action of epinephrine.

Lowest-Observed-Adverse-Effect-Level for cardiac sensitization: 75,000 ppm. Single exposure caused: Lethargy. Narcosis. Increased respiratory rates. These effects were temporary. Single exposure to near lethal doses caused: Pulmonary edema. Repeated exposure caused: Increased adrenals, liver, spleen weight. Decreased uterine, prostate weight. Repeated dosing of higher concentrations caused: the following temporary effects - Tremors. Incoordination.

CARCINOGENIC, DEVELOPMENTAL, REPRODUCTIVE, MUTAGENIC EFFECTS:

In a two-year inhalation study, HFC-134a, at a concentration of 50,000 ppm, produced an increase in late-occurring benign testicular tumors, testicular hyperplasia and testicular weight. The no-effect-level for this study was 10,000 ppm. Animal data show slight fetotoxicity but only at exposure levels producing other toxic effects in the adult animal. Reproductive data on male mice show: No change in reproductive performance. Tests have shown that this material does not cause genetic damage in bacterial or mammalian cell cultures, or in animals. In animal testing, this material has not caused permanent genetic damage in reproductive cells of mammals (has not produced heritable genetic damage).

ECOLOGICAL INFORMATION

Ecotoxicological Information

AQUATIC TOXICITY:

48 hour EC50 - Daphnia magna: 980 mg/L.

96 hour LC50 - Rainbow trout: 450 mg/L
-----DISPOSAL CONSIDERATIONS

Waste Disposal

Contaminated HFC-134a can be recovered by distillation or removed to a permitted waste disposal facility. Comply with Federal, State, and local regulations.

-----TRANSPORTATION INFORMATION

Shipping Information

DOT/IMO
Proper Shipping Name : 1,1,1,2-TETRAFLUOROETHANE
Hazard Class : 2.2
UN No. : 3159
DOT/IMO Label : NONFLAMMABLE GAS

Shipping Containers

Tank Cars.
Tank Trucks.
Ton Tanks.
Cylinders.

-----REGULATORY INFORMATION

U.S. Federal Regulations

TSCA Inventory Status : Reported/Included.

TITLE III HAZARD CLASSIFICATIONS SECTIONS 311, 312

Acute : Yes
Chronic : Yes
Fire : No
Reactivity : No
Pressure : Yes

HAZARDOUS CHEMICAL LISTS

SARA Extremely Hazardous Substance: No
CERCLA Hazardous Substance : No
SARA Toxic Chemical : No

OTHER INFORMATION

NFPA, NPCA-HMIS

NPCA-HMIS Rating
Health : 1
Flammability : 0
Reactivity : 1

Personal Protection rating to be supplied by user depending on use conditions.

Additional Information

MEDICAL USE: CAUTION: Do not use in medical applications involving permanent implantation in the human body. For other medical applications see DuPont CAUTION Bulletin No. H-50102.

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

Responsibility for MSDS : MSDS Coordinator
> : DuPont Fluoroproducts
Address : Wilmington, DE 19898
Telephone : (800) 441-7515

Indicates updated section.

This information is based upon technical information believed to be reliable. It is subject to revision as additional knowledge and experience is gained.

End of MSDS



HAZARDOUS MATERIALS INVENTORY FORM

FORM 3

ADD DELETE REVISED 1

Page 1 of 1 2

FACILITY ID# 30035 38 BUSINESS NAME Battery Systems Inc 3

I. FACILITY INFORMATION

CHEMICAL LOCATION 12400 Industry St, Garden Grove Ca 92841 4

CONFIDENTIAL LOCATION EPCRA Yes No 5 MAP # 1 6 GRID # D-3 7

II. CHEMICAL INFORMATION

CHEMICAL NAME Highly Refined Mineral Oil WASTE Yes 8 TRADE SECRET Yes No 11
If EPCRA see instructions

COMMON NAME Engine Oil 9 An EHS Chemical Yes No 12
*If EHS is "Yes", all amounts must be LBS

CAS # 10 FIRE CODE HAZARD CLASSES (supplied by GGFD) 13

TYPE (Check one item only) a. PURE b. MIXTURE c. WASTE 14 RADIOACTIVE Yes No 15 CURIES 16

PHYSICAL STATE (Check one item only) a. SOLID b. LIQUID c. GAS 17 FED HAZARD CATEGORIES a. FIRE b. REACTIVE c. PRESSURE RELEASE 18
 d. ACUTE HEALTH e. CHRONIC HEALTH

AVERAGE DAILY AMOUNT 800 19 MAXIMUM DAILY AMOUNT 900 20 ANNUAL WASTE AMOUNT 0 21 STATE WASTE CODE 0 22

UNITS a. GALLONS b. CUBIC FEET 23 DAYS ON SITE 365 24 LARGEST CONTAINER 32 oz 25
 c. POUNDS d. TONS
*If EHS, amount must be in pounds.

STORAGE CONTAINER (Check all that apply) a. ABOVEGROUND TANK e. PLASTIC DRUM i. VAT m. CYLINDER q. TANK WAGON 26
 b. UNDERGROUND TANK f. NONMETALLIC DRUM l. FIBER DRUM n. GLASS CONTAINER r. RAIL CAR
 c. TANK INSIDE BLDG g. METAL CONTAINER j. BAG(S) o. PLASTIC CONTAINER s. TOTE BIN
 d. STEEL DRUM h. CARBOY k. BOX(S) p. IN MACH OR EQUIP t. OTHER

STORAGE PRESSURE a. AMBIENT b. ABOVE AMBIENT c. BELOW AMBIENT 27

STORAGE TEMPERATURE a. AMBIENT b. ABOVE AMBIENT c. BELOW AMBIENT d. CRYOGENIC 28

%WT	HAZARDOUS COMPONENT (For mixture or waste only)	EHS	CAS #
1 80-100 29	Highly Refined Mineral Oil 30	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 31	Mixture 32
2 29		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 31	32
3 29		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 31	32
4 29		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 31	32
5 29		<input type="checkbox"/> Yes <input type="checkbox"/> No 31	32

If more hazardous components are present at greater than 1% by weight if non-carcinogenic, or 0.1% by weight if carcinogenic, attach additional sheets of paper capturing the required information.

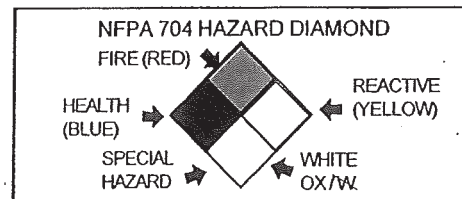
PLACARDING INFORMATION

UNDOT # Not Regulated 33
Refer to shipping papers or MSDS

DOT HAZARD CLASS ORM-D 34
Refer to shipping papers or MSDS

EPCRA YES NO 35

X _____ 36
If EPCRA, Please Sign Here



MAKE AS MANY COPIES OF CHEMICAL INVENTORY FORM AS NEEDED

Material Safety Data Sheet

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

Chevron Supreme Motor Oil (GF-4)

Product Use: Engine Oil

Product Number(s): CPS220013, CPS220135, CPS220155

Synonyms: Chevron Supreme Motor Oil SAE 10W-30 (GF-4), Chevron Supreme Motor Oil SAE 5W-20, Chevron Supreme Motor Oil SAE 5W-30 (GF-4)

Company Identification

Chevron Lubricants Canada Inc.

Lubricants Chevron Canada

6975-A Pacific Circle

Mississauga, ONT L5T 2H3

Canada

www.chevronlubricants.com

Transportation Emergency Response

CHEMTREC: (800) 424-9300 or (703) 527-3887

Health Emergency

Chevron Emergency Information Center: Located in the USA. International collect calls accepted. (800) 231-0623 or (510) 231-0623

Product Information

email : lubemsds@Chevron.com

Product Information: (800) LUBE TEK

MSDS Requests: (800) 414-6737

SECTION 2 COMPOSITION/ INFORMATION ON INGREDIENTS

COMPONENTS	CAS NUMBER	AMOUNT
Highly refined mineral oil (C15 - C50)	Mixture	80 - 100 %weight

Information on ingredients that are considered Controlled Products and/or that appear on the WHMIS Ingredient Disclosure List (IDL) is provided as required by the Canadian Hazardous Products Act (HPA, Sections 13 and 14). Ingredients considered hazardous under the OSHA Hazard Communication Standard, 29 CFR 1910.1200, are also listed. See Section 15 for additional regulatory information.

SECTION 3 HAZARDS IDENTIFICATION

IMMEDIATE HEALTH EFFECTS

Eye: Not expected to cause prolonged or significant eye irritation.

Skin: Contact with the skin is not expected to cause prolonged or significant irritation. Not expected to be harmful to internal organs if absorbed through the skin.

Ingestion: Not expected to be harmful if swallowed.

Inhalation: Not expected to be harmful if inhaled. Contains a petroleum-based mineral oil. May cause respiratory irritation or other pulmonary effects following prolonged or repeated inhalation of oil mist at airborne levels above the recommended mineral oil mist exposure limit. Symptoms of respiratory irritation may include coughing and difficulty breathing.

SECTION 4 FIRST AID MEASURES

Eye: No specific first aid measures are required. As a precaution, remove contact lenses, if worn, and flush eyes with water.

Skin: No specific first aid measures are required. As a precaution, remove clothing and shoes if contaminated. To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.

Ingestion: No specific first aid measures are required. Do not induce vomiting. As a precaution, get medical advice.

Inhalation: No specific first aid measures are required. If exposed to excessive levels of material in the air, move the exposed person to fresh air. Get medical attention if coughing or respiratory discomfort occurs.

SECTION 5 FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES:

Flashpoint: (Cleveland Open Cup) 200 °C (392 °F) (Min)

Autoignition: No Data Available

Flammability (Explosive) Limits (% by volume in air): Lower: Not Applicable Upper: Not Applicable

EXTINGUISHING MEDIA: Use water fog, foam, dry chemical or carbon dioxide (CO₂) to extinguish flames.

PROTECTION OF FIRE FIGHTERS:

Fire Fighting Instructions: This material will burn although it is not easily ignited. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.

Combustion Products: Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Protective Measures: Eliminate all sources of ignition in vicinity of spilled material.

Spill Management: Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.

Reporting: Report spills to local authorities as appropriate or required.

SECTION 7 HANDLING AND STORAGE

Precautionary Measures: Keep out of the reach of children.

General Handling Information: Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.

Static Hazard: Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating and accumulating an electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures. For more information, refer to OSHA Standard 29 CFR 1910.106, 'Flammable and Combustible Liquids', National Fire Protection Association (NFPA) 77, 'Recommended Practice on Static Electricity', and/or the American Petroleum Institute (API) Recommended Practice 2003, 'Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents'.

Container Warnings: Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONSIDERATIONS:

Consider the potential hazards of this material (see Section 3), applicable exposure limits, job activities, and other

substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

ENGINEERING CONTROLS:

Use in a well-ventilated area.

PERSONAL PROTECTIVE EQUIPMENT

Eye/Face Protection: No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields as a good safety practice.

Skin Protection: No special protective clothing is normally required. Where splashing is possible, select protective clothing depending on operations conducted, physical requirements and other substances in the workplace. Suggested materials for protective gloves include: 4H (PE/EVAL), Nitrile Rubber, Silver Shield, Viton.

Respiratory Protection: No respiratory protection is normally required.

If user operations generate an oil mist, determine if airborne concentrations are below the occupational exposure limit for mineral oil mist. If not, wear an approved respirator that provides adequate protection from the measured concentrations of this material. For air-purifying respirators use a particulate cartridge.

Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.

Occupational Exposure Limits:

Component	Country/ Agency	TWA	STEL	Ceiling	Notation
Highly refined mineral oil (C15 - C50)	ACGIH	5 mg/m3	10 mg/m3	--	--

NOTE ON OCCUPATIONAL EXPOSURE LIMITS: Consult local authorities for acceptable provincial values in Canada. Consult the Canadian Standards Association Standard 94.4-2002 Selection, Use and Care of Respirators.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Attention: the data below are typical values and do not constitute a specification.

Color: Amber

Physical State: Liquid

Odor: Petroleum odor

pH: Not Applicable

Vapor Pressure: <0.01 mmHg @ 100 °C (212 °F)

Vapor Density (Air = 1): >1

Boiling Point: >315°C (599°F)

Solubility: Soluble in hydrocarbons; insoluble in water

Freezing Point: Not Applicable

Specific Gravity: 0.86 @ 15.6°C (60.1°F) / 15.6°C (60.1°F)

Viscosity: 7.6 cSt @ 100°C (212°F) (Min)

Odor Threshold: No Data Available

Coefficient of Water/Oil Distribution: No Data Available

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Incompatibility With Other Materials: May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

Hazardous Decomposition Products: None known (None expected)

Hazardous Polymerization: Hazardous polymerization will not occur.

Sensitivity to Mechanical Impact: No.

SECTION 11 TOXICOLOGICAL INFORMATION

IMMEDIATE HEALTH EFFECTS

Eye Irritation: The eye irritation hazard is based on evaluation of data for similar materials or product components.

Skin Irritation: The skin irritation hazard is based on evaluation of data for similar materials or product components.

Skin Sensitization: No product toxicology data available.

Acute Dermal Toxicity: LD50: >5g/kg (rabbit). The acute dermal toxicity hazard is based on evaluation of data for similar materials or product components.

Acute Oral Toxicity: LD50: >5 g/kg (rat) The acute oral toxicity hazard is based on evaluation of data for similar materials or product components.

Acute Inhalation Toxicity: The acute inhalation toxicity hazard is based on evaluation of data for similar materials or product components. For additional information on the acute toxicity of the components, call the technical information center.

ADDITIONAL TOXICOLOGY INFORMATION:

This product contains petroleum base oils which may be refined by various processes including severe solvent extraction, severe hydrocracking, or severe hydrotreating. None of the oils requires a cancer warning under the OSHA Hazard Communication Standard (29 CFR 1910.1200). These oils have not been listed in the National Toxicology Program (NTP) Annual Report nor have they been classified by the International Agency for Research on Cancer (IARC) as: carcinogenic to humans (Group 1), probably carcinogenic to humans (Group 2A), or possibly carcinogenic to humans (Group 2B). These oils have not been classified by the American Conference of Governmental Industrial Hygienists (ACGIH) as: confirmed human carcinogen (A1), suspected human carcinogen (A2), or confirmed animal carcinogen with unknown relevance to humans (A3).

During use in engines, contamination of oil with low levels of cancer-causing combustion products occurs. Used motor oils have been shown to cause skin cancer in mice following repeated application and continuous exposure. Brief or intermittent skin contact with used motor oil is not expected to have serious effects in humans if the oil is thoroughly removed by washing with soap and water.

SECTION 12 ECOLOGICAL INFORMATION

ECOTOXICITY

This material is not expected to be harmful to aquatic organisms.

ENVIRONMENTAL FATE

This material is not expected to be readily biodegradable.

SECTION 13 DISPOSAL CONSIDERATIONS

Use material for its intended purpose or recycle if possible. Oil collection services are available for used oil recycling or disposal. Place contaminated materials in containers and dispose of in a manner consistent with applicable regulations. Contact your sales representative or local environmental or health authorities for approved disposal or recycling methods. (See B.C. Reg. GY/92 Waste Management Act; R.R.O. 1990, Reg. 347 General-Waste Management; C.C.S.M.c. W40 The Waste Reduction and Prevention Act; N.S. Reg. 51/95 and N.S. Reg. 179/96 for examples of Provincial legislation.)

SECTION 14 TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

TC Shipping Description: NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORTATION UNDER TDG REGULATIONS

IMO/IMDG Shipping Description: PETROLEUM LUBRICATING OIL; NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER THE IMDG CODE

ICAO/IATA Shipping Description: PETROLEUM LUBRICATING OIL; NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER ICAO

DOT Shipping Description: PETROLEUM LUBRICATING OIL, NOT REGULATED AS A HAZARDOUS MATERIAL FOR TRANSPORTATION UNDER 49 CFR

Additional Information: NOT HAZARDOUS BY U.S. DOT. ADR/RID HAZARD CLASS NOT APPLICABLE.

SECTION 15 REGULATORY INFORMATION

REGULATORY LISTS SEARCHED:

01-1=IARC Group 1
01-2A=IARC Group 2A
01-2B=IARC Group 2B
35=WHMIS IDL

No components of this material were found on the regulatory lists above.

CHEMICAL INVENTORIES:

All components comply with the following chemical inventory requirements: EINECS (European Union), IECSC (China), KECI (Korea), PICCS (Philippines), TSCA (United States).

One or more components has been notified but may not be listed in the following chemical inventories: DSL (Canada). Secondary notification by the importer may be required.

One or more components does not comply with the following chemical inventory requirements: AICS (Australia), ENCS (Japan).

WHMIS CLASSIFICATION:

This product is not considered a controlled product according to the criteria of the Canadian Controlled Products Regulations.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations. (See Hazardous Products Act (HPA), R.S.C. 1985, c.H-3,s.2).

MSDS PREPARATION:

This Material Safety Data Sheet has been prepared by the Toxicology and Health Risk Assessment Unit, ERTC, P.O. Box 1627, Richmond, CA 94804, (888)676-6183.

Revision Date: September 08, 2006

SECTION 16 OTHER INFORMATION

HMIS RATINGS: Health: 1 Flammability: 1 Reactivity: 0

LABEL RECOMMENDATION:

Label Category : ENGINE OIL 1 - ENG1

REVISION STATEMENT: This is a new Material Safety Data Sheet.

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV - Threshold Limit Value	TWA - Time Weighted Average
STEL - Short-term Exposure Limit	PEL - Permissible Exposure Limit
	CAS - Chemical Abstract Service Number

ACGIH - American Conference of Government Industrial Hygienists	IMO/IMDG - International Maritime Dangerous Goods Code
API - American Petroleum Institute	MSDS - Material Safety Data Sheet
CVX - Chevron	NFPA - National Fire Protection Association (USA)
DOT - Department of Transportation (USA)	NTP - National Toxicology Program (USA)
IARC - International Agency for Research on Cancer	OSHA - Occupational Safety and Health Administration

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.



HAZARDOUS MATERIALS INVENTORY FORM

FORM 3

ADD DELETE REVISED 1

Page 1 of 1 2

FACILITY ID# 30035 38 BUSINESS NAME Battery Systems Inc 3

I. FACILITY INFORMATION

CHEMICAL LOCATION 12400 Industry St, Garden Grove Ca 92841 4

CONFIDENTIAL LOCATION EPCRA Yes No 5 MAP # 1 6 GRID # D-3 7

II. CHEMICAL INFORMATION

CHEMICAL NAME Highly Refined Mineral Oil WASTE Yes 8 TRADE SECRET Yes No 11
If EPCRA see instructions

COMMON NAME SAE 15w -40 Motor Oil 9 An EHS Chemical Yes No 12
*If EHS is "Yes", all amounts must be LBS

CAS # 10 FIRE CODE HAZARD CLASSES (supplied by GGFD) 13

TYPE (Check one item only) a. PURE b. MIXTURE c. WASTE 14 RADIOACTIVE Yes No 15 CURIES 16

PHYSICAL STATE (Check one item only) a. SOLID b. LIQUID c. GAS 17 FED HAZARD CATEGORIES a. FIRE b. REACTIVE c. PRESSURE RELEASE 18
 d. ACUTE HEALTH e. CHRONIC HEALTH

AVERAGE DAILY AMOUNT 350 19 MAXIMUM DAILY AMOUNT 522 20 ANNUAL WASTE AMOUNT 0 21 STATE WASTE CODE 0 22

UNITS a. GALLONS b. CUBIC FEET 23 DAYS ON SITE 365 24 LARGEST CONTAINER 1 gal 25
 c. POUNDS d. TONS
*If EHS, amount must be in pounds.

STORAGE CONTAINER (Check all that apply) a. ABOVEGROUND TANK e. PLASTIC DRUM i. VAT m. CYLINDER q. TANK WAGON 26
 b. UNDERGROUND TANK f. NONMETALLIC DRUM l. FIBER DRUM n. GLASS CONTAINER r. RAIL CAR
 c. TANK INSIDE BLDG g. METAL CONTAINER j. BAG(S) o. PLASTIC CONTAINER s. TOTE BIN
 d. STEEL DRUM h. CARBOY k. BOX(S) p. IN MACH OR EQUIP t. OTHER _____

STORAGE PRESSURE a. AMBIENT b. ABOVE AMBIENT c. BELOW AMBIENT 27

STORAGE TEMPERATURE a. AMBIENT b. ABOVE AMBIENT c. BELOW AMBIENT d. CRYOGENIC 28

%WT	HAZARDOUS COMPONENT (For mixture or waste only)	EHS	CAS #
1 80-100 29	Highly Refined Mineral Oil 30	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 31	Mixture 32
2 1-2 29	Zinc Alkyl Dithiophosphate 30	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 31	68649-42-3 32
3 29	30	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 31	32
4 29	30	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 31	32
5 29	30	<input type="checkbox"/> Yes <input type="checkbox"/> No 31	32

If more hazardous components are present at greater than 1% by weight if non-carcinogenic, or 0.1% by weight if carcinogenic, attach additional sheets of paper capturing the required information.

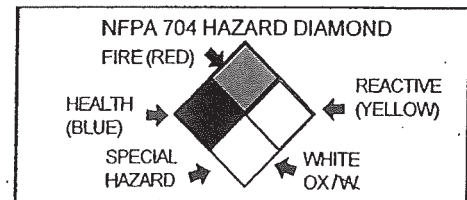
PLACARDING INFORMATION

UNDOT # Not Regulated 33
Refer to shipping papers or MSDS

DOT HAZARD CLASS ORM-D 34
Refer to shipping papers or MSDS

EPCRA YES NO 35

X _____ 36
If EPCRA, Please Sign Here



MAKE AS MANY COPIES OF CHEMICAL INVENTORY FORM AS NEEDED

Material Safety Data Sheet

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

Delo® 400 LE SAE 15W-40

Product Use: Engine Oil

Product Number(s): CPS222220

Company Identification

Chevron Products Company

a division of Chevron U.S.A. Inc.

6001 Bollinger Canyon Road

San Ramon, CA 94583

United States of America

www.chevronlubricants.com

Transportation Emergency Response

CHEMTREC: (800) 424-9300 or (703) 527-3887

Health Emergency

Chevron Emergency Information Center: Located in the USA. International collect calls accepted. (800) 231-0623 or (510) 231-0623

Product Information

email : lubemsds@chevron.com

Product Information: (800) LUBE TEK

MSDS Requests: (800) 414-6737

SECTION 2 COMPOSITION/ INFORMATION ON INGREDIENTS

COMPONENTS	CAS NUMBER	AMOUNT
Highly refined mineral oil (C15 - C50)	Mixture	80 - 100 %weight
Zinc alkyl dithiophosphate	68649-42-3	1 - 2 %weight

SECTION 3 HAZARDS IDENTIFICATION

IMMEDIATE HEALTH EFFECTS

Eye: Not expected to cause prolonged or significant eye irritation.

Skin: Contact with the skin is not expected to cause prolonged or significant irritation. Contact with the skin is not expected to cause an allergic skin response. Not expected to be harmful to internal organs if absorbed through the skin.

Ingestion: Not expected to be harmful if swallowed.

Inhalation: Not expected to be harmful if inhaled. Contains a petroleum-based mineral oil. May cause respiratory irritation or other pulmonary effects following prolonged or repeated inhalation of oil mist at airborne levels above the recommended mineral oil mist exposure limit. Symptoms of respiratory irritation may include coughing and difficulty breathing.

SECTION 4 FIRST AID MEASURES

Eye: No specific first aid measures are required. As a precaution, remove contact lenses, if worn, and flush eyes with water.

Skin: No specific first aid measures are required. As a precaution, remove clothing and shoes if contaminated. To

remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.

Ingestion: No specific first aid measures are required. Do not induce vomiting. As a precaution, get medical advice.

Inhalation: No specific first aid measures are required. If exposed to excessive levels of material in the air, move the exposed person to fresh air. Get medical attention if coughing or respiratory discomfort occurs.

SECTION 5 FIRE FIGHTING MEASURES

FIRE CLASSIFICATION:

OSHA Classification (29 CFR 1910.1200): Not classified by OSHA as flammable or combustible.

NFPA RATINGS: Health: 0 Flammability: 1 Reactivity: 0

FLAMMABLE PROPERTIES:

Flashpoint: (Cleveland Open Cup) 200 °C (392 °F) (Min)

Autoignition: No Data Available

Flammability (Explosive) Limits (% by volume in air): Lower: Not Applicable Upper: Not Applicable

EXTINGUISHING MEDIA: Use water fog, foam, dry chemical or carbon dioxide (CO₂) to extinguish flames.

PROTECTION OF FIRE FIGHTERS:

Fire Fighting Instructions: This material will burn although it is not easily ignited. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.

Combustion Products: Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Protective Measures: Eliminate all sources of ignition in vicinity of spilled material.

Spill Management: Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.

Reporting: Report spills to local authorities and/or the U.S. Coast Guard's National Response Center at (800) 424-8802 as appropriate or required.

SECTION 7 HANDLING AND STORAGE

Precautionary Measures: Keep out of the reach of children.

General Handling Information: Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.

Static Hazard: Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating and accumulating an electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures. For more information, refer to OSHA Standard 29 CFR 1910.106, 'Flammable and Combustible Liquids', National Fire Protection Association (NFPA) 77, 'Recommended Practice on Static Electricity', and/or the American Petroleum Institute (API) Recommended Practice 2003, 'Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents'.

Container Warnings: Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONSIDERATIONS:

Consider the potential hazards of this material (see Section 3), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

ENGINEERING CONTROLS:

Use in a well-ventilated area.

PERSONAL PROTECTIVE EQUIPMENT

Eye/Face Protection: No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields as a good safety practice.

Skin Protection: No special protective clothing is normally required. Where splashing is possible, select protective clothing depending on operations conducted, physical requirements and other substances in the workplace. Suggested materials for protective gloves include: 4H (PE/EVAL), Nitrile Rubber, Silver Shield, Viton.

Respiratory Protection: No respiratory protection is normally required.

If user operations generate an oil mist, determine if airborne concentrations are below the occupational exposure limit for mineral oil mist. If not, wear an approved respirator that provides adequate protection from the measured concentrations of this material. For air-purifying respirators use a particulate cartridge.

Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Attention: the data below are typical values and do not constitute a specification.

Color: Brown

Physical State: Liquid

Odor: Petroleum odor

pH: Not Applicable

Vapor Pressure: <0.01 mmHg @ 37.8 °C (100 °F)

Vapor Density (Air = 1): >1

Boiling Point: >315°C (599°F)

Solubility: Soluble in hydrocarbons; insoluble in water

Freezing Point: Not Applicable

Melting Point: Not Applicable

Specific Gravity: 0.87 - 0.9 @ 15.6°C (60.1°F) / 15.6°C (60.1°F)

Volatile Organic

Compounds (VOC) : 1.1 %weight

Viscosity: 6.6 cSt @ 100°C (212°F) (Min)

Evaporation Rate: No Data Available

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Incompatibility With Other Materials: May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

Hazardous Decomposition Products: None known (None expected)

Hazardous Polymerization: Hazardous polymerization will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

IMMEDIATE HEALTH EFFECTS

Eye Irritation: The eye irritation hazard is based on evaluation of data for similar materials or product components.

Skin Irritation: The skin irritation hazard is based on evaluation of data for similar materials or product components.

Skin Sensitization: The skin sensitization hazard is based on evaluation of data for similar materials or product

components. No product toxicology data available.

Acute Dermal Toxicity: The acute dermal toxicity hazard is based on evaluation of data for similar materials or product components.

Acute Oral Toxicity: The acute oral toxicity hazard is based on evaluation of data for similar materials or product components.

Acute Inhalation Toxicity: The acute inhalation toxicity hazard is based on evaluation of data for similar materials or product components.

ADDITIONAL TOXICOLOGY INFORMATION:

This product contains petroleum base oils which may be refined by various processes including severe solvent extraction, severe hydrocracking, or severe hydrotreating. None of the oils requires a cancer warning under the OSHA Hazard Communication Standard (29 CFR 1910.1200). These oils have not been listed in the National Toxicology Program (NTP) Annual Report nor have they been classified by the International Agency for Research on Cancer (IARC) as: carcinogenic to humans (Group 1), probably carcinogenic to humans (Group 2A), or possibly carcinogenic to humans (Group 2B). These oils have not been classified by the American Conference of Governmental Industrial Hygienists (ACGIH) as: confirmed human carcinogen (A1), suspected human carcinogen (A2), or confirmed animal carcinogen with unknown relevance to humans (A3). During use in engines, contamination of oil with low levels of cancer-causing combustion products occurs. Used motor oils have been shown to cause skin cancer in mice following repeated application and continuous exposure. Brief or intermittent skin contact with used motor oil is not expected to have serious effects in humans if the oil is thoroughly removed by washing with soap and water.

SECTION 12 ECOLOGICAL INFORMATION

ECOTOXICITY

The toxicity of this material to aquatic organisms has not been evaluated. Consequently, this material should be kept out of sewage and drainage systems and all bodies of water. The ecotoxicity hazard is based on an evaluation of data for the components or a similar material.

ENVIRONMENTAL FATE

Ready Biodegradability: This material is not expected to be readily biodegradable. The biodegradability of this material is based on an evaluation of data for the components or a similar material.

SECTION 13 DISPOSAL CONSIDERATIONS

Use material for its intended purpose or recycle if possible. Oil collection services are available for used oil recycling or disposal. Place contaminated materials in containers and dispose of in a manner consistent with applicable regulations. Contact your sales representative or local environmental or health authorities for approved disposal or recycling methods.

SECTION 14 TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

DOT Shipping Description: PETROLEUM LUBRICATING OIL, NOT REGULATED AS A HAZARDOUS MATERIAL FOR TRANSPORTATION UNDER 49 CFR

Additional Information: NOT HAZARDOUS BY U.S. DOT. ADR/RID HAZARD CLASS NOT APPLICABLE.

IMO/IMDG Shipping Description: PETROLEUM LUBRICATING OIL; NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER THE IMDG CODE

ICAO/IATA Shipping Description: PETROLEUM LUBRICATING OIL; NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER ICAO

SECTION 15 REGULATORY INFORMATION

- EPCRA 311/312 CATEGORIES:** 1. Immediate (Acute) Health Effects: NO
 2. Delayed (Chronic) Health Effects: NO
 3. Fire Hazard: NO
 4. Sudden Release of Pressure Hazard: NO
 5. Reactivity Hazard: NO

REGULATORY LISTS SEARCHED:

- | | |
|---------------------|----------------------|
| 01-1=IARC Group 1 | 03=EPCRA 313 |
| 01-2A=IARC Group 2A | 04=CA Proposition 65 |
| 01-2B=IARC Group 2B | 05=MA RTK |
| 02=NTP Carcinogen | 06=NJ RTK |
| | 07=PA RTK |

The following components of this material are found on the regulatory lists indicated.

Zinc alkyl dithiophosphate 03, 06

CHEMICAL INVENTORIES:

All components comply with the following chemical inventory requirements: AICS (Australia), DSL (Canada), ENCS (Japan), IECSC (China), KECI (Korea), PICCS (Philippines), TSCA (United States).

One or more components is listed on ELINCS (European Union). Secondary notification by the importer may be required. All other components are listed or exempted from listing on EINECS.

NEW JERSEY RTK CLASSIFICATION:

Under the New Jersey Right-to-Know Act L. 1983 Chapter 315 N.J.S.A. 34:5A-1 et. seq., the product is to be identified as follows: PETROLEUM OIL (Motor oil)

WHMIS CLASSIFICATION:

This product is not considered a controlled product according to the criteria of the Canadian Controlled Products Regulations.

SECTION 16 OTHER INFORMATION

NFPA RATINGS: Health: 0 Flammability: 1 Reactivity: 0

HMIS RATINGS: Health: 1 Flammability: 1 Reactivity: 0

(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, *-Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

LABEL RECOMMENDATION:

Label Category : ENGINE OIL 1 - ENG1

REVISION STATEMENT: This is a new Material Safety Data Sheet.

Revision Date: July 24, 2006

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV - Threshold Limit Value	TWA - Time Weighted Average
STEL - Short-term Exposure Limit	PEL - Permissible Exposure Limit
	CAS - Chemical Abstract Service Number
ACGIH - American Conference of Government Industrial Hygienists	IMO/IMDG - International Maritime Dangerous Goods Code
API - American Petroleum Institute	MSDS - Material Safety Data Sheet
CVX - Chevron	NFPA - National Fire Protection Association (USA)

DOT - Department of Transportation (USA)	NTP - National Toxicology Program (USA)
IARC - International Agency for Research on Cancer	OSHA - Occupational Safety and Health Administration

Prepared according to the OSHA Hazard Communication Standard (29 CFR 1910.1200) and the ANSI MSDS Standard (Z400.1) by the Chevron Energy Technology Company, 100 Chevron Way, Richmond, California 94802.

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.



HAZARDOUS MATERIALS INVENTORY FORM

FORM 3

ADD DELETE REVISED 1

Page 1 of 1 2

FACILITY ID#	3 0 0 3 5	38	BUSINESS NAME	Battery Systems Inc	3
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I. FACILITY INFORMATION

CHEMICAL LOCATION	12400 Industry St, Garden Grove Ca 92841				4
CONFIDENTIAL LOCATION EPCRA	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	5	MAP #	1	6
			GRID #	D-3	7

II. CHEMICAL INFORMATION

CHEMICAL NAME	Highly Refined Mineral Oil	WASTE	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	8	TRADE SECRET	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	11
COMMON NAME	Transmission Fluid	If EPCRA see instructions		9	An EHS Chemical	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	12
CAS #		FIRE CODE HAZARD CLASSES (supplied by GGFD)					

TYPE (Check one item only)	<input type="checkbox"/> a. PURE <input checked="" type="checkbox"/> b. MIXTURE <input type="checkbox"/> c. WASTE	14	RADIOACTIVE	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	15	CURIES	16
PHYSICAL STATE (Check one item only)	<input type="checkbox"/> a. SOLID <input checked="" type="checkbox"/> b. LIQUID <input type="checkbox"/> c. GAS	17	FED HAZARD CATEGORIES	<input type="checkbox"/> a. FIRE <input type="checkbox"/> b. REACTIVE <input type="checkbox"/> c. PRESSURE RELEASE <input type="checkbox"/> d. ACUTE HEALTH <input type="checkbox"/> e. CHRONIC HEALTH	18		

AVERAGE DAILY AMOUNT	400	19	MAXIMUM DAILY AMOUNT	600	20	ANNUAL WASTE AMOUNT	0	21	STATE WASTE CODE	0	22
UNITS	<input checked="" type="checkbox"/> a. GALLONS <input type="checkbox"/> b. CUBIC FEET <input type="checkbox"/> c. POUNDS <input type="checkbox"/> d. TONS	23	DAYS ON SITE	365	24	LARGEST CONTAINER	32 oz	25			

*If EHS, amount must be in pounds.

STORAGE CONTAINER (Check all that apply)	<input type="checkbox"/> a. ABOVEGROUND TANK <input type="checkbox"/> b. UNDERGROUND TANK <input type="checkbox"/> c. TANK INSIDE BLDG <input type="checkbox"/> d. STEEL DRUM	<input type="checkbox"/> e. PLASTIC DRUM <input type="checkbox"/> f. NONMETALLIC DRUM <input type="checkbox"/> g. METAL CONTAINER <input type="checkbox"/> h. CARBOY	<input type="checkbox"/> i. VAT <input type="checkbox"/> j. FIBER DRUM <input type="checkbox"/> k. BAG(S) <input type="checkbox"/> l. BOX(S)	<input type="checkbox"/> m. CYLINDER <input type="checkbox"/> n. GLASS CONTAINER <input checked="" type="checkbox"/> o. PLASTIC CONTAINER <input type="checkbox"/> p. IN MACH OR EQUIP	<input type="checkbox"/> q. TANK WAGON <input type="checkbox"/> r. RAIL CAR <input type="checkbox"/> s. TOTE BIN <input type="checkbox"/> t. OTHER	26
--	---	--	--	--	--	----

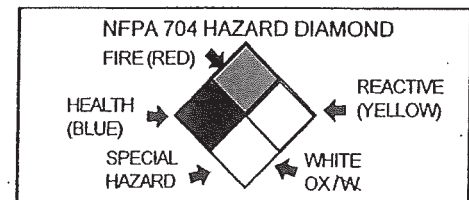
STORAGE PRESSURE	<input checked="" type="checkbox"/> a. AMBIENT <input type="checkbox"/> b. ABOVE AMBIENT <input type="checkbox"/> c. BELOW AMBIENT	27
STORAGE TEMPERATURE	<input checked="" type="checkbox"/> a. AMBIENT <input type="checkbox"/> b. ABOVE AMBIENT <input type="checkbox"/> c. BELOW AMBIENT <input type="checkbox"/> d. CRYOGENIC	28

%WT	HAZARDOUS COMPONENT (For mixture or waste only)	EHS	CAS #
1 80-100 29	Highly Refined Mineral Oil 30	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 31	Mixture 32
2 29		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 31	32
3 29		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 31	32
4 29		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 31	32
5 29		<input type="checkbox"/> Yes <input type="checkbox"/> No 31	32

If more hazardous components are present at greater than 1% by weight if non-carcinogenic, or 0.1% by weight if carcinogenic, attach additional sheets of paper capturing the required information.

PLACARDING INFORMATION

UNDOT #	Not Regulated	33
	Refer to shipping papers or MSDS	
DOT HAZARD CLASS	ORM-D	34
	Refer to shipping papers or MSDS	
EPCRA	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	35
X		36
	If EPCRA, Please Sign Here	



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Material Safety Data Sheet

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

Chevron Automatic Transmission Fluid MD-3

Product Use: Transmission Fluid

Product Number(s): CPS226502

Synonyms: Automatic Transmission Fluid, Chevron ATF DEXRON® III/MERCON®, DEXRON® - III, MERCON®

Company Identification

Chevron Products Company
a division of Chevron U.S.A. Inc.
6001 Bollinger Canyon Road
San Ramon, CA 94583
United States of America
www.chevronlubricants.com

Transportation Emergency Response

CHEMTREC: (800) 424-9300 or (703) 527-3887

Health Emergency

Chevron Emergency Information Center: Located in the USA. International collect calls accepted. (800) 231-0623 or (510) 231-0623

Product Information

email : lubemsds@chevron.com
Product Information: (800) LUBE TEK
MSDS Requests: (800) 414-6737

SECTION 2 COMPOSITION/ INFORMATION ON INGREDIENTS

COMPONENTS	CAS NUMBER	AMOUNT
Highly refined mineral oil (C15 - C50)	Mixture	80 - 100 %weight

SECTION 3 HAZARDS IDENTIFICATION

IMMEDIATE HEALTH EFFECTS

Eye: Not expected to cause prolonged or significant eye irritation.

Skin: Contact with the skin is not expected to cause prolonged or significant irritation. Not expected to be harmful to internal organs if absorbed through the skin. High-Pressure Equipment Information: Accidental high-velocity injection under the skin of materials of this type may result in serious injury. Seek medical attention at once should an accident like this occur. The initial wound at the injection site may not appear to be serious at first; but, if left untreated, could result in disfigurement or amputation of the affected part.

Ingestion: Not expected to be harmful if swallowed.

Inhalation: Not expected to be harmful if inhaled. Contains a petroleum-based mineral oil. May cause respiratory irritation or other pulmonary effects following prolonged or repeated inhalation of oil mist at airborne levels above the recommended mineral oil mist exposure limit. Symptoms of respiratory irritation may include coughing and difficulty breathing.

SECTION 4 FIRST AID MEASURES

Eye: No specific first aid measures are required. As a precaution, remove contact lenses, if worn, and flush eyes with water.

Skin: No specific first aid measures are required. As a precaution, remove clothing and shoes if contaminated. To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.

Ingestion: No specific first aid measures are required. Do not induce vomiting. As a precaution, get medical advice.

Inhalation: No specific first aid measures are required. If exposed to excessive levels of material in the air, move the exposed person to fresh air. Get medical attention if coughing or respiratory discomfort occurs.

Note to Physicians: In an accident involving high-pressure equipment, this product may be injected under the skin. Such an accident may result in a small, sometimes bloodless, puncture wound. However, because of its driving force, material injected into a fingertip can be deposited into the palm of the hand. Within 24 hours, there is usually a great deal of swelling, discoloration, and intense throbbing pain. Immediate treatment at a surgical emergency center is recommended.

SECTION 5 FIRE FIGHTING MEASURES

Leaks/ruptures in high pressure system using materials of this type can create a fire hazard when in the vicinity of ignition sources (eg. open flame, pilot lights, sparks, or electric arcs).

FIRE CLASSIFICATION:

OSHA Classification (29 CFR 1910.1200): Not classified by OSHA as flammable or combustible.

NFPA RATINGS: Health: 0 Flammability: 1 Reactivity: 0

FLAMMABLE PROPERTIES:

Flashpoint: (Cleveland Open Cup) 178 °C (352 °F) (Min)

Autoignition: No Data Available

Flammability (Explosive) Limits (% by volume in air): Lower: Not Applicable Upper: Not Applicable

EXTINGUISHING MEDIA: Use water fog, foam, dry chemical or carbon dioxide (CO₂) to extinguish flames.

PROTECTION OF FIRE FIGHTERS:

Fire Fighting Instructions: This material will burn although it is not easily ignited. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.

Combustion Products: Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Protective Measures: Eliminate all sources of ignition in vicinity of spilled material.

Spill Management: Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.

Reporting: Report spills to local authorities and/or the U.S. Coast Guard's National Response Center at (800) 424-8802 as appropriate or required.

SECTION 7 HANDLING AND STORAGE

Precautionary Measures: DO NOT USE IN HIGH PRESSURE SYSTEMS in the vicinity of flames, sparks and hot surfaces. Use only in well ventilated areas. Keep container closed.

Keep out of the reach of children.

General Handling Information: Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.

Static Hazard: Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating and accumulating an electrostatic charge and/or a flammable

atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures. For more information, refer to OSHA Standard 29 CFR 1910.106, 'Flammable and Combustible Liquids', National Fire Protection Association (NFPA 77, 'Recommended Practice on Static Electricity', and/or the American Petroleum Institute (API) Recommended Practice 2003, 'Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents'.

Container Warnings: Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONSIDERATIONS:

Consider the potential hazards of this material (see Section 3), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

ENGINEERING CONTROLS:

Use in a well-ventilated area.

PERSONAL PROTECTIVE EQUIPMENT

Eye/Face Protection: No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields as a good safety practice.

Skin Protection: No special protective clothing is normally required. Where splashing is possible, select protective clothing depending on operations conducted, physical requirements and other substances in the workplace. Suggested materials for protective gloves include: 4H (PE/EVAL), Nitrile Rubber, Silver Shield, Viton.

Respiratory Protection: No respiratory protection is normally required.

If user operations generate an oil mist, determine if airborne concentrations are below the occupational exposure limit for mineral oil mist. If not, wear an approved respirator that provides adequate protection from the measured concentrations of this material. For air-purifying respirators use a particulate cartridge.

Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Attention: the data below are typical values and do not constitute a specification.

Color: Red

Physical State: Liquid

Odor: Petroleum odor

pH: Not Applicable

Vapor Pressure: <0.01 mmHg @ 37.8 °C (100 °F)

Vapor Density (Air = 1): >1

Boiling Point: >315°C (599°F)

Solubility: Soluble in hydrocarbons; insoluble in water

Freezing Point: Not Applicable

Specific Gravity: 0.86 @ 15.6°C (60.1°F) / 15.6°C (60.1°F)

Viscosity: 6.8 cSt @ 100°C (212°F) (Min)

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Incompatibility With Other Materials: May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

Hazardous Decomposition Products: None known (None expected)

Hazardous Polymerization: Hazardous polymerization will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

IMMEDIATE HEALTH EFFECTS

Eye Irritation: The eye irritation hazard is based on evaluation of data for similar materials or product components.

Skin Irritation: The skin irritation hazard is based on evaluation of data for similar materials or product components.

Skin Sensitization: No product toxicology data available.

Acute Dermal Toxicity: The acute dermal toxicity hazard is based on evaluation of data for similar materials or product components.

Acute Oral Toxicity: The acute oral toxicity hazard is based on evaluation of data for similar materials or product components.

Acute Inhalation Toxicity: The acute inhalation toxicity hazard is based on evaluation of data for similar materials or product components.

ADDITIONAL TOXICOLOGY INFORMATION:

This product contains petroleum base oils which may be refined by various processes including severe solvent extraction, severe hydrocracking, or severe hydrotreating. None of the oils requires a cancer warning under the OSHA Hazard Communication Standard (29 CFR 1910.1200). These oils have not been listed in the National Toxicology Program (NTP) Annual Report nor have they been classified by the International Agency for Research on Cancer (IARC) as; carcinogenic to humans (Group 1), probably carcinogenic to humans (Group 2A), or possibly carcinogenic to humans (Group 2B). These oils have not been classified by the American Conference of Governmental Industrial Hygienists (ACGIH) as: confirmed human carcinogen (A1), suspected human carcinogen (A2), or confirmed animal carcinogen with unknown relevance to humans (A3).

SECTION 12 ECOLOGICAL INFORMATION

ECOTOXICITY

The toxicity of this material to aquatic organisms has not been evaluated. Consequently, this material should be kept out of sewage and drainage systems and all bodies of water.

ENVIRONMENTAL FATE

This material is not expected to be readily biodegradable.

SECTION 13 DISPOSAL CONSIDERATIONS

Use material for its intended purpose or recycle if possible. Oil collection services are available for used oil recycling or disposal. Place contaminated materials in containers and dispose of in a manner consistent with applicable regulations. Contact your sales representative or local environmental or health authorities for approved disposal or recycling methods.

SECTION 14 TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

DOT Shipping Description: PETROLEUM LUBRICATING OIL, NOT REGULATED AS A HAZARDOUS MATERIAL FOR TRANSPORTATION UNDER 49 CFR

Additional Information: NOT HAZARDOUS BY U.S. DOT. ADR/RID HAZARD CLASS NOT APPLICABLE.

IMO/IMDG Shipping Description: PETROLEUM LUBRICATING OIL; NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER THE IMDG CODE

ICAO/IATA Shipping Description: PETROLEUM LUBRICATING OIL; NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER ICAO

SECTION 15 REGULATORY INFORMATION

- EPCRA 311/312 CATEGORIES:** 1. Immediate (Acute) Health Effects: NO
2. Delayed (Chronic) Health Effects: NO
3. Fire Hazard: NO
4. Sudden Release of Pressure Hazard: NO
5. Reactivity Hazard: NO

REGULATORY LISTS SEARCHED:

01-1=IARC Group 1	03=EPCRA 313
01-2A=IARC Group 2A	04=CA Proposition 65
01-2B=IARC Group 2B	05=MA RTK
02=NTP Carcinogen	06=NJ RTK
	07=PA RTK

No components of this material were found on the regulatory lists above.

CHEMICAL INVENTORIES:

All components comply with the following chemical inventory requirements: AICS (Australia), DSL (Canada), ENCS (Japan), IECSC (China), KECI (Korea), TSCA (United States).

One or more components is listed on ELINCS (European Union). Secondary notification by the importer may be required.

One or more components does not comply with the following chemical inventory requirements: EINECS (European Union), ELINCS(European Union).

NEW JERSEY RTK CLASSIFICATION:

Under the New Jersey Right-to-Know Act L. 1983 Chapter 315 N.J.S.A. 34:5A-1 et. seq., the product is to be identified as follows: PETROLEUM OIL (Automatic transmission fluid)

WHMIS CLASSIFICATION:

This product is not considered a controlled product according to the criteria of the Canadian Controlled Products Regulations.

SECTION 16 OTHER INFORMATION

NFPA RATINGS: Health: 0 Flammability: 1 Reactivity: 0

HMIS RATINGS: Health: 1 Flammability: 1 Reactivity: 0

(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, *-Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

LABEL RECOMMENDATION:

Label Category : INDUSTRIAL OIL 1 - IND1

REVISION STATEMENT: This revision updates the following sections of this Material Safety Data Sheet: 1

Revision Date: December 22, 2006

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV - Threshold Limit Value	TWA - Time Weighted Average
STEL - Short-term Exposure Limit	PEL - Permissible Exposure Limit
	CAS - Chemical Abstract Service Number

ACGIH - American Conference of Government Industrial Hygienists	IMO/IMDG - International Maritime Dangerous Goods Code
API - American Petroleum Institute	MSDS - Material Safety Data Sheet
CVX - Chevron	NFPA - National Fire Protection Association (USA)
DOT - Department of Transportation (USA)	NTP - National Toxicology Program (USA)
IARC - International Agency for Research on Cancer	OSHA - Occupational Safety and Health Administration

Prepared according to the OSHA Hazard Communication Standard (29 CFR 1910.1200) and the ANSI MSDS Standard (Z400.1) by the Chevron Energy Technology Company, 100 Chevron Way, Richmond, California 94802.

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.



HAZARDOUS MATERIALS INVENTORY FORM

FORM 3

ADD DELETE REVISED 1

Page 1 of 1 2

FACILITY ID#	3 0 0 3 5	38	BUSINESS NAME	3
			Battery Systems Inc	

I. FACILITY INFORMATION

CHEMICAL LOCATION	12400 Industry St, Garden Grove Ca 92841			4			
CONFIDENTIAL LOCATION EPCRA	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	5	MAP #	6	GRID #	7

II. CHEMICAL INFORMATION

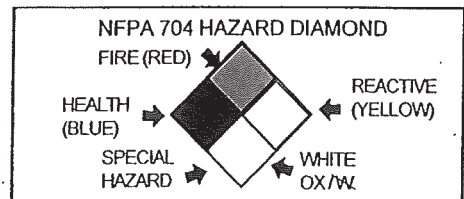
CHEMICAL NAME			WASTE	<input type="checkbox"/> Yes	8	TRADE SECRET	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	11	
						If EPCRA see instructions				
COMMON NAME	Clean R Carb Carburetor Cleaner		9	An EHS Chemical	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	12			
						*If EHS is "Yes", all amounts must be LBS				
CAS #	10	FIRE CODE HAZARD CLASSES (supplied by GGFD)			13					
TYPE (Check one item only)	<input type="checkbox"/> a. PURE	<input checked="" type="checkbox"/> b. MIXTURE	<input type="checkbox"/> c. WASTE	14	RADIOACTIVE	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	15	CURIES	16
PHYSICAL STATE (Check one item only)	<input type="checkbox"/> a. SOLID	<input checked="" type="checkbox"/> b. LIQUID	<input type="checkbox"/> c. GAS	17	FED HAZARD CATEGORIES	<input checked="" type="checkbox"/> a. FIRE	<input type="checkbox"/> b. REACTIVE	<input checked="" type="checkbox"/> c. PRESSURE RELEASE	18	
						<input checked="" type="checkbox"/> d. ACUTE HEALTH	<input type="checkbox"/> e. CHRONIC HEALTH			
AVERAGE DAILY AMOUNT	19	MAXIMUM DAILY AMOUNT	20	ANNUAL WASTE AMOUNT	21	STATE WASTE CODE	22			
UNITS		<input checked="" type="checkbox"/> a. GALLONS	<input type="checkbox"/> b. CUBIC FEET	23	DAYS ON SITE	24	LARGEST CONTAINER	25		
		<input type="checkbox"/> c. POUNDS	<input type="checkbox"/> d. TONS		365		12 oz can			
						*If EHS, amount must be in pounds.				
STORAGE CONTAINER (Check all that apply)	<input type="checkbox"/> a. ABOVEGROUND TANK	<input type="checkbox"/> e. PLASTIC DRUM	<input type="checkbox"/> i. VAT	<input type="checkbox"/> m. CYLINDER	<input type="checkbox"/> q. TANK WAGON	26				
	<input type="checkbox"/> b. UNDERGROUND TANK	<input type="checkbox"/> f. NONMETALLIC DRUM	<input type="checkbox"/> j. FIBER DRUM	<input type="checkbox"/> n. GLASS CONTAINER	<input type="checkbox"/> r. RAIL CAR					
	<input type="checkbox"/> c. TANK INSIDE BLDG	<input checked="" type="checkbox"/> g. METAL CONTAINER	<input type="checkbox"/> k. BAG(S)	<input type="checkbox"/> o. PLASTIC CONTAINER	<input type="checkbox"/> s. TOTE BIN					
	<input type="checkbox"/> d. STEEL DRUM	<input type="checkbox"/> h. CARBOY	<input type="checkbox"/> l. BOX(S)	<input type="checkbox"/> p. IN MACH OR EQUIP	<input type="checkbox"/> t. OTHER					
STORAGE PRESSURE	<input checked="" type="checkbox"/> a. AMBIENT	<input type="checkbox"/> b. ABOVE AMBIENT	<input type="checkbox"/> c. BELOW AMBIENT	27						
STORAGE TEMPERATURE	<input checked="" type="checkbox"/> a. AMBIENT	<input type="checkbox"/> b. ABOVE AMBIENT	<input type="checkbox"/> c. BELOW AMBIENT	<input type="checkbox"/> d. CRYOGENIC	28					

%WT	HAZARDOUS COMPONENT (For mixture or waste only)	EHS	CAS #
1 45-55 29	Acetone	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 31	67-64-1 32
2 25-35 29	Toluene	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 31	108-88-3 32
3 10-20 29	Methanol	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 31	67-56-1 32
4 5-10 29	Carbon Dioxide	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 31	124-38-9 32
5 29		<input type="checkbox"/> Yes <input type="checkbox"/> No 31	32

If more hazardous components are present at greater than 1% by weight if non-carcinogenic, or 0.1% by weight if carcinogenic, attach additional sheets of paper capturing the required information.

PLACARDING INFORMATION

UNDOT #	Not Applicable	33
Refer to shipping papers or MSDS		
DOT HAZARD CLASS	ORM-D	34
Refer to shipping papers or MSDS		
EPCRA	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	35
X		36
If EPCRA, Please Sign Here		



MAKE AS MANY COPIES OF CHEMICAL INVENTORY FORM AS NEEDED



Material Safety Data Sheet

Section 1: Product & Company Identification

Product Name: Clean R Carb™ Carburetor Cleaner – California (aerosol)

Product Number (s): 05079CA, 05079CAP

Manufactured By:

CRC Industries, Inc.
885 Louis Drive
Warminster, PA 18974
www.crcindustries.com

General Information	(215) 674-4300
Technical Assistance	(800) 521-3168
Customer Service	(800) 272-4620
24-Hr Emergency (CHEMTREC)	(800) 424-9300

Section 2: Hazards Identification

Emergency Overview

Appearance & Odor: Clear liquid; solvent odor

DANGER

Extremely Flammable. Harmful or Fatal if Swallowed. May Cause Blindness if Swallowed. Vapor Harmful. Eye and Skin Irritant. Contents Under Pressure.

As defined by OSHA's Hazard Communication Standard, this product is hazardous.

Potential Health Effects:

EYE: Moderate eye irritant. Exposure can cause irritation including stinging, tearing, redness, blurred vision, and swelling of the eyes.

SKIN: Moderate skin irritant. Prolonged or repeated contact may dry the skin. Symptoms may include redness, burning, drying and cracking of the skin, and skin burns. Passage of this material into the body through the skin is possible, but it is unlikely that this would result in harmful effects during safe handling and use.

INHALATION: Breathing large amounts of this material may be harmful. Symptoms include irritation of the nose and throat and central nervous system excitation (giddiness), followed by CNS depression (dizziness, drowsiness, weakness, headache, nausea, unconsciousness).

INGESTION: Swallowing small amounts is not likely to cause harmful effects. May cause stomach or intestinal upset. Swallowing larger amounts may be harmful as this material may be aspirated into the lungs during swallowing or vomiting. This results in lung inflammation and other lung injury.

CHRONIC EFFECTS: Overexposure to methanol may lead to visual impairment.

TARGET ORGANS: liver, kidneys, blood, central nervous system, eyes

Medical Conditions Aggravated by Exposure: skin sensitivities, lung conditions, central nervous system conditions

See Section 11 for toxicology and carcinogenicity information on product ingredients.

Section 3: Composition/Information on Ingredients

COMPONENT	CAS NUMBER	% by Wt.
Acetone	67-64-1	45 - 55
Toluene	108-88-3	25 - 35
Methanol	67-56-1	10 - 20
Carbon dioxide	124-38-9	5 – 10

Section 4: First Aid Measures

- Eye Contact:** Immediately flush with plenty of water for 15 minutes. Call a physician if irritation persists.
- Skin Contact:** Remove contaminated clothing and wash affected area with soap and water. Call a physician if irritation persists. Wash contaminated clothing prior to re-use.
- Inhalation:** Remove person to fresh air. Keep person calm. If not breathing, give artificial respiration. If breathing is difficult give oxygen. Call a physician.
- Ingestion:** Seek medical attention. Do not induce vomiting unless instructed by medical personnel. Have victim drink a glass of water if conscious.

Note to Physicians: This material is an aspiration hazard. This material (or a component) has produced hyperglycemia and ketosis following substantial ingestion. Inhalation of high concentrations of this material may be associated with cardiac arrhythmias. Sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to this material. This product contains methanol. The metabolites of methanol can cause metabolic acidosis, visual disturbances and blindness.

Section 5: Fire-Fighting Measures

Flammable Properties: This product is extremely flammable in accordance with aerosol flammability definitions (16 CFR 1500.3(c)(6)).

Flash Point:	< 0 F (TCC)	Upper Explosive Limit:	12.8
Autoignition Temperature:	725 F	Lower Explosive Limit:	2.6

Suitable Extinguishing Media: dry chemical, carbon dioxide, alcohol-resistant foam, class B extinguishers

Products of Combustion: oxides of carbon

Protection of Fire-Fighters: Firefighters should wear self-contained, NIOSH-approved breathing apparatus for protection against suffocation and possible toxic decomposition products. Vapors are heavier than air and will accumulate near the ground. Proper eye and skin protection should be provided. Use water spray to keep fire-exposed containers cool and to knock down vapors which may result from product decomposition.

Section 6: Accidental Release Measures

Personal Precautions: Use personal protection recommended in Section 8.

Environmental Precautions: Take precautions to prevent contamination of ground and surface waters. Do not flush into sewers or storm drains.

Methods for Containment & Clean-up: Eliminate sources of ignition. Dike area to contain spill. Ventilate the area with fresh air. If in confined space or limited air circulation area, clean-up workers should wear appropriate respiratory protection. Recover or absorb spilled material using an absorbent designed for chemical spills. Place used absorbents into proper waste containers.

Section 7: Handling and Storage

Handling Procedures: Do not use near potential sources of ignition. Do not use on energized equipment. Use with adequate ventilation. Avoid contact with skin and eyes. Avoid inhaling vapors.

Storage Procedures: Store in a cool dry area out of direct sunlight. Aerosol cans must be maintained below 120 F to prevent cans from rupturing.

Aerosol Storage Level: III

Section 8: Exposure Controls/Personal Protection

Exposure Guidelines:

COMPONENT	OSHA		ACGIH		OTHER		UNIT
	TWA	STEL	TWA	STEL	TWA	SOURCE	
Acetone	1000	NE	500	750	NE		ppm
Toluene	200	300 (c)	20	NE	NE		ppm
Methanol	200	NE	200	250 (s)	NE		ppm
Carbon dioxide	5000	30000(v)	5000	30000	NE		ppm
N.E. – Not Established (c) – ceiling (s) – skin (v) – vacated							

Engineering Controls: Area should have ventilation to provide fresh air. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at the source, preventing dispersion into the general work area. Use mechanical means if necessary to maintain vapor levels below the exposure guidelines. If working in a confined space, follow applicable OSHA regulations.

Respiratory Protection: None required for normal work where adequate ventilation is provided. If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with organic vapor cartridge. Use a self-contained breathing apparatus in confined spaces and for emergencies.

Eye/face Protection: For normal conditions, wear safety glasses. Where there is reasonable probability of liquid contact, wear splash-proof goggles.

Skin Protection: Use protective gloves such as nitrile, PVA, or neoprene. Also, use full protective clothing if there is prolonged or repeated contact of liquid with skin.

Section 9: Physical and Chemical Properties

Physical State: liquid
Color: clear
Odor: solvent
Specific Gravity: 0.814
Initial Boiling Point: 132 F
Freezing Point: ND
Vapor Pressure: ND
Vapor Density: > 1 (air = 1)
Evaporation Rate: > 1 (butyl acetate = 1)
Solubility: slightly soluble in water
pH: NA
Volatile Organic Compounds: wt %: 43.8 g/L: 356.5 lbs./gal: 2.97

Section 10: Stability and Reactivity

Stability: Stable
Conditions to Avoid: Sources of ignition; temperature extremes
Incompatible Materials: Acids, alkalis, reducing agents, strong oxidizing agents, hypochlorites, peroxides, reactive metals such as aluminum and magnesium, sodium, zinc
Hazardous Decomposition Products: Oxides of carbon, various hydrocarbons
Possibility of Hazardous Reactions: No

Section 11: Toxicological Information

Long-term toxicological studies have not been conducted for this product. The following information is available for components of this product.

ACUTE EFFECTS

<u>Component</u>	<u>Test</u>	<u>Result</u>	<u>Route</u>	<u>Species</u>
Acetone	LD50	5800 mg/kg	Oral	Rat
Acetone	LC50	16,000 ppm/4H	Inhalation	Rat
Acetone	LD50	20,000 mg/kg	Dermal	Rabbit
Methanol	LD50	5045 mg/kg	Oral	Rat
Methanol	LD50	12,800 mg/kg	Dermal	Rabbit

CHRONIC EFFECTS

Carcinogenicity:

	<u>Component</u>	<u>Result</u>
OSHA:	None listed	
IARC:	None listed	
NTP:	None listed	

Mutagenicity: No information available

Product Name: Clean R Carb™ Carburetor Cleaner – California (Aerosol)

Product Number (s): 05079CA, 05079CAP

Section 12: Ecological Information

Ecological studies have not been conducted for this product. The following information is available for components of this product.

Ecotoxicity: Acetone – 48H LC50 Daphnia: 10 mg/l
Persistence / Degradability: No information available
Bioaccumulation / Accumulation: No information available
Mobility in Environment: No information available

Section 13: Disposal Considerations

Disposal: The dispensed liquid product is a RCRA hazardous waste for the characteristic of ignitability with the following potential waste code(s): D001, F003, F005 (See 40 CFR Part 261.20 – 261.33). Aerosol containers should be fully emptied and depressurized before disposal.

All disposal activities must comply with federal, state and local regulations. Local regulations may be more stringent than state or national requirements.

Section 14: Transport Information

Proper shipping description:

US DOT (ground): Consumer Commodity, ORM-D

Special Provisions: None

Section 15: Regulatory Information

U.S. Federal

Toxic Substances Control Act (TSCA):

All ingredients are either listed on the TSCA inventory or are exempt.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA):

Reportable Quantities (RQ's) exist for the following ingredients: Acetone (5000 lbs), Toluene (1000 lbs), Methanol (5000 lbs)

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

Superfund Amendments Reauthorization Act (SARA) Title III:

Section 302 Extremely Hazardous Substances (EHS): None

Section 311/312 Hazard Categories:	Fire Hazard	Yes
	Reactive Hazard	No
	Release of Pressure	Yes
	Acute Health Hazard	Yes
	Chronic Health Hazard	No

Product Name: Clean R Carb™ Carburetor Cleaner – California (Aerosol)

Product Number (s): 05079CA, 05079CAP

Section 313 Toxic Chemicals: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:
Toluene (< 30%), Methanol (< 20%)

Clean Air Act:

Section 112 Hazardous Air Pollutants (HAPs): Toluene, Methanol

State Regulations

California Safe Drinking Water and Toxic Enforcement Act (Prop 65):

This product may contain the following chemicals known to the state of California to cause cancer, birth defects or other reproductive harm: Toluene

State Right to Know:

New Jersey: 67-64-1, 108-88-3, 67-56-1, 124-3
Pennsylvania: 67-64-1, 108-88-3, 67-56-1, 124-3
Massachusetts: 67-64-1, 108-88-3, 67-56-1, 124-3
Rhode Island : 67-64-1, 108-88-3, 67-56-1, 124-3

Additional Regulatory Information: In states with consumer products VOC regulations, this product is compliant as a 'Carburetor Cleaner'.

Section 16: Other Information

NFPA: Health: 2 Flammability: 3 Reactivity: 0
HMIS: Health: 2 Flammability: 3 Reactivity: 0 PPE: B

Prepared By: Michelle Rudnick
CRC #: 594M/Q
Revision Date: 12/04/2007

Changes since last revision: MSDS reformatted in accordance with ANSI Z400.1-2004

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC Industries' knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label.

CAS:	Chemical Abstract Service	NA:	Not Applicable
ppm:	Parts per Million	ND:	Not Determined
TCC:	Tag Closed Cup	NE:	Not Established
PMCC:	Pensky-Martens Closed Cup	g/L:	grams per Liter
PPE:	Personal Protection Equipment	lbs./gal:	pounds per gallon
TWA:	Time Weighted Average	STEL:	Short Term Exposure Limit
OSHA:	Occupational Safety and Health Administration		
ACGIH:	American Conference of Governmental Industrial Hygienists		
NIOSH:	National Institute of Occupational Safety & Health		



HAZARDOUS MATERIALS INVENTORY FORM

FORM 3

ADD DELETE REVISED 1

Page 1 of 2 2

FACILITY ID#	3 0 0 3 5	38	BUSINESS NAME	Battery Systems Inc	3
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I. FACILITY INFORMATION

CHEMICAL LOCATION 12400 Industry St, Garden Grove Ca 92841 4

CONFIDENTIAL LOCATION Yes No 5 MAP # 1 6 GRID # D-5 7

II. CHEMICAL INFORMATION

CHEMICAL NAME _____ WASTE Yes 8 TRADE SECRET Yes No 11
If EPCRA see instructions

COMMON NAME Carb Medic Non Chlorinated Carburetor Cleaner 9 An EHS Chemical Yes No 12
*If EHS is "Yes", all amounts must be LBS

CAS # _____ 10 FIRE CODE HAZARD CLASSES (supplied by GGFD) _____ 13

TYPE (Check one item only) a. PURE b. MIXTURE c. WASTE 14 RADIOACTIVE Yes No 15 CURIES _____ 16

PHYSICAL STATE (Check one item only) a. SOLID b. LIQUID c. GAS 17 FED HAZARD CATEGORIES a. FIRE b. REACTIVE c. PRESSURE RELEASE 18
 d. ACUTE HEALTH e. CHRONIC HEALTH

AVERAGE DAILY AMOUNT 55 19 MAXIMUM DAILY AMOUNT 70 20 ANNUAL WASTE AMOUNT 0 21 STATE WASTE CODE 0 22

UNITS a. GALLONS b. CUBIC FEET 23 DAYS ON SITE 365 24 LARGEST CONTAINER 12.5 oz can 25
 c. POUNDS d. TONS
*If EHS, amount must be in pounds.

STORAGE CONTAINER (Check all that apply) a. ABOVEGROUND TANK e. PLASTIC DRUM i. VAT m. CYLINDER q. TANK WAGON 26
 b. UNDERGROUND TANK f. NONMETALLIC DRUM l. FIBER DRUM n. GLASS CONTAINER r. RAIL CAR
 c. TANK INSIDE BLDG g. METAL CONTAINER o. PLASTIC CONTAINER s. TOTE BIN
 d. STEEL DRUM h. CARBOY j. BAG(S) p. IN MACH OR EQUIP t. OTHER _____

STORAGE PRESSURE a. AMBIENT b. ABOVE AMBIENT c. BELOW AMBIENT 27

STORAGE TEMPERATURE a. AMBIENT b. ABOVE AMBIENT c. BELOW AMBIENT d. CRYOGENIC 28

%WT	HAZARDOUS COMPONENT (For mixture or waste only)	EHS	CAS #
1 40-70 29	2- Propanone 30	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 31	67641 32
2 1-5 29	Ethylbenzene 30	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 31	100414 32
3 1-4 29	Methanol 30	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 31	67561 32
4 7-13 29	Propane 30	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 31	74986 32
5 10-30 29	Toluene 30	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 31	108883 32

If more hazardous components are present at greater than 1% by weight if non-carcinogenic, or 0.1% by weight if carcinogenic, attach additional sheets of paper capturing the required information.

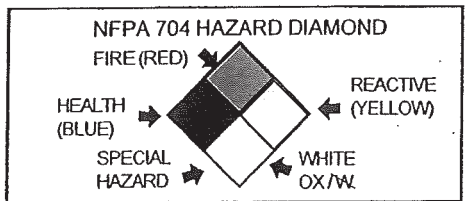
PLACARDING INFORMATION

UNDOT # Not Applicable 33
Refer to shipping papers or MSDS

DOT HAZARD CLASS ORM-D 34
Refer to shipping papers or MSDS

EPCRA YES NO 35

X _____ 36
If EPCRA, Please Sign Here



MAKE AS MANY COPIES OF CHEMICAL INVENTORY FORM AS NEEDED



HAZARDOUS MATERIALS INVENTORY FORM

FORM 3

ADD DELETE REVISED 1

Page 2 of 2 2

FACILITY ID#	3 0 0 3 5	38	BUSINESS NAME	Battery Systems Inc	3
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I. FACILITY INFORMATION

CHEMICAL LOCATION	12400 Industry St, Garden Grove Ca 92841	4
-------------------	--	---

CONFIDENTIAL LOCATION EPCRA	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 5	MAP #	6	GRID #	7
-----------------------------	---	-------	---	--------	---

II. CHEMICAL INFORMATION

CHEMICAL NAME	WASTE <input type="checkbox"/> Yes 8	TRADE SECRET <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 11
If EPCRA see instructions		

COMMON NAME	9	An EHS Chemical <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 12
Carb Medic Chlorinated Carburetor Cleaner		
*If EHS is "Yes", all amounts must be LBS		

CAS #	10	FIRE CODE HAZARD CLASSES (supplied by GGF D)	13
-------	----	--	----

TYPE (Check one item only)	<input type="checkbox"/> a. PURE <input checked="" type="checkbox"/> b. MIXTURE <input type="checkbox"/> c. WASTE 14	RADIOACTIVE <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 15	CURIES	16
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PHYSICAL STATE (Check one item only)	<input type="checkbox"/> a. SOLID <input checked="" type="checkbox"/> b. LIQUID <input type="checkbox"/> c. GAS 17	FED HAZARD CATEGORIES	<input checked="" type="checkbox"/> a. FIRE <input type="checkbox"/> b. REACTIVE <input checked="" type="checkbox"/> c. PRESSURE RELEASE 18	<input checked="" type="checkbox"/> d. ACUTE HEALTH <input type="checkbox"/> e. CHRONIC HEALTH
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AVERAGE DAILY AMOUNT 55	19	MAXIMUM DAILY AMOUNT 70	20	ANNUAL WASTE AMOUNT 0	21	STATE WASTE CODE 0	22
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UNITS	<input checked="" type="checkbox"/> a. GALLONS <input type="checkbox"/> b. CUBIC FEET <input type="checkbox"/> c. POUNDS <input type="checkbox"/> d. TONS 23	DAYS ON SITE	24	LARGEST CONTAINER	25
*If EHS, amount must be in pounds.		365		12.5 oz can	

STORAGE CONTAINER (Check all that apply)	<input type="checkbox"/> a. ABOVEGROUND TANK <input type="checkbox"/> e. PLASTIC DRUM <input type="checkbox"/> i. VAT <input type="checkbox"/> m. CYLINDER <input type="checkbox"/> q. TANK WAGON 26	<input type="checkbox"/> b. UNDERGROUND TANK <input type="checkbox"/> f. NONMETALLIC DRUM <input type="checkbox"/> l. FIBER DRUM <input type="checkbox"/> n. GLASS CONTAINER <input type="checkbox"/> r. RAIL CAR
	<input type="checkbox"/> c. TANK INSIDE BLDG <input checked="" type="checkbox"/> g. METAL CONTAINER <input type="checkbox"/> j. BAG(S) <input type="checkbox"/> o. PLASTIC CONTAINER <input type="checkbox"/> s. TOTE BIN	<input type="checkbox"/> d. STEEL DRUM <input type="checkbox"/> h. CARBOY <input type="checkbox"/> k. BOX(S) <input type="checkbox"/> p. IN MACH OR EQUIP <input type="checkbox"/> t. OTHER

STORAGE PRESSURE	<input checked="" type="checkbox"/> a. AMBIENT <input type="checkbox"/> b. ABOVE AMBIENT <input type="checkbox"/> c. BELOW AMBIENT 27
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STORAGE TEMPERATURE	<input checked="" type="checkbox"/> a. AMBIENT <input type="checkbox"/> b. ABOVE AMBIENT <input type="checkbox"/> c. BELOW AMBIENT <input type="checkbox"/> d. CRYOGENIC 28
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%WT	HAZARDOUS COMPONENT (For mixture or waste only)	EHS	CAS #
1 10-30 29	Xylene (Mixed Isomers) 30	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 31	1330207 32
2 29		<input type="checkbox"/> Yes <input type="checkbox"/> No 31	32
3 29		<input type="checkbox"/> Yes <input type="checkbox"/> No 31	32
4 29		<input type="checkbox"/> Yes <input type="checkbox"/> No 31	32
5 29		<input type="checkbox"/> Yes <input type="checkbox"/> No 31	32

If more hazardous components are present at greater than 1% by weight if non-carcinogenic, or 0.1% by weight if carcinogenic, attach additional sheets of paper capturing the required information.

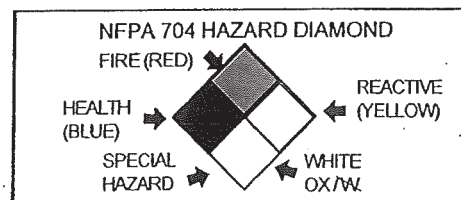
PLACARDING INFORMATION

UNDOT #	Not Applicable 33
Refer to shipping papers or MSDS	

DOT HAZARD CLASS	ORM-D 34
Refer to shipping papers or MSDS	

EPCRA	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO 35
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X	36
If EPCRA, Please Sign Here	



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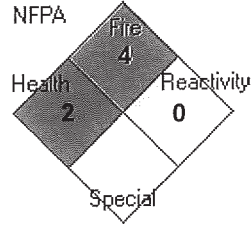
MSDS - Material Safety Data Sheet

Product Name: CARB MEDIC NON-CHLORINATED

MSDS No.: M4815NC

I. Basic Information:

Manufacturer: RADIATOR SPECIALTY COMPANY
Address: 600 RADIATOR ROAD
City, ST Zip: INDIAN TRAIL, NC 28079
Emergency Contact: Rocky Mountain Poison Control Center
Emergency Telephone Number: 303-623-5716
Contact: Robert Geer
Information Telephone Number: 704-688-3430



2	Health
4	Flammability
0	Reactivity
H	Pers. Protection

Last Update: 08/25/2005

Chemical State: Liquid Gas Solid
Chemical Type: Pure Mixture

II. Ingredients:

Trade Secret

CAS No.	Chemical Name	% Range	EHS		IARC		SARA		OSHA PEL	ACGIH TLV	Other Limits
			NTP		SUB	Z	313				
67641	2-Propanone	40.0 - 70.0							1000 ppm	750 ppm	
100414	Ethylbenzene	1-5						X	100 ppm (T)	100 ppm (T)	
67561	Methanol	1-4						X	200 PPM	200 PPM	
74986	Propane	7.0 - 13.0							N/E	1000 ppm	
108883	Toluene	10.0 - 30.0						X	100 PPM	100 PPM	
1330207	Xylene (mixed isomers)	10.0 - 30.0						X	100 ppm (T)	100 ppm (T)	

III. Hazardous Identification:

Hazard Category:

Acute Chronic Fire Pressure Reactive

Hazardous Identification Information:

Danger: Harmful or fatal if swallowed. Vapor harmful. Eye and skin irritant. Extremely Flammable. Contents under pressure.

Level 3 Aerosol

IV. First Aid Measures:

Route(s) of Entry:

Inhalation, eye and skin contact.

Health Hazards (Acute and Chronic):

See signs and symptoms

Signs and Symptoms:

Eye Contact: Direct spray or vapors will irritate and may harm eyes
 Skin Contact: Product may cause irritation due to defatting of skin.
 Inhalation: High concentrations of vapors may irritate nose and throat and cause symptoms of intoxication such as dizziness, nausea, headache, or indigestion.
 Ingestion: May cause blindness if swallowed. Causes irritation, narcosis, and liver and kidney damage.

Medical Conditions Generally Aggravated by Exposure:

None Known

MSDS - Material Safety Data Sheet

Product Name: CARB MEDIC NON-CHLORINATED

MSDS No.: M4815NC

Emergency and First Aid Procedures:

Eye Contact: Flush eyes with clean water for 15 minutes while lifting eyelids. Get prompt medical attention.

Skin Contact: Wash with soap and water thoroughly. If adverse effects persist, get prompt medical attention. Launder contaminated clothing before reuse.

Inhalation: Remove to fresh air. If breathing becomes difficult give oxygen and get prompt medical attention. If breathing stops, give artificial respiration and get prompt medical attention.

Ingestion: DO NOT INDUCE VOMITING! Call Poison Control Center, physician, or hospital emergency room immediately.

Aspiration of vomitus into the lungs can cause pneumonitis, which can be fatal.

Other Health Warnings:

None Known

V. Fire Fighting Measures:

Flash Point: 0 - 20°F Lower Explosive Limit: 1.8% Upper Explosive Limit: 9.5%

F.P. Method: TCC

Fire Extinguishing Media: Foam, Dry Chemical (B-C), Carbon Dioxide

Special Fire Fighting Procedures:

Wear self-contained, positive pressure breathing apparatus and protective clothing. Use water fog to keep container cool. Protect from venting, rupturing, and bursting containers.

Unusual Fire and Explosion:

At temperatures above 120°F, containers may vent, rupture, or burst, even violently. Contents under pressure. Do not use near fire, sparks, or flame.

VI. Accidental Release Measures:

Steps to be Taken in Case Material is Released or Spilled:

Eliminate all ignition sources. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Dike or contain spill and absorb with inert materials (sand, sawdust, absorbent sweeping compounds, rags, etc). Using a non-metallic scoop, place contaminated material into an approved chemical waste container. Where possible, vacuum spilled liquid using an explosion proof vacuum to recover material. Prevent run-off to sewers, streams, or other bodies of water. If run-off occurs, notify proper authorities as required that a spill has occurred.

VII. Handling and Storage:

Precautions to be Taken:

Use with adequate ventilation and proper protective equipment.
Do not use or store near fire, sparks, or open flame. Do not puncture or incinerate container. Exposure to temperatures above 120° may cause container to vent, rupture, or burst.

Other Precautions:

Do not used in confined area without proper ventilation. Contact lenses may cause further damage in case of splash into eye.
KEEP AWAY FROM CHILDREN AND ANIMALS!

VIII. Exposure Controls/Personal Protection:

Ventilation Requirements:

See Section 2 for applicable exposure limits. Maintain adequate ventilation.
Avoid breathing vapors. In restricted areas, use approved chemical/mechanical filters designed to remove a combination of particles and vapor. In confined areas, use approved air line type respirator or hood. A self-contained breathing apparatus is required for vapor concentrations above TLV limits.

Personal Protective Equipment:

See Section 2 for applicable exposure limits. For prolonged exposure wear protective safety glasses, gloves, and apron.

MSDS - Material Safety Data Sheet

Product Name: CARB MEDIC NON-CHLORINATED

MSDS No.: M4815NC

IX. Physical and Chemical Properties:

Boiling Point: 133°F	Melting Point: N/A
Evaporation Rate (Butyl Acetate = 1): > 1.0	Vapor Pressure (mm Hg.): N. D.
Specific Gravity (H2O = 1): 0.81000	Vapor Density (AIR = 1): N.D.
Solubility In Water: Partial solubility	Appearance and Odor: Clear liquid with solvent odor.
Other Information: % Volatiles by Wt: 100%	
Solubility in Solvent: Complete	
VOC content (CARB): < 45%	

X. Stability and Reactivity:

Stability:

Product is stable

Incompatibility (Materials to Avoid):

Avoid contact with strong oxidizers

Decomposition/By Products:

Carbon Dioxide, Carbon Monoxide, hydrocarbons.

Hazardous Polymerization:

Will not occur.

XI. Toxicological Information:

No data available

XII. Ecological Information:

No data available.

XIII. Disposal Considerations:

DISPOSAL: This container may be recycled in aerosol recycling centers when empty. Before offering for recycling, empty the can by using the product according to the label. DO NOT PUNCTURE! If recycling is not available, wrap the container and discard in the trash. Dispose of unused product in accordance with all local, state government and federal laws and regulations.

XIV. Transport Information:

DOT Hazard Class: ORM-D
Shipping Name: Consumer Commodity

XV. Regulatory Information:

MSDS - Material Safety Data Sheet

Product Name: CARB MEDIC NON-CHLORINATED

MSDS No.: M4815NC

See Section 2 for SARA Reportable Chemicals.

USA TSCA: All components of this material are listed on the US TSCA Inventory.

Warning: This product contains a chemical known to the state of California to cause reproductive toxicity.

New Jersey RTK Label Information

Xylenes	CAS# 1330-20-7
Ethylbenzene	CAS# 100-41-4
Toluene	CAS# 108-88-3

Pennsylvania RTK Label Information

Xylenes	CAS# 1330-20-7
Ethylbenzene	CAS# 100-41-4
Toluene	CAS# 108-88-3

XVI. Other Information:

Do not used in confined area without proper ventilation. Contact lenses may cause further damage in case of splash into eye.
KEEP AWAY FROM CHILDREN AND ANIMALS!

N/E: Not Established
N/D: Not Determined
N/A: Not Applicable
N/AV: Not Available

WEARING CONTACT LENSES WHEN HANDLING THIS MATERIAL IS INADVISABLE! KEEP AWAY FROM CHILDREN AND ANIMALS.

While Radiator Specialty Company believes this data is accurate as of the revision date, we make no warranty with respect to the data and we expressly disclaim all liability for reliance thereon. The data is offered solely for information, investigation, and verification. Various government agencies may have specific regulations regarding the transportation, handling, storage, use, or disposal of this product which may not be covered by this MSDS. The user is responsible for full compliance.



HAZARDOUS MATERIALS INVENTORY FORM

FORM 3

ADD DELETE REVISED 1

Page 1 of 2 2

FACILITY ID#	3 0 0 3 5	38	BUSINESS NAME	Battery Systems Inc	3
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I. FACILITY INFORMATION

CHEMICAL LOCATION	12400 Industry St, Garden Grove Ca 92841	4
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CONFIDENTIAL LOCATION EPCRA	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	5	MAP #	1	6	GRID #	D-5	7
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II. CHEMICAL INFORMATION

CHEMICAL NAME	WASTE <input type="checkbox"/> Yes	8	TRADE SECRET <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	11
If EPCRA see instructions				

COMMON NAME	Heavy Duty Engine Degreaser	9	An EHS Chemical <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	12
*If EHS is "Yes", all amounts must be LBS				

CAS #	10	FIRE CODE HAZARD CLASSES (supplied by GGFD)	13
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TYPE (Check one item only)	<input type="checkbox"/> a. PURE <input checked="" type="checkbox"/> b. MIXTURE <input type="checkbox"/> c. WASTE	14	RADIOACTIVE <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	15	CURIES	16
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PHYSICAL STATE (Check one item only)	<input type="checkbox"/> a. SOLID <input checked="" type="checkbox"/> b. LIQUID <input type="checkbox"/> c. GAS	17	FED HAZARD CATEGORIES	<input checked="" type="checkbox"/> a. FIRE <input type="checkbox"/> b. REACTIVE <input checked="" type="checkbox"/> c. PRESSURE RELEASE <input checked="" type="checkbox"/> d. ACUTE HEALTH <input checked="" type="checkbox"/> e. CHRONIC HEALTH	18
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AVERAGE DAILY AMOUNT	100	19	MAXIMUM DAILY AMOUNT	150	20	ANNUAL WASTE AMOUNT	0	21	STATE WASTE CODE	0	22
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UNITS	<input checked="" type="checkbox"/> a. GALLONS <input type="checkbox"/> b. CUBIC FEET <input type="checkbox"/> c. POUNDS <input type="checkbox"/> d. TONS	23	DAYS ON SITE	365	24	LARGEST CONTAINER	16oz can	25
*If EHS, amount must be in pounds.								

STORAGE CONTAINER (Check all that apply)	<input type="checkbox"/> a. ABOVEGROUND TANK <input type="checkbox"/> b. UNDERGROUND TANK <input type="checkbox"/> c. TANK INSIDE BLDG <input type="checkbox"/> d. STEEL DRUM <input type="checkbox"/> e. PLASTIC DRUM <input type="checkbox"/> f. NONMETALLIC DRUM <input checked="" type="checkbox"/> g. METAL CONTAINER <input type="checkbox"/> h. CARBOY <input type="checkbox"/> i. VAT <input type="checkbox"/> j. FIBER DRUM <input type="checkbox"/> k. BAG(S) <input type="checkbox"/> l. BOX(S) <input type="checkbox"/> m. CYLINDER <input type="checkbox"/> n. GLASS CONTAINER <input type="checkbox"/> o. PLASTIC CONTAINER <input type="checkbox"/> p. IN MACH OR EQUIP <input type="checkbox"/> q. TANK WAGON <input type="checkbox"/> r. RAIL CAR <input type="checkbox"/> s. TOTE BIN <input type="checkbox"/> t. OTHER	26
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STORAGE PRESSURE	<input checked="" type="checkbox"/> a. AMBIENT <input type="checkbox"/> b. ABOVE AMBIENT <input type="checkbox"/> c. BELOW AMBIENT	27
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STORAGE TEMPERATURE	<input checked="" type="checkbox"/> a. AMBIENT <input type="checkbox"/> b. ABOVE AMBIENT <input type="checkbox"/> c. BELOW AMBIENT <input type="checkbox"/> d. CRYOGENIC	28
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%WT	HAZARDOUS COMPONENT (For mixture or waste only)	EHS	CAS #
1 1-2 29	2- Butoxyethanol	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	111-76-2 32
2 < 1 29	Alkyl Aryl Sulfonate	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	78330-12-8 32
3 1-3 29	Carbon dioxide	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	124-38-9 32
4 3-5 29	Ethoxylated Nonyl Phenol	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	9016-45-9 32
5 80-88 29	Petroleum Distillate, Aliphatic	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	68476-34-6 32

If more hazardous components are present at greater than 1% by weight if non-carcinogenic, or 0.1% by weight if carcinogenic, attach additional sheets of paper capturing the required information.

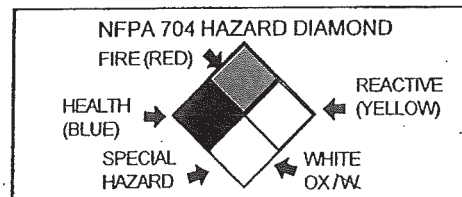
PLACARDING INFORMATION

UNDOT #	Not Applicable	33
Refer to shipping papers or MSDS		

DOT HAZARD CLASS	ORM-D	34
Refer to shipping papers or MSDS		

EPCRA	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	35
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X	_____	36
If EPCRA, Please Sign Here		



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HAZARDOUS MATERIALS INVENTORY FORM

FORM 3

ADD DELETE REVISED 1

Page 2 of 2 2

FACILITY ID#	3	0	0	3	5					38	BUSINESS NAME	Battery Systems Inc
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I. FACILITY INFORMATION

CHEMICAL LOCATION	12400 Industry St, Garden Grove Ca 92841											
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CONFIDENTIAL LOCATION EPCRA	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	5	MAP #	6	GRID #	7
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II. CHEMICAL INFORMATION

CHEMICAL NAME	WASTE <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	8	TRADE SECRET <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	11
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If EPCRA see instructions

COMMON NAME	Heavy Duty Engine Degreaser		9	An EHS Chemical <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	12
-------------	-----------------------------	--	---	---	----

*If EHS is "Yes", all amounts must be LBS

CAS #	10	FIRE CODE HAZARD CLASSES (supplied by GGFD)	13
-------	----	---	----

TYPE (Check one item only)	<input type="checkbox"/> a. PURE <input checked="" type="checkbox"/> b. MIXTURE <input type="checkbox"/> c. WASTE	14	RADIOACTIVE <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	15	CURIES	16
----------------------------	---	----	---	----	--------	----

PHYSICAL STATE (Check one item only)	<input type="checkbox"/> a. SOLID <input checked="" type="checkbox"/> b. LIQUID <input type="checkbox"/> c. GAS	17	FED HAZARD CATEGORIES	<input checked="" type="checkbox"/> a. FIRE <input type="checkbox"/> b. REACTIVE <input checked="" type="checkbox"/> c. PRESSURE RELEASE <input checked="" type="checkbox"/> d. ACUTE HEALTH <input checked="" type="checkbox"/> e. CHRONIC HEALTH	18
--------------------------------------	---	----	-----------------------	--	----

AVERAGE DAILY AMOUNT	100	19	MAXIMUM DAILY AMOUNT	150	20	ANNUAL WASTE AMOUNT	0	21	STATE WASTE CODE	0	22
----------------------	-----	----	----------------------	-----	----	---------------------	---	----	------------------	---	----

UNITS	<input checked="" type="checkbox"/> a. GALLONS <input type="checkbox"/> b. CUBIC FEET <input type="checkbox"/> c. POUNDS <input type="checkbox"/> d. TONS	23	DAYS ON SITE	365	24	LARGEST CONTAINER	16 oz can	25
-------	---	----	--------------	-----	----	-------------------	-----------	----

*If EHS, amount must be in pounds.

STORAGE CONTAINER (Check all that apply)	<input type="checkbox"/> a. ABOVEGROUND TANK <input type="checkbox"/> b. UNDERGROUND TANK <input type="checkbox"/> c. TANK INSIDE BLDG <input type="checkbox"/> d. STEEL DRUM <input type="checkbox"/> e. PLASTIC DRUM <input type="checkbox"/> f. NONMETALLIC DRUM <input checked="" type="checkbox"/> g. METAL CONTAINER <input type="checkbox"/> h. CARBOY <input type="checkbox"/> i. VAT <input type="checkbox"/> j. FIBER DRUM <input type="checkbox"/> k. BAG(S) <input type="checkbox"/> l. BOX(S) <input type="checkbox"/> m. CYLINDER <input type="checkbox"/> n. GLASS CONTAINER <input type="checkbox"/> o. PLASTIC CONTAINER <input type="checkbox"/> p. IN MACH OR EQUIP <input type="checkbox"/> q. TANK WAGON <input type="checkbox"/> r. RAIL CAR <input type="checkbox"/> s. TOTE BIN <input type="checkbox"/> t. OTHER	26
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STORAGE PRESSURE	<input checked="" type="checkbox"/> a. AMBIENT <input type="checkbox"/> b. ABOVE AMBIENT <input type="checkbox"/> c. BELOW AMBIENT	27
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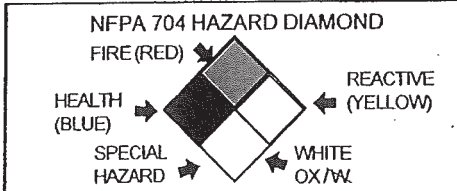
STORAGE TEMPERATURE	<input checked="" type="checkbox"/> a. AMBIENT <input type="checkbox"/> b. ABOVE AMBIENT <input type="checkbox"/> c. BELOW AMBIENT <input type="checkbox"/> d. CRYOGENIC	28
---------------------	--	----

%WT	HAZARDOUS COMPONENT (For mixture or waste only)	EHS	CAS #
1 6-9	Petroleum Naphtha	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	64742-94-5
2		<input type="checkbox"/> Yes <input type="checkbox"/> No	
3		<input type="checkbox"/> Yes <input type="checkbox"/> No	
4		<input type="checkbox"/> Yes <input type="checkbox"/> No	
5		<input type="checkbox"/> Yes <input type="checkbox"/> No	

If more hazardous components are present at greater than 1% by weight if non-carcinogenic, or 0.1% by weight if carcinogenic, attach additional sheets of paper capturing the required information.

PLACARDING INFORMATION

UNDOT #	Not Applicable	33
	Refer to shipping papers or MSDS	
DOT HAZARD CLASS	ORM-D	34
	Refer to shipping papers or MSDS	
EPCRA	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	35
X		36
	If EPCRA, Please Sign Here	



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MSDS - Material Safety Data Sheet

Product Name: ENGINE BRITE HEAVY DUTY ENGINE DEGREASER
(UPC: 078698502014) (AAP SKU: 7040104)

MSDS No.: EB1

I. Basic Information:

Manufacturer: RADIATOR SPECIALTY COMPANY

Address: 600 RADIATOR ROAD

City, ST Zip: INDIAN TRAIL, NC 28079

Country:

Contact: Robert Geer

Information Telephone Number: 704-684-1811

Emergency Contact: Rocky Mountain Poison Control Center

Emergency Telephone Number: 303-623-5716

Emergency Restrictions:

Product Name: ENGINE BRITE HEAVY DUTY ENGINE DEGREASER (UPC: 078698502014) (AAP SKU: 7040104)

MSDS No.: EB1

Issue Date: 03/10/2008

Supersedes Date: Not Available

II. Hazards Identification:**EMERGENCY OVERVIEW**

Flammable. Harmful or Fatal if Swallowed. Eye and Skin Irritant. Contents Under Pressure.

Level 3 Aerosol

OSHA Regulatory Status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Potential Health Effects**Route(s) of Entry:**

Absorption, Eye, Inhalation, and Ingestion.

Health Hazards (Acute and Chronic):

See signs and symptoms below

Signs and Symptoms:

Eye Contact: Irritant. Prolonged contact may cause conjunctivitis.

Skin Contact: Irritant. Defatting of tissue, dermatitis may occur.

Inhalation: Irritant to mucous membranes. Repeated exposure may cause narcosis..

Ingestion: HARMFUL OR FATAL IF SWALLOWED.

Medical Conditions Generally Aggravated by Exposure:

None Known

Other Health Warnings:

Vomiting and subsequent aspiration into the lungs may lead to chemical pneumonia and pulmonary edema which is a potentially fatal condition.

Potential Environmental Effects

Not Available

III. Composition/Information on Ingredients:

Chemical Name	CAS No.	% Range	Trade Secret
2-Butoxyethanol	111-76-2	1-2	
Alkyl Aryl Sulfonate	78330-12-8	<1	
Carbon dioxide	124-38-9	1-3	
Ethoxylated Nonyl Phenol	9016-45-9	3-5	
Petroleum distillate, Aliphatic	68476-34-6	80-88	
Petroleum naphtha	64742-94-5	6-9	

MSDS - Material Safety Data Sheet

Product Name: ENGINE BRITE HEAVY DUTY ENGINE DEGREASER
(UPC: 078698502014) (AAP SKU: 7040104)

MSDS No.: EBI

IV. First Aid Measures:**Emergency and First Aid Procedures:**

Eye Contact: Flush eyes with clean water for 15 minutes while lifting eyelids. Get prompt medical attention.

Skin Contact: Wash with soap and water thoroughly. If adverse effects persist, get prompt medical attention. Launder contaminated clothing before reuse.

Inhalation: Remove to fresh air. If breathing becomes difficult give oxygen and get prompt medical attention. If breathing stops, give artificial respiration and get prompt medical attention.

Ingestion: DO NOT INDUCE VOMITING! Call Poison Control Center, physician, or hospital emergency room immediately. Aspiration of vomitus into the lungs can cause pneumonitis, which can be fatal.

Note to Physicians:

N/E

V. Fire Fighting Measures:**Suitable Extinguishing Media:**

Water Fog, Foam, Carbon Dioxide, Dry Chemical

Unsuitable Extinguishing Media:

Do not use forced water stream as this could cause the fire to spread.

Products of Combustion:

High temperatures and ignition sources produce products of combustion: carbon monoxide, sulfur-like smoke.

Protection of Firefighters:

Wear self-contained positive pressure breathing apparatus and protective clothes. Use shield to protect from rupturing and venting containers. At elevated temperatures containers may vent, rupture or burst, even violently

VI. Accidental Release Measures:**Personal Precautions:**

Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Environmental Precautions:

Prevent run-off to sewers, streams, or other bodies of water. If run-off occurs, notify proper authorities as required that a spill has occurred. Run off to sewer may create fire or explosion hazard.

Methods for Containment:

Dike or contain spill and absorb with inert materials (sand, sawdust, absorbent sweeping compounds, rags, etc).

Methods for Cleanup:

Using a non-metallic scoop, place contaminated material into an approved chemical waste container. Where possible, vacuum spilled liquid using an explosion proof vacuum to recover material.

Other Information:

All equipment used with handling the concentrate must be grounded. If run-off occurs, notify proper authorities as required that a spill has occurred.

VII. Handling and Storage:**Handling Precautions:**

Handling: Use with adequate ventilation and proper protective equipment.

Do not use near fire, sparks, or flame. Do not puncture or incinerate container.

Store in cool, well ventilated area below 120°F away from heat sources.

Storage Precautions:

Avoid contact with eyes. Avoid prolonged or repeated breathing of vapors. If exposure may or does exceed occupational exposure limits, use a NIOSH approved respirator to prevent over-exposure.

VIII. Exposure Controls/Personal Protection:

MSDS - Material Safety Data Sheet

Product Name: ENGINE BRITE HEAVY DUTY ENGINE DEGREASER
(UPC: 078698502014) (AAP SKU: 7040104)

MSDS No.: EBI

Chemical Name	OSHA PEL	ACGIH TLV	Other Limits
Ethoxylated Nonyl Phenol	N/D	N/D	Not Available
Petroleum distillate, Aliphatic	N/E	100 ppm	N/E
Petroleum naphtha	N/E	N/E	100 ppm
2-Butoxyethanol	25 ppm	25 ppm	Not Available
Alkyl Aryl Sulfonate	N/E	N/E	5 mg/m3
Carbon dioxide	N/AV	5000 ppm	Not Available

Engineering Controls:

See Section 2 for applicable exposure limits. Use with adequate ventilation. If TLV is exceeded, wear NIOSH approved respirator.

Personal Protective Equipment:

See Section 2 for applicable exposure limits. For prolonged exposure wear protective safety glasses, gloves, and apron.

IX. Physical and Chemical Properties:

Boiling Point: 305°F

Boiling Range: Not Available

Solubility In Water: Emulifies

Flash Point: 165°F

Odor Threshold: Not Available

Vapor Density (AIR = 1): 1.2

pH Range: Not Available

Decomposition Temp: Not Available

Lower Explosive Limit: N/E

Specific Gravity (H2O = 1): 0.86

Other Information: VOC Content: 18%

Melting Point: N/A

Freezing Point: Not Available

Evaporation Rate (Butyl Acetate = 1): N/D

Flash Point Method: TCC

Appearance and Odor: Amber liquid with petroleum odor

Vapor Pressure (mm Hg.): N/D

Partition Coefficient: Not Available

Auto-ignition Temp: Not Available

Upper Explosive Limit: N/E

X. Stability and Reactivity:**Stability:**

Stable

Conditions to Avoid:

See Incompatible Materials below.

Incompatible Materials:

Strong oxidizing agents.

Hazardous Decomposition Products:

High temperatures and ignition sources produce products of combustion: carbon monoxide, sulfur-like smoke.

Possibility of Hazardous Reactions:

Will not occur.

XI. Toxicological Information:

N/D

MSDS - Material Safety Data Sheet**Product Name: ENGINE BRITE HEAVY DUTY ENGINE DEGREASER
(UPC: 078698502014) (AAP SKU: 7040104)**

MSDS No.: EBI

XII. Ecological Information:

N/D

XIII. Disposal Considerations:

DISPOSAL: This container may be recycled in aerosol recycling centers when empty. Before offering for recycling, empty the can by using the product according to the label. DO NOT PUNCTURE! If recycling is not available, wrap the container and discard in the trash. Dispose of unused product in accordance with all local, state government and federal laws and regulations.

XIV. Transport Information:

Shipping Name: Not Available

DOT Hazard Class: Not Available

UN/NA#: Not Available

DOT Subsidiary Hazard Class: Not Available

Packing Group: Not Available

Transportation Information:

DOT Hazard Class: ORM-D

Shipping Name: Consumer Commodity

The DOT description is provided to assist in the proper shipping classification of this product and may not be suitable for international and air shipping purposes.

ICAO/IATA (US)

Shipping Name: Aerosols

Class: 2.1

UN number: UN1950

International:**ICAO/IATA**

UN number: UN1950

Shipping Name: Aerosols

Class: 2.1

IMDG

UN number: UN1950

Shipping Name: Aerosols

Class: 2.1

EmS: F-D, S-U

XV. Regulatory Information:

See Section 2 for SARA Reportable Chemicals.

USA TSCA: All components of this material are listed on the US TSCA Inventory.

Warning: This product contains a chemical(s) known to the State of California to cause cancer or birth defects or other reproductive harm.

MSDS - Material Safety Data Sheet

Product Name: ENGINE BRITE HEAVY DUTY ENGINE DEGREASER
(UPC: 078698502014) (AAP SKU: 7040104)

MSDS No.: EBI

XVI. Other Information:

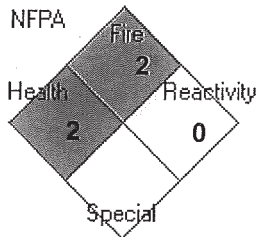
Chemical State: Liquid Gas Solid

Chemical Type: Pure Mixture

Hazard Category:

Acute Chronic Fire

Pressure Reactive



Additional Manufacturer Warnings:

Do not used in confined area without proper ventilation. Contact lenses may cause further damage in case of splash into eye. KEEP AWAY FROM CHILDREN AND ANIMALS!

N/E: Not Established
N/D: Not Determined
N/A: Not Applicable
N/AV: Not Available

2	Flammability
0	Physical Hazard
B	Pers. Protection

Additional Product Information:

While Radiator Specialty Company believes this data is accurate as of the revision date, we make no warranty with respect to the data and we expressly disclaim all liability for reliance thereon. The data is offered solely for information, investigation, and verification. Various government agencies may have specific regulations regarding the transportation, handling, storage, use, or disposal of this product which may not be covered by this MSDS. The user is responsible for full compliance.



HAZARDOUS MATERIALS INVENTORY FORM

FORM 3

ADD DELETE REVISED 1

Page ___ of ___ 2

FACILITY ID#	3	0	0	3	5						38	BUSINESS NAME	Battery Systems Inc
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I. FACILITY INFORMATION

CHEMICAL LOCATION 12400 Industry St, Garden Grove Ca 92841

CONFIDENTIAL LOCATION Yes No 5 MAP # 1 6 GRID # D-5 7

II. CHEMICAL INFORMATION

CHEMICAL NAME Heavy Low VOC Brake Parts Cleaner WASTE Yes 8 TRADE SECRET Yes No 11
If EPCRA see instructions

COMMON NAME Centennial Brake Cleaner 9 An EHS Chemical Yes No 12
*If EHS is "Yes", all amounts must be LBS

CAS # 10 FIRE CODE HAZARD CLASSES (supplied by GGFD) 13

TYPE (Check one item only) a. PURE b. MIXTURE c. WASTE 14 RADIOACTIVE Yes No 15 CURIES 16

PHYSICAL STATE (Check one item only) a. SOLID b. LIQUID c. GAS 17 FED HAZARD CATEGORIES a. FIRE b. REACTIVE c. PRESSURE RELEASE 18
 d. ACUTE HEALTH e. CHRONIC HEALTH

AVERAGE DAILY AMOUNT 1000 19 MAXIMUM DAILY AMOUNT 1300 20 ANNUAL WASTE AMOUNT 0 21 STATE WASTE CODE 0 22

UNITS a. GALLONS b. CUBIC FEET 23 DAYS ON SITE 365 24 LARGEST CONTAINER 14oz can 25
 c. POUNDS d. TONS
*If EHS, amount must be in pounds.

STORAGE CONTAINER (Check all that apply)

<input type="checkbox"/> a. ABOVEGROUND TANK	<input type="checkbox"/> e. PLASTIC DRUM	<input type="checkbox"/> i. VAT	<input type="checkbox"/> m. CYLINDER	<input type="checkbox"/> q. TANK WAGON 26
<input type="checkbox"/> b. UNDERGROUND TANK	<input type="checkbox"/> f. NONMETALLIC DRUM	<input type="checkbox"/> j. FIBER DRUM	<input type="checkbox"/> n. GLASS CONTAINER	<input type="checkbox"/> r. RAIL CAR
<input type="checkbox"/> c. TANK INSIDE BLDG	<input checked="" type="checkbox"/> g. METAL CONTAINER	<input type="checkbox"/> k. BAG(S)	<input type="checkbox"/> o. PLASTIC CONTAINER	<input type="checkbox"/> s. TOTE BIN
<input type="checkbox"/> d. STEEL DRUM	<input type="checkbox"/> h. CARBOY	<input type="checkbox"/> l. BOX(S)	<input type="checkbox"/> p. IN MACH OR EQUIP	<input type="checkbox"/> t. OTHER _____

STORAGE PRESSURE a. AMBIENT b. ABOVE AMBIENT c. BELOW AMBIENT 27

STORAGE TEMPERATURE a. AMBIENT b. ABOVE AMBIENT c. BELOW AMBIENT d. CRYOGENIC 28

%WT	HAZARDOUS COMPONENT (For mixture or waste only)	EHS	CAS #
1 60-100 29	Acetone 30	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 31	67-64-1 32
2 10-30 29	Heptane 30	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 31	142-82-5 32
3 5-10 29	Carbon Dioxide 30	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 31	124-38-9 32
4 29	30	<input type="checkbox"/> Yes <input type="checkbox"/> No 31	32
5 29	30	<input type="checkbox"/> Yes <input type="checkbox"/> No 31	32

If more hazardous components are present at greater than 1% by weight if non-carcinogenic, or 0.1% by weight if carcinogenic, attach additional sheets of paper capturing the required information.

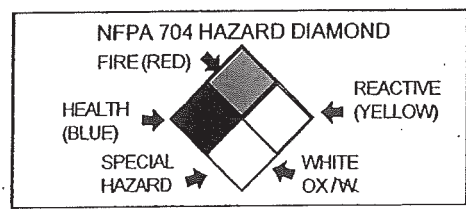
PLACARDING INFORMATION

UNDOT # Not Applicable 33
Refer to shipping papers or MSDS

DOT HAZARD CLASS ORM-D 34
Refer to shipping papers or MSDS

EPCRA YES NO 35

X _____ 36
If EPCRA, Please Sign Here



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MATERIAL SAFETY DATA SHEET

This MSDS complies with OSHA'S Hazard Communication Standard 29 CFR 1910.1200 and OSHA Form 174

IDENTITY AND DISTRIBUTOR'S INFORMATION	
NFPA Rating: Health-2; Flammability-3; Reactivity-0; Special- Manufacturer For: Battery Systems, Inc. Address: 18221 Susana Road # A Address: Rancho Dominguez, CA 90220	HMIS Rating: Health-2; Flammability-3; Reactivity-0; Personal Protection-B DOT Hazard Classification: ORM-D Identity (trade name as used on label): <h3 style="text-align: center;">Heavy Low VOC Brake Parts Cleaner 50 State VOC Compliant</h3>
Date Prepared: 10/22/08 Prepared By: IB Information Calls: (770)422-2071 Emergency Response Number: 1(800)255-3924	MSDS Number: A00730 / 504300730 Revision- first issue NOTICE: JUDGEMENT BASED ON INDIRECT TEST DATA

SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION					
COMPONENTS-CHEMICAL NAMES AND COMMON NAMES (Hazardous Components 1% or greater; Carcinogens 0.1% or greater)	CAS Number	SARA III LIST	OSHA PEL (ppm)	ACGIH TLV (ppm)	Carcinogen Ref. Source **
ACETONE	67-64-1	No	1000	750	d
HEPTANE	142-82-5	No	500	400	d
CARBON DIOXIDE	124-38-9	No	5000	5000	d

SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS	
Boiling Point: N/A	Specific Gravity (H ₂ O=1): Concentrate Only = 0.757
Vapor Pressure: PSIG @ 70°F (Aerosols): max 50	Vapor Pressure (Non-Aerosols)(mm Hg and Temperature): N/A
Vapor Density (Air = 1): N/E	Evaporation Rate (= 1): N/E
Solubility in Water: None	Water Reactive: No
Appearance and Odor: Clear forceful spray with aliphatic/ketone solvent odor.	

SECTION 3 - FIRE AND EXPLOSION HAZARD DATA		
FLAMMABILITY as per USA FLAME PROJECTION TEST (aerosols) EXTREMELY FLAMMABLE	Auto Ignition Temperature N/E	Flammability Limits in Air by % in Volume: % LEL: N/E % UEL: N/E
FLASH POINT AND METHOD USED (non-aerosols): N/A		EXTINGUISHER MEDIA: Foam, dry chemical, carbon dioxide.
SPECIAL FIRE FIGHTING PROCEDURES: Self-contained breathing apparatus.		
Unusual Fire & Explosion Hazards: Do not expose aerosols to temperatures above 130°F or the container may rupture.		

SECTION 4 - REACTIVITY HAZARD DATA	
STABILITY <input checked="" type="checkbox"/> STABLE <input type="checkbox"/> UNSTABLE	HAZARDOUS POLYMERIZATION <input type="checkbox"/> WILL <input checked="" type="checkbox"/> WILL NOT OCCUR
Incompatibility (Mat. to avoid): Strong oxidizing agents.	Conditions to Avoid: Open flame, welding arcs, heat, sparks.
Hazardous Decomposition Products: Carbon dioxide, carbon monoxide.	

SECTION 5 - HEALTH HAZARD DATA
PRIMARY ROUTES OF ENTRY: <input checked="" type="checkbox"/> INHALATION <input checked="" type="checkbox"/> INGESTION <input type="checkbox"/> SKIN ABSORPTION <input checked="" type="checkbox"/> EYE <input type="checkbox"/> NOT HAZARDOUS

ACUTE EFFECTS
Inhalation: Excessive inhalation of vapors can cause nasal & respiratory irritation, dizziness, weakness, nausea, headache, possible unconsciousness or asphyxiation.
Eye Contact: Slight irritation.
Skin Contact: Slight irritation due to defatting of skin.
Ingestion: Irritation. While likely not to occur, can result in aspiration into lungs and resulting inhalation effects.
CHRONIC EFFECTS: (Effects due to excessive exposure to the raw materials of this mixture) Excessive inhalation may result in central nervous system effects and respiratory system effects.
Medical Conditions Generally Aggravated by Exposure: May aggravate existing eye, skin, or upper respiratory conditions.

EMERGENCY FIRST AID PROCEDURES
Eye Contact: Flush with water for 15 minutes. If irritated, seek medical attention.
Skin Contact: Wash with soap and water. If irritated, seek medical attention.
Inhalation: Remove to fresh air. Resuscitate if necessary. Get medical attention.
Ingestion: DO NOT INDUCE VOMITING. Drink two large glasses of water. Get immediate medical attention.

SECTION 6 - CONTROL AND PROTECTIVE MEASURES
Respiratory Protection (specify type): If vapor concentration exceeds TLV, use respirator approved by NIOSH approved for organic vapor.
Protective Gloves: Neoprene
Eye Protection: Safety glasses recommended.
Ventilation Requirements: Adequate ventilation to keep vapor concentration below TLV.
Other Protective Clothing & Equipment: None
Hygienic Work Practices: Wash with soap and water before handling food.

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE
Steps To Be Taken If Material Is Spilled Or Released: Absorb with suitable medium. Incinerate or landfill according to local, state or federal regulations. DO NOT FLUSH TO SEWER.
Waste Disposal Methods: Aerosol cans when vented to atmospheric pressure through normal use, pose no disposal hazard.
Precautions To Be Taken In Handling & Storage: Do not puncture or incinerate containers. Do not store at temperatures above 130°F.
Other Precautions &/or Special Hazards: KEEP OUT OF REACH OF CHILDREN. Avoid food contamination.

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind.
 ** Chemical Listed as Carcinogen or Potential Carcinogen. [a] NTP [b] IARC Monograph [c] OSHA [d] Not Listed [e] Animal Data Only



HAZARDOUS MATERIALS INVENTORY FORM

FORM 3

ADD DELETE REVISED 1

Page ___ of ___ 2

FACILITY ID#	3 0 0 3 5	38	BUSINESS NAME	Battery Systems Inc
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I. FACILITY INFORMATION

CHEMICAL LOCATION	12400 Industry St, Garden Grove, CA 92841
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CONFIDENTIAL LOCATION EPCRA	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 5	MAP #	1	6	GRID #	E-3+4	7
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II. CHEMICAL INFORMATION

CHEMICAL NAME	Anti Freeze 50/50	WASTE	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 8	TRADE SECRET	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 11
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COMMON NAME	Antifreeze 50/50	An EHS Chemical	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 12
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CAS #	10	FIRE CODE HAZARD CLASSES (supplied by GGFD)	13
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TYPE (Check one item only)	<input type="checkbox"/> a. PURE <input checked="" type="checkbox"/> b. MIXTURE <input type="checkbox"/> c. WASTE 14	RADIOACTIVE	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 15	CURIES	16
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PHYSICAL STATE (Check one item only)	<input type="checkbox"/> a. SOLID <input checked="" type="checkbox"/> b. LIQUID <input type="checkbox"/> c. GAS 17	FED HAZARD CATEGORIES	<input type="checkbox"/> a. FIRE <input type="checkbox"/> b. REACTIVE <input type="checkbox"/> c. PRESSURE RELEASE 18	<input checked="" type="checkbox"/> d. ACUTE HEALTH <input checked="" type="checkbox"/> e. CHRONIC HEALTH
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AVERAGE DAILY AMOUNT	2600 19	MAXIMUM DAILY AMOUNT	2900 20	ANNUAL WASTE AMOUNT	0 21	STATE WASTE CODE	n/a 22
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UNITS	<input checked="" type="checkbox"/> a. GALLONS <input type="checkbox"/> b. CUBIC FEET <input type="checkbox"/> c. POUNDS <input type="checkbox"/> d. TONS 23	DAYS ON SITE	365 24	LARGEST CONTAINER	1 gallon 25
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STORAGE CONTAINER (Check all that apply)	<input type="checkbox"/> a. ABOVEGROUND TANK <input type="checkbox"/> b. UNDERGROUND TANK <input type="checkbox"/> c. TANK INSIDE BLDG <input type="checkbox"/> d. STEEL DRUM <input type="checkbox"/> e. PLASTIC DRUM <input type="checkbox"/> f. NONMETALLIC DRUM <input type="checkbox"/> g. METAL CONTAINER <input type="checkbox"/> h. CARBOY <input type="checkbox"/> i. VAT <input type="checkbox"/> j. FIBER DRUM <input type="checkbox"/> k. BAG(S) <input type="checkbox"/> l. BOX(S) <input checked="" type="checkbox"/> m. CYLINDER <input type="checkbox"/> n. GLASS CONTAINER <input type="checkbox"/> o. PLASTIC CONTAINER <input type="checkbox"/> p. IN MACH OR EQUIP <input type="checkbox"/> q. TANK WAGON <input type="checkbox"/> r. RAIL CAR <input type="checkbox"/> s. TOTE BIN <input type="checkbox"/> t. OTHER	26
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STORAGE PRESSURE	<input checked="" type="checkbox"/> a. AMBIENT <input type="checkbox"/> b. ABOVE AMBIENT <input type="checkbox"/> c. BELOW AMBIENT	27
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STORAGE TEMPERATURE	<input checked="" type="checkbox"/> a. AMBIENT <input type="checkbox"/> b. ABOVE AMBIENT <input type="checkbox"/> c. BELOW AMBIENT <input type="checkbox"/> d. CRYOGENIC	28
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%WT	HAZARDOUS COMPONENT (For mixture or waste only)	EHS	CAS #
1 45-48 29	Ethylene Glycol 30	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 31	107-21-1 32
2 0-5 29	Diethylene Glycol 30	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 31	111-46-6 32
3 1-2 29	Dipotassium Phosphate 30	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 31	7758-11-4 32
4 49-50 29	Water 30	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 31	7732-18-5 32
5 29	30	<input type="checkbox"/> Yes <input type="checkbox"/> No 31	32

If more hazardous components are present at greater than 1% by weight if non-carcinogenic, or 0.1% by weight if carcinogenic, attach additional sheets of paper capturing the required information.

PLACARDING INFORMATION

UNDOT #	UN3082 33
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Refer to shipping papers or MSDS

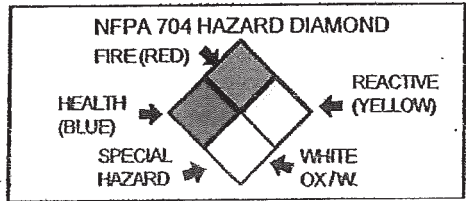
DOT HAZARD CLASS	9 34
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Refer to shipping papers or MSDS

EPCRA	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO 35
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X	36
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If EPCRA, Please Sign Here



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Initial Preparation Date: 11/27/2002
Last Revision Date: 9/23/2003
Effective Date: 12/9/2008

MATERIAL SAFETY DATA SHEET

**PRODUCT IDENTITY: FULL FORCE 50/50 PREDILUTED ANTIFREEZE &
COOLANT**

1. CHEMICAL PRODUCT & COMPANY INFORMATION

**OLD WORLD INDUSTRIES, INC.
4065 COMMERCIAL AVENUE
NORTHBROOK, ILLINOIS 60062
PHONE: 847-559-2000
EMERGENCY PHONE: 1-800-424-9300 (CHEMTREC)**

2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Material</u>	<u>CAS#</u>	<u>% by Wt</u>	<u>PEL (OSHA)</u>	<u>TLV (ACGIH)</u>
Water	7732-18-5	49 - 50	None	None
Ethylene Glycol	107-21-1	45 - 48	50 ppm	50 ppm
Diethylene Glycol	111-46-6	0 - 2	None	None
Dipotassium Phosphate	7758-11-4	< 2	None	None

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Slight odor.

May be fatal if swallowed.

Vapors can cause eye irritation.

Lowest Known LD50 (Oral)
Lowest Known LD50 (Skin)

107-21-1
107-21-1

11,680 mg/kg (Rats)
19,060 mg/kg (Rabbits)

HAZARD RATING SYSTEM

**NFPA: HEALTH: 1
HMIS: HEALTH: 2**

**FLAMMABILITY: 1
FLAMMABILITY: 1**

**REACTIVITY: 0
REACTIVITY: 0**

KEY: 0 - Minimal 1 - Slight 2 - Moderate 3 - Serious 4 - Severe

4. FIRST AID MEASURES

Ensure physician has access to this MSDS.

TREATMENT

Eyes: Immediately flush eyes with large amounts of water for 15 minutes, lifting lower and upper lids. Get medical attention as soon as possible. Contact lenses should never be worn when working with this chemical.

Skin: Flush area of skin contact immediately with large amounts of water for at least 15 minutes while removing contaminated clothing. If irritation persists after flushing, get medical attention promptly. Wash clothing before re-use.

Inhalation: If inhaled, immediately remove victim to fresh air and call *emergency medical care*. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Ingestion: Obtain medical attention immediately. If patient is fully conscious, give two glasses of water. Do not induce vomiting. If medical advice is delayed, and if the person has swallowed a moderate volume of material (a few ounces), then give three to four ounces of hard liquor, such as whisky. For children, give proportionally less liquor, according to weight.

Notes to Physician:

It is estimated that the lethal oral dose to adults is of the order of 1.0 ml/kg. Ethylene glycol is metabolized by alcohol dehydrogenase to various metabolites including glyceraldehydes, glycolic acid and oxalic acid which cause an elevated anion-gap metabolic acidosis and renal tubular injury. The signs and symptoms in ethylene glycol poisoning are those of metabolic acidosis, CNS depression, and kidney injury. Urinalysis may show albuminuria, hematuria and oxaluria. Clinical chemistry may reveal anion-gap metabolic acidosis and uremia. The currently recommended medical management of ethylene glycol poisoning includes elimination of ethylene glycol and metabolites, correction of metabolic acidosis and prevention of kidney injury. It is essential to have immediate and follow up urinalysis and clinical chemistry. There should be particular emphasis on acid-base balance and renal function tests. A continuous infusion of 5% sodium bicarbonate with frequent monitoring of electrolytes and fluid balance is used to achieve correction of metabolic acidosis and forced diuresis. As a competitive substrate for alcohol dehydrogenase, ethanol is antidotal. Given in the early stages of intoxication, it blocks the formulation of nephrotoxic metabolites. A therapeutically effective blood concentration of ethanol is in the range 100-150 mg/dl, and should be achieved by a rapid loading dose and maintained by intravenous infusion. For severe and/or deteriorating cases, hemodialysis may be required. Dialysis should be considered for patients who are symptomatic, have severe metabolic acidosis, a blood ethylene glycol concentration greater than 25 md/dl, or compromise of renal functions.

A more effective intravenous antidote for physician use is 4-methylpyrazole, a potent inhibitor of alcohol dehydrogenases, which effectively blocks the formation of toxic metabolites of ethylene glycol. It has been used to decrease the metabolic consequences of ethylene glycol poisoning before metabolic acidosis coma, seizures, and renal failure have occurred. A generally recommended protocol is a loading dose of 15 mg/kg followed by 10 mg/kg every 12 hours for 4 doses and then 15 mg/kg every 12 hours until ethylene glycol concentrations are below 20 mg/100 ml. Slow intravenous infusion is required. Since 4-methylpyrazole is dialyzable, increased dosage may be necessary during hemodialysis. Additional therapeutic measures may include the administration of cofactors involved in the metabolism of ethylene glycol. Thiamine (100 mg) and pyridoxine (50 mg) should be given every six hours.

Pulmonary edema with hypoxemia has been described in a number of patients following poisoning with ethylene glycol. The mechanism of production has not been elucidated, but it appears to be non-cardiogenic in origin in several cases. Respiratory support with mechanical ventilation and positive end expiratory pressure may be required. There may be cranial nerve involvement in the late stages of toxicity from swallowed ethylene glycol. In particular, effects

7. HANDLING AND STORAGE

Steps to be Taken in Case Material is Released or Spilled: Eliminate all sources of ignition in vicinity of the spilled or released fluid.

Other Precautions: Use normal precautions in handling any combustible liquid. Keep container closed when not in use. Store away from heat or open flame. Product on surfaces can cause slippery conditions. Practice reasonable care and cleanliness. Avoid breathing spray mists if generated. Keep out of reach of children. Product may become a solid at temperatures below -37°C (-34°F). Do not store near food, foodstuffs, drugs or potable water supplies.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Respiratory Protection: Respiratory protection is required if airborne concentration exceeds TLV. At any detectable concentration any self-contained breathing apparatus with a full face piece and operated in a pressure-demand or other positive pressure mode or any supplied-air respirator with a full face piece and operated in a pressure-demand or other positive pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive pressure mode.

Escape: Any air-purifying full face piece respirator (gas mask) with a chin-style or front- or back-mounted organic vapor canister or any appropriate escape-type self-contained breathing apparatus.

Skin Protection: Protective gloves recommended when prolonged skin contact cannot be avoided. Polyethylene; Neoprene; Nitrile; Polyvinyl alcohol; Natural Rubber, Butyl Rubber. Safety shower should be available.

Eye Protection: Safety goggles and face shield. Emergency eyewash should be available. Contact lenses should not be worn when working with this chemical.

Engineering Controls: Use general or local exhaust ventilation to meet TLV requirements.

EXPOSURE LIMITS

<u>Component</u>	<u>Exposure Limits</u>	<u>Skin Form</u>
Ethylene glycol	100 mg/m3 CEILING ACGIH	Aerosol
Ethylene glycol	125 mg/m3 CEILING OSHA-vacated	
	50 ppm CEILING OSHA - vacated	
	100 mg/m3 CEILING UCC	Aerosol and Vapor
Diethylene glycol	50 ppm TWA8 AIHA WEEL	Aerosol and Vapor
Diethylene glycol	10 mg/m3 TWA8 AIHA WEEL	Aerosol

In the Exposure Limits Chart above, if there is no specific qualifier (i.e., Aerosol) listed in the Form Column for a particular limit, the listed limit includes all airborne forms of the substance that can be inhaled.

A "blank" in the Skin column indicates that exposure by the cutaneous (skin) route is not a potential significant contributor to overall exposure.

available information to suggest that ethylene glycol has caused birth defects in humans. Cutaneous application of ethylene glycol is ineffective in producing developmental toxicity. Exposure to high aerosol concentrations is only minimally effective in producing developmental toxicity. The major route for producing developmental toxicity is perorally. Two chronic feeding studies, using rats and mice, have not produced any evidence that ethylene glycol causes dose-related increases in tumor incidence or a different pattern of tumors compared with untreated controls. The absence of carcinogenic potential for ethylene glycol has been supported by numerous in vitro genotoxicity studies showing that it does not produce mutagenic or clastogenic effects.

A chronic dietary feeding study of diethylene glycol with rats showed mild kidney injury at 1%, while concentrations of 2% and 4% caused more marked kidney injury. In addition, at 2% and 4% of diethylene glycol in the diet, some rats developed benign papillary tumors in the urinary bladder. These have been attributed to the presence of urinary bladder calcium oxalate stones. No evidence for carcinogenicity was found with a chronic skin-painting study with diethylene glycol in mice. The absence of a direct chemical carcinogenic effect adds with the results in vitro genotoxicity studies that show that it does not produce mutagenic or clastogenic effects. A feeding study employing up to 5.0% diethylene glycol in the diet failed to produce any teratogenic effects. In a mouse continuous breeding study with large doses of diethylene glycol in drinking water, there was evidence for reproductive toxicity at 3.5% (equivalent to 6.1 g/kg/day) as reduced number of litter, live pups per litter and live pup weight. No such effects were seen at 1.75% (approximately 3.05 g/kg/day). The relevance of these very high dosages to human health is uncertain. Pregnant rats receiving undiluted diethylene glycol by gavage over the period of organogenesis had toxic effects at 4.0 and 8.0 ml/kg/day as mortality, decreased body weight, decreased food consumption increased water consumption and increased liver and kidney weights. Fetotoxicity was seen only at these maternally toxic dosages. Decreased fetal body weight occurred at 8.0 ml/kg/day, and increased skeletal variants at 4.0 and 8.0 ml/kg/day. No embryotoxic or teratogenic effects were seen. Neither maternal toxicity nor fetotoxicity occurred at 1.0 ml/kg/day. In a study with mice also receiving undiluted diethylene glycol over the period of organogenesis, maternal toxicity occurred at 2.5 and 10.0 ml/kg/day, but not at 0.5 ml/kg/day. Definitive developmental toxicity was not seen in this species.

ACUTE TOXICITY

Peroral: The lethal dose in humans is estimated to be 3 oz. or 100 ml.

Rat: LD50 (6000 - 13000) mg/kg

Percutaneous:

Rabbit: LD50 = >22270 mg/kg; 24 h occluded

Inhalation:

Rat: 8-hour exposure, substantially saturated vapor studies, dynamic generation method

Mortality: 0/6

Inhalation: Mist/vapor study, rat, at 170°C, 8-hour exposure = 2.2 mg/l

Mortality: 0/6

Inhalation:

Rat: 8-hour exposure, fog = 10000 ppm; 65° - 70°C

Mortality: 0/6

but not the percutaneous route. The hypothesis from literature sources exists that developmental toxicity is caused by a metabolite of ethylene glycol, called glycolic acid, and not parent ethylene glycol. Under most conditions of ethylene glycol exposure, the glycolic acid metabolite is present in the blood in very low levels. However, it can become the major metabolite following large doses of ethylene glycol due to saturation of glycolic acid oxidation and/or elimination. When levels of this acidic metabolite exceed the capacity of maternal blood buffers to neutralize it, a maternal metabolic acidosis ensues, which has been hypothesized to be the true agent responsible for ethylene glycol induced developmental toxicity. Research suggests that ethylene glycol developmental toxicity is due to a dose-rate dependent toxicokinetic shift leading to glycolate accumulation and metabolic acidosis.

ADDITIONAL STUDIES

Ethylene glycol has been shown to produce dose-related teratogenic effects in rats and mice when given by gavage or in drinking water at high concentrations or doses. The no-effect doses for developmental toxicity for ethylene glycol given by gavage over the period of organogenesis has been shown to be 150 mg/kg/day for the mouse and 500 mg/kg/day for the rat. Also, in a preliminary study to assess the effects of exposure of pregnant rats and mice to aerosols at concentrations of 150, 1000 and 2500 mg/m³ for 6 hours a day throughout the period of organogenesis, teratogenic effects were produced at the highest concentration, but only in mice. The conditions of these latter experiments did not allow a conclusion as to whether the developmental toxicity was mediated by inhalation of aerosol, percutaneous absorption of ethylene glycol from contaminated skin, or swallowing of ethylene glycol as a result of grooming the wetted coat. In a further study, comparing effects from high aerosol concentration by whole-body or nose-only exposure, it was shown that nose-only exposure resulted in maternal toxicity (1000 and 2500 mg/m³) and developmental toxicity with minimal evidence of teratogenicity (2500 mg/m³). The no-effects concentration (based on maternal toxicity) was 500 mg/m³. In a further study in mice, no teratogenic effects could be produced when ethylene glycol was applied to the skin of pregnant mice over the period of organogenesis. The above observations suggest that ethylene glycol is to be regarded as an animal teratogen. There is currently no available information to suggest that ethylene glycol has caused birth defects in humans. Cutaneous application of ethylene glycol is ineffective in producing developmental toxicity. Exposure to high aerosol concentrations is only minimally effective in producing developmental toxicity.

12. ECOLOGICAL INFORMATION

(Concentrated Ethylene Glycol)

ENVIRONMENTAL FATE

Movement & Partitioning: Bioconcentration potential is low (BCF less than 100 or Log Kow less than 3). Log octanol/water partition coefficient (log Kow) is -1.36. Henry's Law Constant (H) is 6.0E-08 atm-m³/mol. Bioconcentration factor (BCF) is 10 in golden orfe.

Degradation & Transformation: Biodegradation under aerobic static laboratory conditions is high (BOD20 or BOD28/ThOD greater than 40%). 5-Day biochemical oxygen demand (BOD5) is 0.78 p/p. 10-Day biochemical oxygen demand (BOD10) is 1.06 p/p. 20-Day biochemical oxygen demand (BOD20) is 1.15 p/p. Theoretical oxygen demand (THOD) is calculated to be 1.29 p/p. Biodegradation may occur under both aerobic and anaerobic conditions (in either the presence or absence of oxygen). Inhibitory concentration (IC50) in OECD "Activated Sludge, Respiration Inhibition Test" (Guideline # 209) is < 1000 mg/L. Degradation is expected in the atmospheric environment within days to weeks.

Ecotoxicology: Material is practically non-toxic to aquatic organisms on an acute basis (LC50 greater than 100 mg/L in most sensitive species). Acute LC50 for fathead minnow (*Pimephales promelas*) is 51000 mg/L. Acute LC50 for bluegill (*Lepomis macrochirus*) is 27549 mg/L. Acute LC50 for rainbow trout (*Oncorhynchus mykiss*) is about 18000-46000 mg/L. Acute LC50 for guppy (*Poecilia reticulata*) is 49300 mg/L. Acute LC50 for water flea (*Daphnia magna*) is 46300-51100 mg/L. Acute LC50 for the cladoceran *Ceriodaphnia dubia* is 10000-25800 mg/L. Acute LC50 for crayfish is 91430 mg/L. Acute LC50 for brine shrimp (*Artemia salina*) is 20000 mg/L. Acute LC50 for golden orfe



HAZARDOUS MATERIALS INVENTORY FORM

FORM 3

ADD DELETE REVISED 1

Page ___ of ___ 2

FACILITY ID#	3 0 0 3 5	38	BUSINESS NAME	Battery Systems Inc
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I. FACILITY INFORMATION

CHEMICAL LOCATION	12400 Industry St, Garden Grove, CA 92841
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CONFIDENTIAL LOCATION EPCRA	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 5	MAP #	1	6	GRID #	E-3+4	7
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II. CHEMICAL INFORMATION

CHEMICAL NAME	Anti Freeze	WASTE	<input type="checkbox"/> Yes 8	TRADE SECRET	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 11
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COMMON NAME	Antifreeze	9	An EHS Chemical	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 12
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CAS #	10	FIRE CODE HAZARD CLASSES (supplied by GGFD)	13
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TYPE (Check one item only)	<input type="checkbox"/> a. PURE <input checked="" type="checkbox"/> b. MIXTURE <input type="checkbox"/> c. WASTE 14	RADIOACTIVE	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 15	CURIES	16
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PHYSICAL STATE (Check one item only)	<input type="checkbox"/> a. SOLID <input checked="" type="checkbox"/> b. LIQUID <input type="checkbox"/> c. GAS 17	FED HAZARD CATEGORIES	<input type="checkbox"/> a. FIRE <input type="checkbox"/> b. REACTIVE <input type="checkbox"/> c. PRESSURE RELEASE 18	<input checked="" type="checkbox"/> d. ACUTE HEALTH <input checked="" type="checkbox"/> e. CHRONIC HEALTH
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AVERAGE DAILY AMOUNT	8500 19	MAXIMUM DAILY AMOUNT	9000 20	ANNUAL WASTE AMOUNT	0 21	STATE WASTE CODE	n/a 22
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UNITS	<input checked="" type="checkbox"/> a. GALLONS <input type="checkbox"/> b. CUBIC FEET <input type="checkbox"/> c. POUNDS <input type="checkbox"/> d. TONS 23	DAYS ON SITE	365 24	LARGEST CONTAINER	1 gallon 25
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STORAGE CONTAINER (Check all that apply)	<input type="checkbox"/> a. ABOVEGROUND TANK <input type="checkbox"/> b. UNDERGROUND TANK <input type="checkbox"/> c. TANK INSIDE BLDG <input type="checkbox"/> d. STEEL DRUM <input type="checkbox"/> e. PLASTIC DRUM <input type="checkbox"/> f. NONMETALLIC DRUM <input type="checkbox"/> g. METAL CONTAINER <input type="checkbox"/> h. CARBOY <input type="checkbox"/> i. VAT <input type="checkbox"/> j. FIBER DRUM <input type="checkbox"/> k. BAG(S) <input type="checkbox"/> l. BOX(S) <input checked="" type="checkbox"/> m. CYLINDER <input type="checkbox"/> n. GLASS CONTAINER <input checked="" type="checkbox"/> o. PLASTIC CONTAINER <input type="checkbox"/> p. IN MACH OR EQUIP <input type="checkbox"/> q. TANK WAGON <input type="checkbox"/> r. RAIL CAR <input type="checkbox"/> s. TOTE BIN <input type="checkbox"/> t. OTHER _____ 26
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STORAGE PRESSURE	<input checked="" type="checkbox"/> a. AMBIENT <input type="checkbox"/> b. ABOVE AMBIENT <input type="checkbox"/> c. BELOW AMBIENT 27
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STORAGE TEMPERATURE	<input checked="" type="checkbox"/> a. AMBIENT <input type="checkbox"/> b. ABOVE AMBIENT <input type="checkbox"/> c. BELOW AMBIENT <input type="checkbox"/> d. CRYOGENIC 28
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%WT	HAZARDOUS COMPONENT (For mixture or waste only)	EHS	CAS #
1 90-95 29	Ethylene Glycol 30	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 31	107-21-1 32
2 0-5 29	Diethylene Dlycol 30	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 31	111-46-6 32
3 1-2 29	Dipotassium Phosphate 30	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 31	7758-11-4 32
4 29	30	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 31	32
5 29	30	<input type="checkbox"/> Yes <input type="checkbox"/> No 31	32

If more hazardous components are present at greater than 1% by weight if non-carcinogenic, or 0.1% by weight if carcinogenic, attach additional sheets of paper capturing the required information.

PLACARDING INFORMATION

UNDOT #	UN3082 33
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Refer to shipping papers or MSDS

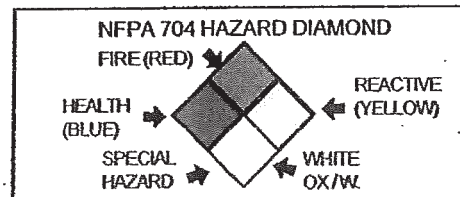
DOT HAZARD CLASS	9 34
------------------	------

Refer to shipping papers or MSDS

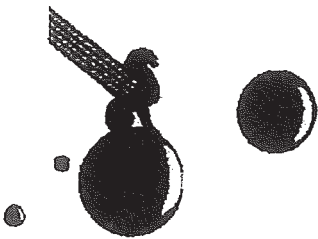
EPCRA	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO 35
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X	36
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If EPCRA, Please Sign Here



MAKE AS MANY COPIES OF CHEMICAL INVENTORY FORM AS NEEDED



Initial Preparation Date: 4/5/89
Last Revision Date: 4/10/02

MATERIAL SAFETY DATA SHEET

PRODUCT IDENTITY: ALL WEATHER ANTIFREEZE & COOLANT

1. CHEMICAL PRODUCT & COMPANY INFORMATION

OLD WORLD INDUSTRIES, INC.
4065 COMMERCIAL AVENUE
NORTHBROOK, ILLINOIS 60062
PHONE: 847-559-2000
EMERGENCY PHONE: 1-800-424-9300 (CHEMTREC)

2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Material</u>	<u>CAS#</u>	<u>% by Wt</u>	<u>PEL (OSHA)</u>	<u>TLV (ACGIH)</u>
Ethylene Glycol	107-21-1	90 - 95	50 ppm	50 ppm
Diethylene Glycol	111-46-6	0 - 5	None	None
Dipotassium Phosphate	7758-11-4	1 - 2	None	None

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Slight odor.

May be fatal if swallowed.

Vapors can cause eye irritation.

Lowest Known LD50 (Oral)
Lowest Known LD50 (Skin)

107-21-1
107-21-1

5840 mg/kg (Rats)
9530 mg/kg (Rabbits)

HAZARD RATING SYSTEM

NFPA: HEALTH: 1
HMIS: HEALTH: 2

FLAMMABILITY: 1
FLAMMABILITY: 1

REACTIVITY: 0
REACTIVITY: 0

KEY: 0 – Minimal 1 – Slight 2 - Moderate 3 - Serious 4 - Severe

POTENTIAL HEALTH EFFECTS

Routes of Exposure: Inhalation, Ingestion, Skin Contact/Absorption, Eye Contact

Eye: May cause slight transient (temporary) eye irritation. Corneal injury is unlikely. Vapors or mists may cause eye irritation.

Skin: Prolonged or repeated exposure not likely to cause significant skin irritation. A single prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts. Repeated skin exposure may result in absorption of harmful amounts. Massive contact with damaged skin or of material sufficiently hot to burn skin may result in absorption of potential lethal amounts.

Ingestion: Single dose oral toxicity is considered to be moderate. Excessive exposure may cause central nervous system effects, cardiopulmonary effects (metabolic acidosis), and kidney failure. Small amounts swallowed incidental to normal handling operations are not likely to cause injury; however, swallowing amounts larger than that may cause serious injury, even death.

Inhalation: At room temperature, exposures to vapors are minimal due to physical properties; higher temperatures may generate vapor levels sufficient to cause adverse effects.

Systemic (Other Target Organ) Effects: Repeated excessive exposures may cause severe kidney and also liver and gastrointestinal effects. Signs and symptoms of excessive exposure may be central nervous system effects. Signs and symptoms of excessive exposure may be nausea and/or vomiting. Signs and symptoms of excessive exposure may be anesthetic or narcotic effects. Observations in animals include formation of bladder stones after repeated oral doses of ethylene glycol. Reports of kidney failure and death in burn patients suggest the ethylene glycol may have been a factor. The use of topical applications containing this material may not be appropriate in severely burned patients or individuals with impaired renal function.

Cancer Information: Based on data from long-term animal studies, ethylene glycol is not believed to pose a carcinogenic risk to man.

Teratology (Birth Defects): Exposure to ethylene glycol has caused birth defects in laboratory animals only at doses toxic to the mother.

Reproductive Effects: Ethylene glycol has not interfered with reproduction in animal studies except at very high doses.

CHRONIC, PROLONGED OR REPEATED OVEREXPOSURE

Effects of Repeated Overexposure: Repeated inhalation of ethylene glycol mist may produce signs of central nervous system involvement, particularly dizziness and nystagmus.

Other Effects of Overexposure: repeated skin contact with ethylene glycol may, in a very small proportion of cases, cause sensitization with the development of allergic contact dermatitis. The incidence is significantly less than 1% with the undiluted material.

4. *FIRST AID MEASURES* ***Ensure physician has access to this MSDS.***

TREATMENT

Eyes: Immediately flush eyes with large amounts of water for 15 minutes, lifting lower and upper lids. Get medical attention as soon as possible. Contact lenses should never be worn when working with this chemical.

Skin: Flush area of skin contact immediately with large amounts of water for at least 15 minutes while removing contaminated clothing. If irritation persists after flushing, get medical attention promptly. Wash clothing before re-use.

Inhalation: If inhaled, immediately remove victim to fresh air and call *emergency medical care*. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Ingestion: Obtain medical attention immediately. If patient is fully conscious, give two glasses of water. Do not induce vomiting. If medical advice is delayed, and if the person has swallowed a moderate volume of material (a few ounces), then give three to four ounces of hard liquor, such as whisky. For children, give proportionally less liquor, according to weight.

Notes to Physician:

It is estimated that the lethal oral dose to adults is of the order of 1.0 ml/kg. Ethylene glycol is metabolized by alcohol dehydrogenase to various metabolites including glyceraldehydes, glycolic acid and oxalic acid which cause an elevated anion-gap metabolic acidosis and renal tubular injury. The signs and symptoms in ethylene glycol poisoning are those of metabolic acidosis, CNS depression, and kidney injury. Urinalysis may show albuminuria, hematuria and oxaluria. Clinical chemistry may reveal anion-gap metabolic acidosis and uremia. The currently recommended medical management of ethylene glycol poisoning includes elimination of ethylene glycol and metabolites, correction of metabolic acidosis and prevention of kidney injury. It is essential to have immediate and follow up urinalysis and clinical chemistry. There should be particular emphasis on acid-base balance and renal function tests. A continuous infusion of 5% sodium bicarbonate with frequent monitoring of electrolytes and fluid balance is used to achieve correction of metabolic acidosis and forced diuresis. As a competitive substrate for alcohol dehydrogenase, ethanol is antidotal. Given in the early stages of intoxication, it blocks the formulation of nephrotoxic metabolites. A therapeutically effective blood concentration of ethanol is in the range 100-150 mg/dl, and should be achieved by a rapid loading dose and maintained by intravenous infusion. For severe and/or deteriorating cases, hemodialysis may be required. Dialysis should be considered for patients who are symptomatic, have severe metabolic acidosis, a blood ethylene glycol concentration greater than 25 md/dl, or compromise of renal functions.

A more effective intravenous antidote for physician use is 4-methylpyrazole, a potent inhibitor of alcohol dehydrogenases, which effectively blocks the formation of toxic metabolites of ethylene glycol. It has been used to decrease the metabolic consequences of ethylene glycol poisoning before metabolic acidosis coma, seizures, and renal failure have occurred. A generally recommended protocol is a loading dose of 15 mg/kg followed by 10 mg/kg every 12 hours for 4 doses and then 15 mg/kg every 12 hours until ethylene glycol concentrations are below 20 mg/100 ml. Slow intravenous infusion is required. Since 4-methylpyrazole is dialyzable, increased dosage may be necessary during hemodialysis. Additional therapeutic measures may include the administration of cofactors involved in the metabolism of ethylene glycol. Thiamine (100 mg) and pyridoxine (50 mg) should be given every six hours.

Pulmonary edema with hypoxemia has been described in a number of patients following poisoning with ethylene glycol. The mechanism of production has not been elucidated, but it appears to be non-cardiogenic in origin in several cases. Respiratory support with mechanical ventilation and positive end expiratory pressure may be required. There may be cranial nerve involvement in the late stages of toxicity from swallowed ethylene glycol. In particular, effects have been reported involving the seventh, eighth and ninth cranial nerves, presenting with bilateral facial paralysis, diminished hearing and dysphasia.

5. FIRE FIGHTING MEASURES

Flammable Properties

Flash Point: 119°C (247°F)

Method Used: Setaflash

Autoignition Temperature: Autoignition temperature for ethylene glycol is 398°C (748°F).

Flammability Limits - % of vapor concentration at which product can ignite in presence of spark.

Lower Flammability Limit: 3.2%

Upper Flammability Limit: 15.3%

Hazardous Combustion Products: Hazardous combustion products may include and are not limited to carbon monoxide, carbon dioxide and trace amounts of aldehydes and organic acids. When available oxygen is limited, as in a fire or when heated to very high temperatures by a hot wire or plate, carbon monoxide and other hazardous compounds such as aldehydes might be generated.

Extinguishing Media: Water fog or fine spray. Alcohol resistant foams (ATC type) are preferred if available. General purpose synthetic foams (including AFFF) or protein foams may function, but much less effectively. Carbon dioxide. Dry chemical. Do not use direct water stream. May spread fire.

Fire Fighting Instructions: No fire and explosion hazards expected under normal storage and handling conditions (i.e. ambient temperatures). However, ethylene glycol or solutions of ethylene glycol and water can form flammable vapors with air if heated sufficiently. Keep people away. Isolate fire area and deny unnecessary entry.

Protective Equipment for Fire Fighters: Wear positive-pressure, self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire-fighting helmet, coat, pants, boots and gloves).

6. ACCIDENTAL RELEASE MEASURES

Protect People: Material is moderately toxic when ingested. Take adequate precautions to keep people, especially children away from spill site. PVC-coated rubber gloves and monogoggles or face shield can be used during cleanup of spill site. Product on surfaces can cause slippery conditions. Practice reasonable care and cleanliness. Avoid breathing spray mists if generated. Keep out of reach of children. Product may become a solid at temperatures below -18°C (0°F). Do not store near food, foodstuffs, drugs or potable water supplies.

Protect the Environment: Do not dump used product or diluted material into sewers, on the ground, or into any body of water.

Cleanup: Small spills: Soak up with absorbent material. Large spills: Dike and pump into suitable containers for disposal. Ensure compliance with all applicable statutes that require notification of appropriate government officials.

7. HANDLING AND STORAGE

Steps to be Taken in Case Material is Released or Spilled: Eliminate all sources of ignition in vicinity of the spilled or released fluid.

Other Precautions: Use normal precautions in handling any combustible liquid. Keep container closed when not in use. Store away from heat or open flame. Product on surfaces can cause slippery conditions. Practice reasonable care and cleanliness. Avoid breathing spray mists if generated. Keep out of reach of children. Product may become a solid at temperatures below -18°C (0°F). Do not store near food, foodstuffs, drugs or potable water supplies.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Respiratory Protection: Respiratory protection is required if airborne concentration exceeds TLV. At any detectable concentration any self-contained breathing apparatus with a full face piece and operated in a pressure-demand or other positive pressure mode or any supplied-air respirator with a full face piece and operated in a pressure-demand or other positive pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive pressure mode.

Escape: Any air-purifying full face piece respirator (gas mask) with a chin-style or front- or back-mounted organic vapor canister or any appropriate escape-type self-contained breathing apparatus.

Skin Protection: Protective gloves recommended when prolonged skin contact cannot be avoided. Polyethylene; Neoprene; Nitrile; Polyvinyl alcohol; Natural Rubber, Butyl Rubber. Safety shower should be available.

Eye Protection: Safety goggles and face shield. Emergency eyewash should be available. Contact lenses should not be worn when working with this chemical.

Engineering Controls: Use general or local exhaust ventilation to meet TLV requirements.

EXPOSURE LIMITS

<u>Component</u>	<u>Exposure Limits</u>	<u>Skin Form</u>
Ethylene glycol	100 mg/m ³ CEILING ACGIH	Aerosol
Ethylene glycol	125 mg/m ³ CEILING OSHA-vacated	
	50 ppm CEILING OSHA – vacated	
	100 mg/m ³ CEILING UCC	Aerosol and Vapor
Diethylene glycol	50 ppm TWA8 AIHA WEEL	Aerosol and Vapor
Diethylene glycol	10 mg/m ³ TWA8 AIHA WEEL	Aerosol

In the Exposure Limits Chart above, if there is no specific qualifier (i.e., Aerosol) listed in the Form Column for a particular limit, the listed limit includes all airborne forms of the substance that can be inhaled.

A "blank" in the Skin column indicates that exposure by the cutaneous (skin) route is not a potential significant contributor to overall exposure.

9. PHYSICAL / CHEMICAL PROPERTIES

Boiling Range:	171 - 175°C (339 - 348°F)
Freeze Point:	-18°C (0°F)
Specific Gravity (Water =1):	1.12
Pounds/Gallons:	9.3
Vapor Pressure (mm of Hg) @ 20C:	<0.1
Vapor Density (air=1):	2.1
Water Solubility:	Complete
Evaporation Rate (BuAc = 1):	Nil
% Volatile By Volume:	97.0
Appearance:	Green
Odor:	Mild
pH (50% Water Solution):	10.5-11.0

10. STABILITY & REACTIVITY DATA

Stability:	Stable
Conditions to Avoid:	Keep away from flame
Incompatibility (Materials to Avoid):	Strong acid or oxidizing agents
Hazardous Decomposition Products:	Incomplete combustion may produce CO gas
Hazardous Polymerization:	Will not occur

11. TOXICOLOGICAL INFORMATION

Skin: The dermal LD50 has not been determined.

Ingestion: The lethal dose in humans is estimated to be 100 ml (3 ozs.). The oral LD50 for rats is in the 6000-13,000-mg/kg range.

Mutagenicity (The Effects on Genetic Material): In vitro mutagenicity studies were negative. Animal mutagenicity studies were negative.

Significant Data with Possible Relevance to Humans: Ethylene glycol has been shown to produce dose-related teratogenic effects in rats and mice when given by gavage or in drinking water at high concentrations or doses. The no-effect doses for developmental toxicity for ethylene glycol given by gavage over the period of organogenesis has been shown to be 150 mg/kg/day for the mouse and 500 mg/kg/day for the rat. Also, in a preliminary study to assess the effects of exposure of pregnant rats and made to aerosol at concentrations of 150, 1000 and 25000 mg/m³ for 6 hours a day throughout the period of organogenesis, teratogenic effects were produced at the highest concentration, but only in mice. The conditions of these latter experiments did not allow a conclusion as to whether the developmental toxicity was mediated by inhalation of aerosol percutaneous absorption of ethylene glycol from contaminated skin, or swallowing ethylene glycol as a result of grooming the wetted coat. In a further study, comparing effects from high aerosol concentration by whole-body or nose-only exposure, it was shown that nose-only exposure resulted in maternal toxicity (1000 and 25000 mg/m³) and developmental toxicity with minimal evidence of teratogenicity (2500 mg/m³). The no-effects concentration (based on maternal toxicity) was 500 mg/m³. In a further study in mice, no teratogenic effects could be produced when ethylene glycol was applied to skin of pregnant mice over the period of organogenesis. The above observations suggest that ethylene glycol is to be regarded as an animal teratogen. There is currently no available information to suggest that ethylene glycol has caused birth defects in humans. Cutaneous application of ethylene glycol is ineffective in producing developmental toxicity. Exposure to high aerosol concentrations is only minimally effective in producing developmental toxicity. The major route for producing developmental toxicity is perorally. Two chronic feeding studies, using rats and mice, have not produced any evidence that ethylene glycol causes dose-related increases in tumor incidence or a different pattern of tumors compared with untreated controls. The absence of carcinogenic potential for ethylene glycol has been supported by numerous in vitro genotoxicity studies showing that it does not produce mutagenic or clastogenic effects.

A chronic dietary feeding study of diethylene glycol with rats showed mild kidney injury at 1%, while concentrations of 2% and 4% caused more marked kidney injury. In addition, at 2% and 4% of diethylene glycol in the diet, some rats developed benign papillary tumors in the urinary bladder. These have been attributed to the presence of urinary bladder calcium oxalate stones. No evidence for carcinogenicity was found with a chronic skin-painting study with diethylene glycol in mice. The absence of a direct chemical carcinogenic effect accords with the results in vitro genotoxicity studies that show that it does not produce mutagenic or clastogenic effects. A feeding study employing up to 5.0% diethylene glycol in the diet failed to produce any teratogenic effects. In a mouse continuous breeding study with large doses of diethylene glycol in drinking water, there was evidence for reproductive toxicity at 3.5% (equivalent to 6.1 g/kg/day) as reduced number of litter, live pups per litter and live pup weight. No such effects were seen at 1.75% (approximately 3.05 g/kg/day). The relevance of these very high dosages to human health is uncertain. Pregnant rats receiving undiluted diethylene glycol by gavage over the period of organogenesis had toxic effects at 4.0 and 8.0 ml/kg/day as mortality, decreased body weight, decreased food consumption increased water consumption and increased liver and kidney weights. Fetotoxicity was seen only at these maternally toxic dosages. Decreased fetal body weight occurred at 8.0 ml/kg/day, and increased skeletal variants at 4.0 and 8.0 ml/kg/day. No embryotoxic or teratogenic effects were seen. Neither maternal toxicity nor fetotoxicity occurred at 1.0 ml/kg/day. In a study with mice also receiving undiluted diethylene glycol over the period of organogenesis, maternal toxicity occurred at 2.5 and 10.0 ml/kg/day, but not at 0.5 ml/kg/day. Definitive developmental toxicity was not seen in this species.

ACUTE TOXICITY

Peroral: The lethal dose in humans is estimated to be 3 oz. or 100 ml.

Rat: LD50 (6000 – 13000) mg/kg

Percutaneous:

Rabbit: LD50 = >22270 mg/kg; 24 h occluded

Inhalation:

Rat: 8-hour exposure, substantially saturated vapor studies, dynamic generation method

Mortality: 0/6

Inhalation: Mist/vapor study, rat, at 170°C, 8-hour exposure = 2.2 mg/l

Mortality: 0/6

Inhalation:

Rat: 8-hour exposure, fog = 10000 ppm; 65° - 70°C

Mortality: 0/6

IRRITATION**Skin:**

Rabbit: 24-hour occluded contact, 0.5 ml

Results: Minor erythema and edema

Skin:

Human: Primary irritation patch test, 48-hour occluded, 0.2 ml

Results: Evidence of irritation

Eye:

Rabbit: 0.1 ml

Results: Minor transient iritis, conjunctival irritation with discharge

REPEATED EXPOSURE

In a 7-day dietary study with rats, a significant increase in kidney weights in females was observed at 5.0 gm/kg. The NOEL was 2.5 gm/kg.

In a 24-month dietary study with rats, increased mortality in males was observed at the highest dose, 1.0 gm/kg/day. There were multiple signs: mineralization of several organs, including the cardiac vessels, cardiac muscle, vas deferens, stomach and pulmonary vessels; cellular hyperplasia of the parathyroids, hemosiderosis of the spleen, myocardial fibrosis, portal fibrosis of the liver, bile duct hyperplasia and hydronephrosis and oxylate nephrosis of the kidneys. Ethylene glycol was not oncogenic.

In a 90-day dietary study with dogs, repeated exposures to 2.5 gm/kg resulted in acute renal failure and deaths. The NOAEL was 1.0 gm/kg.

SENSITIZATION (ANIMAL AND HUMAN STUDIES)

Repeated skin contact with ethylene glycol may, in a very small proportion of cases, cause sensitization with the development of allergic contact dermatitis. The incidence is significantly less than 1% with the undiluted material.

REPRODUCTIVE TOXICITY

A three-generation study indicated that ethylene glycol did not affect reproductive parameters at dietary concentrations up to 1.0 gm/kg/day in any generation.

CHRONIC TOXICITY AND CARCINOGENICITY

Two chronic feeding studies, using rats and mice, have not produced any evidence that ethylene glycol causes dose-related increases in tumor incidence or a different pattern of tumors compared with untreated controls. The absence of a carcinogenic potential for ethylene glycol has been supported by numerous *in vitro* genotoxicity studies showing that it does not produce mutagenic or clastogenic effects.

GENETIC TOXICOLOGY

In Vitro: Ethylene glycol was devoid of genotoxic activity in an Ames test, forward gene mutation and sister chromatid exchange (SCE) studies in Chinese Hamster Ovary (CHO) cells and an *in vitro* cytogenetics study.

In Vivo: Ethylene glycol by three different routes (intravenous, peroral and percutaneous) demonstrates apparent first-order pharmacokinetic behavior for the disposition in and the elimination from the plasma. Dose-dependent changes occur for the elimination of metabolites in the urine and as 14CO_2 after single doses for the intravenous and peroral, but not the percutaneous route. The hypothesis from literature sources exists that developmental toxicity is caused by a metabolite of ethylene glycol, called glycolic acid, and not parent ethylene glycol. Under most conditions of ethylene glycol exposure, the glycolic acid metabolite is present in the blood in very low levels. However, it can become the major metabolite following large doses of ethylene glycol due to saturation of glycolic acid oxidation and/or elimination. When levels of this acidic metabolite exceed the capacity of maternal blood buffers to neutralize it, a maternal metabolic acidosis ensues, which has been hypothesized to be the true agent responsible for ethylene glycol induced developmental toxicity. Research suggests that ethylene glycol developmental toxicity is due to a dose-rate dependent toxicokinetic shift leading to glycolate accumulation and metabolic acidosis.

ADDITIONAL STUDIES

Ethylene glycol has been shown to produce dose-related teratogenic effects in rats and mice when given by gavage or in drinking water at high concentrations or doses. The no-effect doses for developmental toxicity for ethylene glycol given by gavage over the period of organogenesis has been shown to be 150 mg/kg/day for the mouse and 500 mg/kg/day for the rat. Also, in a preliminary study to assess the effects of exposure of pregnant rats and mice to aerosols at concentrations of 150, 1000 and 2500 mg/m³ for 6 hours a day throughout the period of organogenesis, teratogenic effects were produced at the highest concentration, but only in mice. The conditions of these latter experiments did not allow a conclusion as to whether the developmental toxicity was mediated by inhalation of aerosol, percutaneous absorption of ethylene glycol from contaminated skin, or swallowing of ethylene glycol as a result of grooming the wetted coat. In a further study, comparing effects from high aerosol concentration by whole-body or nose-only exposure, it was shown that nose-only exposure resulted in maternal toxicity (1000 and 2500 mg/m³) and developmental toxicity with minimal evidence of teratogenicity (2500 mg/m³). The no-effects concentration (based on maternal toxicity) was 500 mg/m³. In a further study in mice, no teratogenic effects could be produced when ethylene glycol was applied to the skin of pregnant mice over the period of organogenesis. The above observations suggest that ethylene glycol is to be regarded as an animal teratogen. There is currently no available information to suggest that ethylene glycol has caused birth defects in humans. Cutaneous application of ethylene glycol is ineffective in producing developmental toxicity. Exposure to high aerosol concentrations is only minimally effective in producing developmental toxicity.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE

Movement & Partitioning: Bioconcentration potential is low (BCF less than 100 or Log Kow less than 3). Log octanol/water partition coefficient (log Kow) is -1.36. Henry's Law Constant (H) is 6.0E-08 atm-m³/mol. Bioconcentration factor (BCF) is 10 in golden orfe.

Degradation & Transformation: Biodegradation under aerobic static laboratory conditions is high (BOD₂₀ or BOD₂₈/ThOD greater than 40%). 5-Day biochemical oxygen demand (BOD₅) is 0.78 p/p. 10-Day biochemical oxygen demand (BOD₁₀) is 1.06 p/p. 20-Day biochemical oxygen demand (BOD₂₀) is 1.15 p/p. Theoretical oxygen demand (THOD) is calculated to be 1.29 p/p. Biodegradation may occur under both aerobic and anaerobic conditions (in either the presence or absence of oxygen). Inhibitory concentration (IC₅₀) in OECD "Activated Sludge, Respiration Inhibition Test" (Guideline # 209) is < 1000 mg/L. Degradation is expected in the atmospheric environment within days to weeks.

Ecotoxicology: Material is practically non-toxic to aquatic organisms on an acute basis (LC₅₀ greater than 100 mg/L in most sensitive species). Acute LC₅₀ for fathead minnow (*Pimephales promelas*) is 51000 mg/L. Acute LC₅₀ for bluegill (*Lepomis macrochirus*) is 27549 mg/L. Acute LC₅₀ for rainbow trout (*Oncorhynchus mykiss*) is about 18000-46000 mg/L. Acute LC₅₀ for guppy (*Poecilia reticulata*) is 49300 mg/L. Acute LC₅₀ for water flea (*Daphnia magna*) is 46300-51100 mg/L. Acute LC₅₀ for the cladoceran *Ceriodaphnia dubia* is 10000-25800 mg/L. Acute LC₅₀ for crayfish is 91430 mg/L. Acute LC₅₀ for brine shrimp (*Artemia salina*) is 20000 mg/L. Acute LC₅₀ for golden orfe (*Leuciscus idus*) is greater than 10000 mg/L. Acute LC₅₀ for goldfish (*Carassius auratus*) is greater than 5000 mg/L. Growth inhibition EC₅₀ for green alga *Selenastrum capricornutum* is 9500-13000 mg/L.

BOD (% Oxygen Consumption):

Day 5	Day 10	Day 15	Day 20	Day 30
51%	80%		97%	

ECOTOXICITY

Toxicity to Micro-organisms:

Bacterial / NA: 16 h; IC₅₀
Result Value: >10000 mg/l

Toxicity to Aquatic Invertebrates:

Daphnia: 48 h; LC₅₀
Result Value: >100000 mg/l

Toxicity to Fish

Fathead Minnow: 94 h; LC₅₀
Result Value: 70000 mg/l

FURTHER INFORMATION

Chemical Oxygen Demand (COD) – Measured: 1.29 mg/mg
Theoretical Oxygen Demand (THOD) – Calculated: 1.30 mg/mg

Octanol/Water Partition Coefficient – Measured: -1.36

All Weather Antifreeze

13. DISPOSAL CONSIDERATIONS

DO NOT discharge to sewer. Wear appropriate personal protection. Take up with sand, vermiculite, or similar inert material. Dispose in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION

Non-Bulk

Proper Shipping Name: ETHYLENE GLYCOL

Bulk

Proper Shipping Name: Environmentally Hazardous Substance, LIQUID N.O.S. (ETHYLENE GLYCOL)

Technical Name: ETHYLENE GLYCOL

ID Number: UN 3082

Hazard Class: 9

Packing Group: PG III

Reportable Quantity: 5,000 lb.

IATA

Non-Bulk

Proper Shipping Name: Ethylene Glycol

Not Regulated by IATA

15. REGULATORY INFORMATION

THIS PRODUCT CONTAINS COMPONENT(S) CITED ON THE FOLLOWING REGULATIONS.

<u>Chemical Name</u>	<u>Cas Number</u>
Ethylene Glycol	107-21-1

United States - TSCA

Inventory: Listed

Water Standards: No data available

Atmospheric Standards: Clean Air Act (1990) - List of Hazardous Air Contaminants: listed

CERCLA: Reportable Quantity (RQ): 5,000 pounds (532 gallons)

OSHA Hazard Communication

Standard: This product is a "hazardous chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SARA Title III:

Section 311/312 - Categories: Acute hazard; chronic hazard

Section 312 - Inventory Reporting: Ethylene glycol is subject to Tier I and/or Tier II annual inventory reporting.

Section 313 - Emission Reporting: Ethylene glycol is subject to Form R reporting requirements.

Section 302 - Extremely Hazardous Substances: Ethylene glycol is not listed.

State Right-To-Know:

California - Exposure Limits - Ceilings:	vapor-50 ppm ceiling; 125 mg/m3 ceiling
Director's List of Hazardous Substances:	listed
Florida - Hazardous Substances List:	listed
Massachusetts - Right-to-Know List:	listed
Minnesota - Haz. Subs. List:	listed (particulate and vapor)
New Jersey - Right-to-Know List (Total):	Present greater than 1.0%
Pennsylvania Right-to-Know List:	environmental hazard

Canadian Regulations: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required.

WHMIS Information: D2A - material has potential toxic effects. Refer elsewhere in the MSDS for specific warnings and safe handling information. Refer to the employer's workplace education program.

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986): This product contains the following chemical(s) known to the State of California to cause cancer:

<u>Component</u>	<u>CAS #</u>	<u>Amount</u>
1,4 - Dioxane	123-91-1	<=0.0086%
Acetaldehyde	75-07-0	<=0.1000PPM

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986): This product contains the following chemical(s) known to the State of California to cause birth defects and/or other reproductive harm.

<u>Component</u>	<u>CAS #</u>	<u>Amount</u>
Ethylene glycol monomethyl ether	109-86-4	<=0.0009%

California SCAQMD Rule 443.1 (South Coast Air Quality Management District Rule 443.1, Labeling of Materials Containing Organic Solvents):

VOC: Vapor pressure 0.06 mmHg at 20°C
1113.38 g/l

16. OTHER INFORMATION

Contact: Thomas Cholke

Phone: (847) 559-2225

Old World Industries, Inc. makes no warranty, representation or guarantee as to the accuracy, sufficiency or completeness of the material set forth herein. It is the user's responsibility to determine the safety, toxicity and suitability of his own use, handling and disposal of this product. Since actual use by others is beyond our control, no warranty, expressed or implied, is made by Old World Industries, Inc. as to the effects of such use, the results to be obtained or the safety and toxicity of this product, nor does Old World Industries, Inc. assume liability arising out of the use by others of this product referred to herein. The data in this MSDS relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.



HAZARDOUS MATERIALS INVENTORY FORM

FORM 3

ADD DELETE REVISED 1

Page ___ of ___ 2

FACILITY ID#	3	0	0	3	5	38	BUSINESS NAME	3
							Battery Systems Inc	

I. FACILITY INFORMATION

CHEMICAL LOCATION	12400 Industry St, Garden Grove, CA 92841							4
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CONFIDENTIAL LOCATION EPCRA	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	5	MAP #	1	6	GRID #	E-324	7
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II. CHEMICAL INFORMATION

CHEMICAL NAME	Methanol	WASTE	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	8	TRADE SECRET	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	11
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COMMON NAME	+ 32 Windshield Wash	9	An EHS Chemical	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	12	*If EHS is "Yes", all amounts must be LBS	
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CAS #	67-56-1	10	FIRE CODE HAZARD CLASSES (supplied by GGFD)	13
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TYPE (Check one item only)	<input type="checkbox"/> a. PURE <input checked="" type="checkbox"/> b. MIXTURE <input type="checkbox"/> c. WASTE	14	RADIOACTIVE	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	15	CURIES	16
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PHYSICAL STATE (Check one item only)	<input type="checkbox"/> a. SOLID <input checked="" type="checkbox"/> b. LIQUID <input type="checkbox"/> c. GAS	17	FED HAZARD CATEGORIES	<input checked="" type="checkbox"/> a. FIRE <input type="checkbox"/> b. REACTIVE <input type="checkbox"/> c. PRESSURE RELEASE <input checked="" type="checkbox"/> d. ACUTE HEALTH <input type="checkbox"/> e. CHRONIC HEALTH	18
--------------------------------------	---	----	-----------------------	--	----

AVERAGE DAILY AMOUNT	1400	19	MAXIMUM DAILY AMOUNT	1600	20	ANNUAL WASTE AMOUNT	0	21	STATE WASTE CODE	n/a	22
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UNITS	<input checked="" type="checkbox"/> a. GALLONS <input type="checkbox"/> b. CUBIC FEET <input type="checkbox"/> c. POUNDS <input type="checkbox"/> d. TONS	23	DAYS ON SITE	365	24	LARGEST CONTAINER	1 gallon	25
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*If EHS, amount must be in pounds.

STORAGE CONTAINER (Check all that apply)	<input type="checkbox"/> a. ABOVEGROUND TANK <input type="checkbox"/> b. UNDERGROUND TANK <input type="checkbox"/> c. TANK INSIDE BLDG <input type="checkbox"/> d. STEEL DRUM <input type="checkbox"/> e. PLASTIC DRUM <input type="checkbox"/> f. NONMETALLIC DRUM <input type="checkbox"/> g. METAL CONTAINER <input type="checkbox"/> h. CARBOY <input type="checkbox"/> i. VAT <input type="checkbox"/> j. FIBER DRUM <input type="checkbox"/> k. BAG(S) <input type="checkbox"/> l. BOX(S) <input checked="" type="checkbox"/> m. CYLINDER <input type="checkbox"/> n. GLASS CONTAINER <input checked="" type="checkbox"/> o. PLASTIC CONTAINER <input type="checkbox"/> p. IN MACH OR EQUIP <input type="checkbox"/> q. TANK WAGON <input type="checkbox"/> r. RAIL CAR <input type="checkbox"/> s. TOTE BIN <input type="checkbox"/> t. OTHER	26
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STORAGE PRESSURE	<input checked="" type="checkbox"/> a. AMBIENT <input type="checkbox"/> b. ABOVE AMBIENT <input type="checkbox"/> c. BELOW AMBIENT	27
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STORAGE TEMPERATURE	<input checked="" type="checkbox"/> a. AMBIENT <input type="checkbox"/> b. ABOVE AMBIENT <input type="checkbox"/> c. BELOW AMBIENT <input type="checkbox"/> d. CRYOGENIC	28
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%WT	HAZARDOUS COMPONENT (For mixture or waste only)	EHS	CAS #
1 95-99	29 Water	30 <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	31 7732-18-5
2 < 1	29 Methanol	30 <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	31 67-56-1
3	29	30 <input type="checkbox"/> Yes <input type="checkbox"/> No	31
4	29	30 <input type="checkbox"/> Yes <input type="checkbox"/> No	31
5	29	30 <input type="checkbox"/> Yes <input type="checkbox"/> No	31

If more hazardous components are present at greater than 1% by weight if non-carcinogenic, or 0.1% by weight if carcinogenic, attach additional sheets of paper capturing the required information.

PLACARDING INFORMATION

UNDOT #	Not Regulated	33
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Refer to shipping papers or MSDS

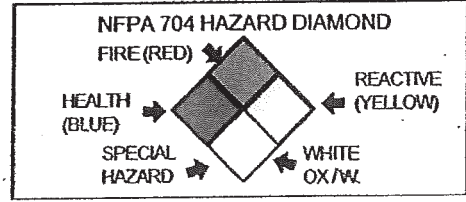
DOT HAZARD CLASS	Not Regulated	34
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Refer to shipping papers or MSDS

EPCRA	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	35
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X	_____	36
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If EPCRA, Please Sign Here



MAKE AS MANY COPIES OF CHEMICAL INVENTORY FORM AS NEEDED

Initial Preparation Date: 11/10/2004
Last Revision Date: None
Effective Date: 8/1/2005

MATERIAL SAFETY DATA SHEET

PRODUCT IDENTITY: PEAK® 32° WASH

1. CHEMICAL PRODUCT & COMPANY INFORMATION

OLD WORLD INDUSTRIES, INC.
4065 COMMERCIAL AVENUE
NORTHBROOK, ILLINOIS 60062
PHONE: 847-559-2000
EMERGENCY PHONE: 1-800-424-9300 (CHEMTREC)

2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>MATERIAL</u>	<u>CAS#</u>	<u>% BY WT</u>	<u>8-Hour Time Weighted Avg. (TWA)</u>
Methanol	67-56-1	<1	200 ppm (260 Mg/M ³)

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Slight odor.

May be fatal if swallowed.

Vapors can cause eye irritation.

LD50 Rat (Oral):	562,800 mg/kg	(1% methanol concentration)
LD50 Rabbit (Skin):	2000 g/kg	(1% methanol concentration)
Carcinogenicity:	No	
National Toxicology Program:	No	
International Agency for Research on Cancer:	No	
OSHA Regulated:	Yes	

HAZARD RATING SYSTEM

HMIS: HEALTH: 2 FLAMMABILITY: 2 REACTIVITY: 0 PERSONAL PROTECTION: A

KEY: 0 - Minimal 1 - Slight 2 - Moderate 3 - Serious 4 - Severe A - Safety glasses

POTENTIAL HEALTH EFFECTS

Health Hazards (Acute and Chronic):

Acute:

Acute methanol intoxication is manifested initially by signs of narcosis. This is followed by a latent period in which formic acid accumulates in the body causing metabolic acidosis. Severe abdominal, leg, and back pain occur and visual degeneration can lead to blindness.

1. Humans – Ingestion of 80 to 150 mL of methanol is usually fatal to humans (HSDB 1994). One worker died from exposure to vapor ranging from 4,000 to 13,000 ppm over 12 hours (ACGIH 1991). The concentration of 4,000 ppm is roughly equivalent to a total of 1,140 mg/kg over the 12-hour period (see end note 2). Poisoning by nonlethal doses can be described in three stages: (1) narcotic stage similar to ethanol; (2) latent period of 10-15 hours; (3) visual disturbances and central nervous system lesions (Rowe and McCollister 1981). Visual disturbances can lead to blindness due to edema of the retina and atrophy of the optic nerve head (HSDB 1994). Third-stage CNS lesions include headache, dizziness, abdominal, back, and leg pain, delirium that can lead to coma, and nausea (HSDB 1994). Formic acid production causes severe metabolic acidosis (Rowe and McCollister 1981).
2. Animals – Oral LD50 values for methanol in animals are 0.4 g/kg in the mouse, 6.2 to 13 g/kg in the rat, 14.4 g/kg in the rabbit, and 2 to 7 g/kg in the monkey (Rowe and McCollister 1981). The LD50 for dermal application to rabbits is 20 mL/kg (approximately 16 g/kg) (Rowe and McCollister 1981). Dose-response data for inhalation vary with species, dose, and duration (8,800 ppm for 8 hours to 152,800 ppm for 94 minutes). Symptoms of intoxication include incoordination, salivation, lethargy, narcosis, and death (Rowe and McCollister 1981).

Subchronic/Chronic:

Chronic exposure to methanol, either orally or by inhalation, causes headache, insomnia, gastrointestinal problems, and blindness in humans and hepatic and brain alterations in animals. EPA has derived an oral RfD (reference dose) (see end note 3) for methanol of 0.5 mg/kg/day, based on the absence of liver and brain effects in animals exposed by mouth to 500 mg/kg/day.

1. Humans – “Chronic” exposure to methanol vapors (no time or dose given) caused conjunctivitis, headache, giddiness, insomnia, gastric disturbances, and bilateral blindness (ACGIH 1991). Marked vision loss occurred in one worker exposed to 1,200 to 8,000 ppm vapor for 4 years (ACGIH 1991).
2. Animals – No effects were seen in rats given 1% (approximately 140 mg/kg/day) methanol in drinking water for 6 months (Rowe and McCollister 1981). Hepatic abnormalities (proteinic degeneration, altered RNA metabolism) occurred in rhesus monkeys given 3 to 6 g/kg for 3 to 20 weeks and in rats given 10, 100, or 500 mg/kg/day for one month (Rowe and McCollister 1981). Rabbits chronically fed methanol (no dose or time given) had increasing blood levels, brain and eye edema, and myelin thinning (HSDB 1994). Male and female rats were gavaged with 100, 500, or 2,500 mg/kg/day for 90 days (U.S. EPA 1994). Increased levels of SGPT and SAP as well as decreased brain weights were seen in both sexes at the

highest dose; a no-observed-adverse effect level (NOAEL) for the study was 500 mg/kg/day. Based on these data, the U.S. EPA (1994) calculated a chronic RfD (see end note 4) for methanol of 0.5 mg/kg/day. No toxic effects were seen in dogs exposed by inhalation to either 10,000 ppm for 3 minutes, 3x/day, for 100 days or to 450 or 500 ppm, 8 hours/day for 379 days (Rowe and McCollister 1981). Ultrastructural changes were observed in the photoreceptor cells of rabbits exposed to 46.6 ppm for 6 months (Rowe and McCollister 1981). Rowe and McCollister (1981) concluded that the effects of combined oral and inhalation exposure appear to be additive. Rats exposed by inhalation to 16.8 ppm, 4 hours/day, for 6 months and administered 0.7 mg/kg/day orally had changes in blood morphology, oxidation-reduction processes, and liver function (Rowe and McCollister 1981).

Carcinogenicity:

No information was found on the carcinogenicity of methanol in the secondary sources searched.

1. Humans – No information was found in the secondary sources searched concerning the carcinogenicity of methanol to humans.
2. Animals – No information was found in the secondary sources searched concerning the carcinogenicity of methanol to animals. The NTP has assigned a project leader for methanol and the design of the study is in progress (NTP 1994).

4. FIRST AID MEASURES ***Ensure physician has access to this MSDS.***

Routes of Entry: Inhalation, Skin, Ingestion

Signs and Symptoms of Exposure:

Eye Contact: May cause eye irritation.

Skin Contact: Frequent or prolonged contact may cause skin irritation experienced as burning, drying, cracking and redness.

Inhalation: May cause nose and throat irritation. High concentrations may cause acute central nervous system depression characterized by headaches, dizziness, nausea and confusion.

Skin Absorption Health Risks and Symptoms of Exposure: Harmful quantities of Methyl Alcohol may affect eyes and central nervous system.

Ingestion Health Risks and Symptoms of Exposure: May cause nausea, abdominal pain, headache, shortness of breath, visual impairment and blindness. Severe poisoning can cause coma and death.

Medical Conditions Generally Aggravated by Exposure: Ingestion of large amounts of Methyl Alcohol has been shown to damage organs including liver, kidney, pancreas, heart, lungs and brain. Although this rarely occurs, survivors of severe intoxication may suffer permanent neurological damage. Overexposure may aggravate pre-existing disorders of the eyes.

People have died as a result of drinking large amounts of methanol. Drinking smaller, non-lethal amounts of methanol adversely affects the human nervous system. Effects range from headaches to incoordination similar to that associated with drunkenness. Delayed effects such as severe abdominal, leg, and back pain can follow the inebriation effects of methanol. Loss of vision and even blindness can also occur after exposure to amounts of methanol causing inebriation. These effects are not likely to occur at levels of methanol that are normally found in the environment.

Human health effects associated with breathing or otherwise consuming smaller amounts of methanol over long periods of time are not known. Workers repeatedly exposed to methanol have experienced several adverse effects. Effects range from headaches to sleep disorders and gastrointestinal problems to optic nerve damage. Laboratory studies show that repeat exposure to large amounts of methanol in air or in drinking water cause similar adverse effects in animals.

TREATMENT

Eyes: Flush with large quantities of water for 15 minutes and seek medical attention.

Skin: Remove contaminated clothing and wash contaminated skin with large amounts of soap and water. If irritation persists, get medical attention. Launder clothing before reuse.

Inhalation: Remove to fresh air. If breathing has stopped, apply artificial respiration. If breathing is difficult, give oxygen provided a qualified operator is available. Get medical attention.

Ingestion: Notes to Physician: This product contains methanol which can cause intoxication and central nervous system depression. Methanol is metabolized to formic acid and formaldehyde. These metabolites can cause metabolic acidosis, visual disturbances and blindness. Since metabolism is required for these toxic symptoms, their onset may be delayed from 6 to 30 hours following ingestion. Ethanol competes for the same metabolic pathway and has been used to prevent methanol metabolism. Ethanol administration is indicated in symptomatic patients or at blood hemodialysis. Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material: skin, lung (for example, asthma-like conditions), liver, kidney, central nervous system, pancreas, heart). Exposure to this material may aggravate any preexisting condition sensitive to a decrease in available oxygen, such as chronic lung disease, coronary artery disease or anemias.

If swallowed, induce vomiting of conscious patient immediately by giving two glasses of water and pressing finger down throat. Drink a large amount of water, milk or sodium bicarbonate to dilute material in stomach. (Never give anything by mouth to an unconscious person.) Call Poison Control Center, hospital emergency room or physician immediately.

5. FIRE FIGHTING MEASURES

FIRE & EXPLOSION HAZARD DATA

Flammable Properties

Flash Point: N/A
Method Used:

Flammability Limits - % of vapor concentration at which methanol can ignite in presence of spark.

LEL: 6.0%
UEL: 36.0%

Hazardous Combustion Products: Methanol

Extinguishing Media: Foam, dry chemical, carbon dioxide or any Class B extinguishing agent. Water may be unsuitable as an extinguishing medium but helpful in keeping adjacent containers cool

Fire Fighting Instructions: Use water spray to cool fire exposed containers.

Water may be ineffective but may be used to cool exposed containers to prevent pressure buildup and possible auto-ignition or explosion when exposed to extreme heat. If water is used, fog nozzles are preferable.

Unusual Fire and Explosion Hazards: Handle as flammable liquid. Vapors are heavier than air and may travel along the ground or may be moved by ventilation. Vapors form an explosive mixture in air between the upper and lower explosive limits which can be ignited by many sources, such as pilot lights, open flames, electrical motors and switches.

Protective Equipment For Fire Fighters: Wear NIOSH approved self-contained breathing apparatus with full face piece and protective clothing to prevent contact with skin and eyes.

6. ACCIDENTAL RELEASE MEASURES

Small Spill

Absorb liquid on vermiculite, floor absorbent or other absorbent material.

Large Spill

Eliminate all ignition sources (flares, flames including pilot lights, electrical sparks). Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source. Prevent from entering drains, sewers, streams or other bodies of water. Prevent from spreading. If runoff occurs, notify authorities as required. Pump or vacuum transfer spilled product to clean containers for recovery. Absorb unrecoverable product. Transfer contaminated absorbent, soil and other materials to containers for disposal. Prevent run-off to sewers, streams or other bodies of water. If run-off occurs, notify proper authorities as required, that a spill has occurred.

7. HANDLING AND STORAGE

Do not swallow. Store in closed containers in a cool, dry, well-ventilated area. Keep away from sparks and open flame.

Respiratory Protection: Use approved NIOSH respirator when TLV is exceeded.

Ventilation: Provide sufficient ventilation to maintain exposure below TLV.

Protective Gloves: Wear appropriate impermeable gloves.

Eye Protection: Use chemical safety glasses, goggles and face shields for eye protection.

Other Protective Clothing or Equipment: Long sleeves and apron are recommended.

Work / Hygienic Practices: Avoid prolonged or repeated skin contact.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Eye Protection:

Chemical splash goggles in compliance with OSHA regulations are advised; however, OSHA regulations also permit other type safety glasses. Consult your safety representative.

Skin Protection:

Wear resistant gloves (consult your safety equipment supplier). To prevent repeated or prolonged skin contact, wear impervious clothing and boots.

Respiratory Protection:

If workplace exposure limit(s) of product or any component is exceeded (see exposure guidelines), a NIOSH/MSHA approved air supplied respiratory is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure type) under specified conditions (see your industrial hygienist). Engineering or administrative controls should be implemented to reduce exposure.

Engineering Controls:

Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV(s).

Exposure Guidelines:

Component

Methyl Alcohol (67-56-1)

OSHA VPEL 200.000 ppm – TWA (skin)

OSHA VPEL 250.000 ppm – STEL (skin)

ACGIH TLV 200.000 ppm – TWA (skin)

ACGIH TLV 250.000 ppm – STEL (skin)

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Range:	209°F - 211°F
Specific Gravity (Water =1):	.998 @ 20° C
Vapor Pressure (mm of Hg):	18 @ 20° C
Vapor Density (Air=1):	Heavier than air
Water Solubility:	Soluble
Appearance:	Clear blue liquid
Odor:	Mild alcohol odor
Evaporation Rate:	Greater than m-butyl acetate

10. STABILITY AND REACTIVITY

Stability: Stable

Conditions to Avoid: Ignition sources, such as heat, sparks and flames

Incompatibility (Materials to Avoid): Strong acids and strong oxidizing agents

Hazardous Decomposition Products: Burning can produce carbon monoxide and/or carbon dioxide. Carbon monoxide is highly toxic if inhaled; carbon dioxide in sufficient concentrations can act as an asphyxiant.

Hazardous Polymerization: Will not occur

11. TOXICOLOGICAL INFORMATION

Mutagenicity (The Effects On Genetic Material):

Genotoxicity:

Methanol was negative for cell transformation in Syrian hamster embryo cells (clonal assay and viral enhanced), sister chromatid exchange in vitro, and for aneuploidy and chromosome aberrations in *Neurospora crassa* (GENETOX 1992). The micronucleus test and the assay for chromosome aberrations in mammalian polychromatic erythrocytes were inconclusive (GENETOX 1992).

Developmental/Reproductive Toxicity:

No information was found on the developmental toxicity of methanol in humans. Methanol can cause adverse effects in the developing offspring in rats at doses that cause overt maternal intoxication.

1. Humans – No information was found in the secondary sources searched regarding the developmental or reproductive toxicity of methanol to humans. However, one of the breakdown products of the artificial sweetener aspartame is methanol. Increased blood methanol levels did not lead to increased formic acid levels in women receiving up to 200 mg/kg aspartame (no other details reported) and no evidence of fetal risk was detected (HSDB 1994).
2. Animals – Rats were exposed by inhalation, 7 hours/day, to 5,000 or 10,000 ppm methanol on gestation days 1-19 or to 20,000 ppm on days 7-15. Maternal intoxication (unsteadiness) occurred at the highest dose and coincided with extra or rudimentary ribs and urinary or cardiovascular defects in the fetuses (ACGIH 1991). Male rats had significantly lowered testosterone levels after inhalation exposure to 200 ppm methanol for 6 weeks; at 10,000 ppm a change in luteinizing hormone was also observed (HSDB 1994).

Neurotoxicity:

Methanol causes central nervous system depression in humans and animals as well as degenerative changes in the brain and visual system.

1. Humans – Methanol causes narcosis similar to ethanol intoxication and nonlethal doses can lead to blindness. Autopsy of individuals after lethal doses revealed edema and hyperemia of the brain and degeneration of the ganglion cells of the retina (Rowe and McCollister 1981).

2. Animals – Acute methanol intoxication in animals causes CNS depression as observed by narcosis, incoordination, lethargy, drowsiness, and prostration (Rowe and McCollister 1981).

Significant Data With Possible Relevance To Humans:

Pharmacokinetics:

1. Absorption – Methanol is readily absorbed after oral, inhalation, or dermal exposure. Oral doses in humans of 71 to 84 mg/kg resulted in blood levels of 4.7 to 7.6 mg/100 mL of blood within 3 hours (Rowe and McCollister 1981). Inhalation of 500 to 1,000 ppm methanol for 3 to 4 hours gave urine concentrations of 1 to 3 mg methanol/100 mL of urine at the end of exposure (Rowe and McCollister 1981). Based on urinary methanol levels, the rate of absorption of the chemical appears to be proportional to the concentration of vapor inhaled (HSDB 1994). The rate of dermal absorption increased for 35 minutes then decreased over the next 25 minutes (no other details given) (HSDB 1994).
2. Distribution – Methanol distributes rapidly in dogs exposed to 4,000 to 15,000 ppm for 12 hours to 5 days; the highest concentrations of the chemical were found in blood, eye fluid, bile, and urine (HSDB 1994).
3. Metabolism – Methanol is oxidized in the human liver by the enzyme alcohol dehydrogenase (Rowe and McCollister 1981). Metabolic products include formaldehyde and formic acid (HSDB 1994). The rate of metabolism for methanol (25 mg/kg/hr) is much slower than for ethanol (175 mg/kg/hr) and is independent of concentrations in the blood (HSDB 1994). Formic acid is responsible for the toxic effects of methanol (ACGIH 1991).
4. Excretion – Methanol is excreted either as parent compound in the urine or expired air, or as the formic acid metabolite in urine (Rowe and McCollister 1981; HSDB 1994). The amount of formic acid excreted varies greatly with species from 1% in rabbits to 20% in dogs; humans are intermediate (HSDB 1994). In humans, the half-life of methanol elimination in expired air after oral or dermal exposure is 1.5 hours (HSDB 1994).

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE

Methanol evaporates when exposed to air. It dissolves completely when mixed with water. Most direct releases of methanol to the environment are to air. Methanol also evaporates from water and soil exposed to air. Once in air, it breaks down to other chemicals. Microorganisms that live in water and in soil can also break down methanol. Because it is a liquid that does not bind well to soil, methanol that makes it way into the ground can move through the ground and enter groundwater. Plants and animals are not likely to store methanol.

Methanol by itself is not likely to cause environmental harm at levels normally found in the environment. Methanol can contribute to the formation of photochemical smog when it reacts with other volatile organic carbon substances in air.

Movement & Partitioning:

The miscibility of methanol in water and a low KOC (9) indicate that the chemical will be highly mobile in soil (HSDB 1994). Volatilization half-lives from a model river and an environmental pond were estimated at 4.8 days and 51.7 days, respectively (HSDB 1994). Methanol can be removed from the atmosphere in rain water (HSDB 1994).

Degradation & Transformation:

1. Air – Once in the atmosphere, methanol exists in the vapor phase with a half life of 17.8 days (HSDB 1994). The chemical reacts with photochemically produced hydroxyl radicals to produce formaldehyde (HSDB 1994). Methanol can also react with nitrogen dioxide in polluted air to form methyl nitrite (HSDB 1994).
2. Soil – Biodegradation is the major route of removal of methanol from soils. Several species of *Methylobacterium* and *Methylomonas* isolated from soils are capable of utilizing methanol as a sole carbon source (CHEMFATE 1994).
3. Water – Most methanol is removed from water by biodegradation. The degradation products of methane and carbon dioxide were detected from aqueous cultures of mixed bacteria isolated from sewage sludge (CHEMFATE 1994). Aerobic, Gram-negative bacteria (65 strains) isolated from seawater, sand, mud, and weeks of marine origin utilized methanol as a sole carbon source (CHEMFATE 1994). Aquatic hydrolysis, oxidation, and photolysis are not significant fate processes for methanol (HSDB 1994).
4. Biota – Bioaccumulation of methanol in aquatic organisms is not expected to be significant based on an estimated bioconcentration factor of 0.2 (HSDB 1994).

Ecotoxicology:

1. Toxicity to Aquatic Organisms – Methanol has low acute toxicity to aquatic organisms; lethal concentrations are much greater than 100 mg/L. Ninety-six hour LC50 values for fish are 28,100 mg/L for *Pimephales promelas* (fathead minnow), 20,100 mg/L for *Oncorhynchus mykiss* (rainbow trout), and >28,000 mg/L for *Alburnus alburnus* (bleak) (AQUIRE 1994). Forty-eight hour LC50 values for *Cyprinus carpio* (common carp) and *Carassius auratus* (goldfish) are 28,000 mg/L and 1,700 mg/L, respectively (AWQUIRE 1994). Growth inhibition occurred for 4 strains of *Anabaena* (blue-green algae) over a range of EC50s of 2.57%-3.13% for 10-14 days (AQUIRE 1994). The LC50 for *Artemia salina* (brine shrimp) is >10,000 mg/L in 24 hours and that for *Culex restuans* (mosquito) is 20,000 mg/L in 18 hours (AQUIRE 1994).
2. Toxicity to Terrestrial Organisms – No information was found in the secondary sources searched regarding the toxicity of methanol to terrestrial organisms. However, based on the range of oral LD50s, 0.4 to 14.2 g/kg, for monkeys, rats, mice, and rabbits (Rowe and McCollister 1981), it is unlikely that methanol would be toxic to terrestrial animals at environmental levels.
3. Abiotic Effects – Methanol reacts with nitrogen dioxide in polluted atmospheres to produce methyl nitrite (HSDB 1994). According to the definition provided in the Federal Register (1992), methanol is a volatile organic compound (VOC) substance. As a VOC, methanol can contribute to the formation of photochemical smog in the presence of other VOCs.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method: Dispose in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

(U.S. D.O.T.) – U. S. Department of Transportation

Not regulated

(IATA) International Air Dangerous Good Regulations

Not regulated

(IMDG) International Maritime Dangerous Goods

Not regulated

15. REGULATORY INFORMATION

THIS PRODUCT CONTAINS COMPONENT(S) CITED ON THE FOLLOWING REGULATIONS:

<u>CHEMICAL NAME</u>	<u>CAS NUMBER</u>
Methanol	67-56-1

U.S. Federal Regulations

TSCA (Toxic Substances Control Act) Status – TSCA (UNITED STATES)

The intentional ingredients of this product are listed.

CERCLA RQ – 40 CFR 302.4(a)

<u>Component</u>	<u>RQ (lbs)</u>
Methyl Alcohol	5,000

SARA 302 Components – 40 CFR 355 Appendix A

None

Section 311/312 Hazard Class – 40 CFR 370.2

Immediate (X) Delayed (X) Fire (X) Reactive () Sudden Release of Pressure ()

SARA 313 Components – 40 CFR 372.65

<u>Section 313 Component(s)</u>	<u>CAS Number</u>	<u>%</u>
Methanol	67-56-1	1

International Regulations

Inventory Status – DSL (CANADA)

The intentional ingredients of this product are listed.
WHMIS Information: B2, D1A

ECL (SOUTH KOREA)
The intentional ingredients of this product are listed.

EINECS (EUROPE)
The intentional ingredients of this product are listed.

ENCS (JAPAN)
The intentional ingredients of this product are listed.

State and Local Regulations – California Proposition 65
None

New Jersey RTK (Right-to-Know) Label Information
Methyl Alcohol 67-56-1

Pennsylvania RTK (Right-to-Know) Label Information
Methanol 67-56-1

Atmospheric Standards: The Clean Air Act Amendments of 1990 list methanol as a hazardous air pollutant.

16. OTHER INFORMATION

Contact: Tom Cholke

Phone: (847) 559-2225

Old World Industries, Inc. makes no warranty, representation or guarantee as to the accuracy, sufficiency or completeness of the material set forth herein. It is the user's responsibility to determine the safety, toxicity and suitability of his own use, handling and disposal of this product. Since actual use by others is beyond our control, no warranty, expressed or implied, is made by Old World Industries, Inc. as to the effects of such use, the results to be obtained or the safety and toxicity of this product, nor does Old World Industries, Inc. assume liability arising out of the use by others of this product referred to herein. The data in this MSDS relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.



HAZARDOUS MATERIALS INVENTORY FORM

FORM 3

ADD DELETE REVISED 1

Page ___ of ___ 2

FACILITY ID#	3 0 0 3 5	38	BUSINESS NAME	3
			Battery Systems Inc	

I. FACILITY INFORMATION

CHEMICAL LOCATION	12400 Industry St, Garden Grove, Ca 92841	4
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CONFIDENTIAL LOCATION EPCRA	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 5	MAP #	1	6	GRID #	D-4	7
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II. CHEMICAL INFORMATION

CHEMICAL NAME	Glycol Ether	WASTE	<input type="checkbox"/> Yes <input type="checkbox"/> No 8	TRADE SECRET	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 11
If EPCRA see instructions					

COMMON NAME	Dot 3 Brake Fluid	9	An EHS Chemical	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 12
*If EHS is "Yes", all amounts must be LBS				

CAS #	10	FIRE CODE HAZARD CLASSES (supplied by GGFD)	13
-------	----	---	----

TYPE (Check one item only)	<input type="checkbox"/> a. PURE <input checked="" type="checkbox"/> b. MIXTURE <input type="checkbox"/> c. WASTE 14	RADIOACTIVE	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 15	CURIES	16
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PHYSICAL STATE (Check one item only)	<input type="checkbox"/> a. SOLID <input checked="" type="checkbox"/> b. LIQUID <input type="checkbox"/> c. GAS 17	FED HAZARD CATEGORIES	<input checked="" type="checkbox"/> a. FIRE <input type="checkbox"/> b. REACTIVE <input type="checkbox"/> c. PRESSURE RELEASE 18	<input checked="" type="checkbox"/> d. ACUTE HEALTH <input type="checkbox"/> e. CHRONIC HEALTH
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AVERAGE DAILY AMOUNT	550 19	MAXIMUM DAILY AMOUNT	700 20	ANNUAL WASTE AMOUNT	0 21	STATE WASTE CODE	0 22
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UNITS	<input checked="" type="checkbox"/> a. GALLONS <input type="checkbox"/> b. CUBIC FEET <input type="checkbox"/> c. POUNDS <input type="checkbox"/> d. TONS 23	DAYS ON SITE	365 24	LARGEST CONTAINER	1 gallon 25
*If EHS, amount must be in pounds.					

STORAGE CONTAINER (Check all that apply)	<input type="checkbox"/> a. ABOVEGROUND TANK <input type="checkbox"/> b. UNDERGROUND TANK <input type="checkbox"/> c. TANK INSIDE BLDG <input type="checkbox"/> d. STEEL DRUM	<input type="checkbox"/> e. PLASTIC DRUM <input type="checkbox"/> f. NONMETALLIC DRUM <input type="checkbox"/> g. METAL CONTAINER <input type="checkbox"/> h. CARBOY	<input type="checkbox"/> i. VAT <input type="checkbox"/> j. FIBER DRUM <input type="checkbox"/> k. BAG(S) <input type="checkbox"/> l. BOX(S)	<input type="checkbox"/> m. CYLINDER <input type="checkbox"/> n. GLASS CONTAINER <input checked="" type="checkbox"/> o. PLASTIC CONTAINER <input type="checkbox"/> p. IN MACH OR EQUIP	<input type="checkbox"/> q. TANK WAGON <input type="checkbox"/> r. RAIL CAR <input type="checkbox"/> s. TOTE BIN <input type="checkbox"/> t. OTHER	26
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STORAGE PRESSURE	<input checked="" type="checkbox"/> a. AMBIENT <input type="checkbox"/> b. ABOVE AMBIENT <input type="checkbox"/> c. BELOW AMBIENT	27
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STORAGE TEMPERATURE	<input checked="" type="checkbox"/> a. AMBIENT <input type="checkbox"/> b. ABOVE AMBIENT <input type="checkbox"/> c. BELOW AMBIENT <input type="checkbox"/> d. CRYOGENIC	28
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%WT	HAZARDOUS COMPONENT (For mixture or waste only)	EHS	CAS #
1-3 29	Diisopropanolamine 30	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 31	110-97-4 32
1-10 29	Diethylene Glycol 30	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 31	111-46-6 32
1-20 29	Triethylene Glycol 30	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 31	112-27-6 32
1-5 29	Diethylene Glycol Monobutylether 30	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 31	112-34-5 32
7-30 29	Triethylene Glycol Monomethylether 30	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 31	112-35-6 32

If more hazardous components are present at greater than 1% by weight if non-carcinogenic, or 0.1% by weight if carcinogenic, attach additional sheets of paper capturing the required information.

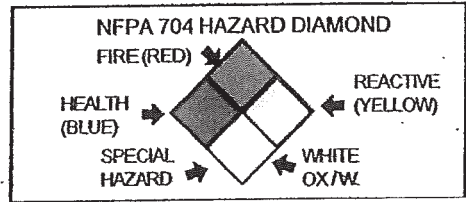
PLACARDING INFORMATION

UNDOT #	not regulated 33
Refer to shipping papers or MSDS	

DOT HAZARD CLASS	Not Regulated 34
Refer to shipping papers or MSDS	

EPCRA	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO 35
-------	--

X	36
If EPCRA, Please Sign Here	



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HAZARDOUS MATERIALS INVENTORY FORM

FORM 3

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Page ___ of ___ 2

FACILITY ID#	3 0 0 3 5	38	BUSINESS NAME	3
			Battery Systems Inc	

I. FACILITY INFORMATION

CHEMICAL LOCATION	12400 Industry St, Garden Grove, Ca 92841	4
-------------------	---	---

CONFIDENTIAL LOCATION EPCRA	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	5	MAP #	6	GRID #	7
-----------------------------	---	---	-------	---	--------	---

II. CHEMICAL INFORMATION

CHEMICAL NAME	Glycol Ether	WASTE	<input type="checkbox"/> Yes <input type="checkbox"/> No	8	TRADE SECRET	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	11
If EPCRA see instructions							

COMMON NAME	Dot 3 Brake Fluid	9	An EHS Chemical	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	12
*If EHS is "Yes", all amounts must be LBS					

CAS #	10	FIRE CODE HAZARD CLASSES (supplied by GGFD)	13
-------	----	---	----

TYPE (Check one item only)	<input type="checkbox"/> a. PURE <input checked="" type="checkbox"/> b. MIXTURE <input type="checkbox"/> c. WASTE	14	RADIOACTIVE	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	15	CURIES	16
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PHYSICAL STATE (Check one item only)	<input type="checkbox"/> a. SOLID <input checked="" type="checkbox"/> b. LIQUID <input type="checkbox"/> c. GAS	17	FED HAZARD CATEGORIES	<input checked="" type="checkbox"/> a. FIRE <input type="checkbox"/> b. REACTIVE <input type="checkbox"/> c. PRESSURE RELEASE	18	<input type="checkbox"/> d. ACUTE HEALTH <input type="checkbox"/> e. CHRONIC HEALTH
--------------------------------------	---	----	-----------------------	---	----	---

AVERAGE DAILY AMOUNT	550	19	MAXIMUM DAILY AMOUNT	700	20	ANNUAL WASTE AMOUNT	0	21	STATE WASTE CODE	0	22
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UNITS	<input checked="" type="checkbox"/> a. GALLONS <input type="checkbox"/> b. CUBIC FEET <input type="checkbox"/> c. POUNDS <input type="checkbox"/> d. TONS	23	DAYS ON SITE	365	24	LARGEST CONTAINER	1 gallon	25
*If EHS, amount must be in pounds.								

STORAGE CONTAINER (Check all that apply)	<input type="checkbox"/> a. ABOVEGROUND TANK	<input type="checkbox"/> e. PLASTIC DRUM	<input type="checkbox"/> i. VAT	<input type="checkbox"/> m. CYLINDER	<input type="checkbox"/> q. TANK WAGON	26
	<input type="checkbox"/> b. UNDERGROUND TANK	<input type="checkbox"/> f. NONMETALLIC DRUM	<input type="checkbox"/> j. FIBER DRUM	<input type="checkbox"/> n. GLASS CONTAINER	<input type="checkbox"/> r. RAIL CAR	
	<input type="checkbox"/> c. TANK INSIDE BLDG	<input type="checkbox"/> g. METAL CONTAINER	<input type="checkbox"/> k. BAG(S)	<input checked="" type="checkbox"/> o. PLASTIC CONTAINER	<input type="checkbox"/> s. TOTE BIN	
	<input type="checkbox"/> d. STEEL DRUM	<input type="checkbox"/> h. CARBOY	<input type="checkbox"/> l. BOX(S)	<input type="checkbox"/> p. IN MACH OR EQUIP	<input type="checkbox"/> t. OTHER	

STORAGE PRESSURE	<input checked="" type="checkbox"/> a. AMBIENT <input type="checkbox"/> b. ABOVE AMBIENT <input type="checkbox"/> c. BELOW AMBIENT	27
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STORAGE TEMPERATURE	<input checked="" type="checkbox"/> a. AMBIENT <input type="checkbox"/> b. ABOVE AMBIENT <input type="checkbox"/> c. BELOW AMBIENT <input type="checkbox"/> d. CRYOGENIC	28
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%WT	HAZARDOUS COMPONENT (For mixture or waste only)	EHS	CAS #
1 1-20 29	Tetraethylene Glycol	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 31	112-60-7 32
2 1-25 29	Triethylene Glycol Monobutylether	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 31	143-22-6 32
3 1-5 29	Poly(Ethylene oxide)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 31	25322-68-3 32
4 1-10 29	Pentaethylene Glycol	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 31	4792-15-8 32
5 1-5 29	Sodium Phosphate	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 31	7601-54-9 32

If more hazardous components are present at greater than 1% by weight if non-carcinogenic, or 0.1% by weight if carcinogenic, attach additional sheets of paper capturing the required information.

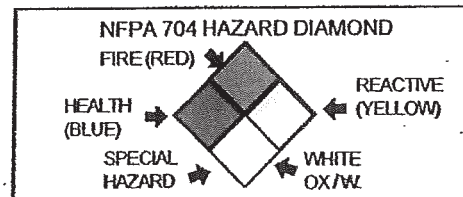
PLACARDING INFORMATION

UNDOT #	not regulated	33
Refer to shipping papers or MSDS		

DOT HAZARD CLASS	Not Regulated	34
Refer to shipping papers or MSDS		

EPCRA	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	35
-------	---	----

X	_____	36
If EPCRA, Please Sign Here		



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HAZARDOUS MATERIALS INVENTORY FORM

FORM 3

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Page ___ of ___ 2

FACILITY ID#	3 0 0 3 5	38	BUSINESS NAME	3
			Battery Systems Inc	

I. FACILITY INFORMATION

CHEMICAL LOCATION	12400 Industry St, Garden Grove, Ca 92841	4
-------------------	---	---

CONFIDENTIAL LOCATION EPCRA	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	5	MAP #	6	GRID #	7
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II. CHEMICAL INFORMATION

CHEMICAL NAME	Glycol Ether	WASTE	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	8	TRADE SECRET	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	11
If EPCRA see instructions							

COMMON NAME	Dot 3 Brake Fluid	9	An EHS Chemical	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	12
*If EHS is "Yes", all amounts must be LBS					

CAS #	10	FIRE CODE HAZARD CLASSES (supplied by GGFD)	13
-------	----	---	----

TYPE (Check one item only)	<input type="checkbox"/> a. PURE <input checked="" type="checkbox"/> b. MIXTURE <input type="checkbox"/> c. WASTE	14	RADIOACTIVE	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	15	CURIES	16
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PHYSICAL STATE (Check one item only)	<input type="checkbox"/> a. SOLID <input checked="" type="checkbox"/> b. LIQUID <input type="checkbox"/> c. GAS	17	FED HAZARD CATEGORIES	<input checked="" type="checkbox"/> a. FIRE <input type="checkbox"/> b. REACTIVE <input type="checkbox"/> c. PRESSURE RELEASE	18	<input checked="" type="checkbox"/> d. ACUTE HEALTH <input type="checkbox"/> e. CHRONIC HEALTH
--------------------------------------	---	----	-----------------------	---	----	--

AVERAGE DAILY AMOUNT	550	19	MAXIMUM DAILY AMOUNT	700	20	ANNUAL WASTE AMOUNT	0	21	STATE WASTE CODE	0	22
----------------------	-----	----	----------------------	-----	----	---------------------	---	----	------------------	---	----

UNITS	<input checked="" type="checkbox"/> a. GALLONS <input type="checkbox"/> b. CUBIC FEET <input type="checkbox"/> c. POUNDS <input type="checkbox"/> d. TONS	23	DAYS ON SITE	365	24	LARGEST CONTAINER	1 gallon	25
*If EHS, amount must be in pounds.								

STORAGE CONTAINER (Check all that apply)	<input type="checkbox"/> a. ABOVEGROUND TANK	<input type="checkbox"/> e. PLASTIC DRUM	<input type="checkbox"/> i. VAT	<input type="checkbox"/> m. CYLINDER	<input type="checkbox"/> q. TANK WAGON	26
	<input type="checkbox"/> b. UNDERGROUND TANK	<input type="checkbox"/> f. NONMETALLIC DRUM	<input type="checkbox"/> j. FIBER DRUM	<input type="checkbox"/> n. GLASS CONTAINER	<input type="checkbox"/> r. RAIL CAR	
	<input type="checkbox"/> c. TANK INSIDE BLDG	<input type="checkbox"/> g. METAL CONTAINER	<input type="checkbox"/> k. BAG(S)	<input checked="" type="checkbox"/> o. PLASTIC CONTAINER	<input type="checkbox"/> s. TOTE BIN	
	<input type="checkbox"/> d. STEEL DRUM	<input type="checkbox"/> h. CARBOY	<input type="checkbox"/> l. BOX(S)	<input type="checkbox"/> p. IN MACH OR EQUIP	<input type="checkbox"/> t. OTHER	

STORAGE PRESSURE	<input checked="" type="checkbox"/> a. AMBIENT <input type="checkbox"/> b. ABOVE AMBIENT <input type="checkbox"/> c. BELOW AMBIENT	27
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STORAGE TEMPERATURE	<input checked="" type="checkbox"/> a. AMBIENT <input type="checkbox"/> b. ABOVE AMBIENT <input type="checkbox"/> c. BELOW AMBIENT <input type="checkbox"/> d. CRYOGENIC	28
---------------------	--	----

%WT	HAZARDOUS COMPONENT (For mixture or waste only)	EHS	CAS #
1 5-50	29 Polyethylene Glycol Monomethyl Ether	30 <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	31 9004-74-5
2 1-20	29 Ployethylene Glycol Monobutyl Ether	30 <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	31 9004-77-7
3	29	30 <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	31
4	29	30 <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	31
5	29	30 <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	31

If more hazardous components are present at greater than 1% by weight if non-carcinogenic, or 0.1% by weight if carcinogenic, attach additional sheets of paper capturing the required information.

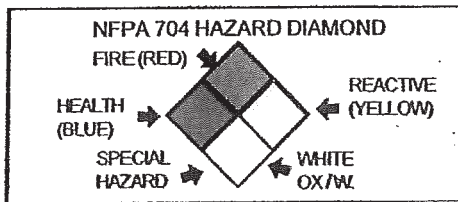
PLACARDING INFORMATION

UNDOT # not regulated 33
Refer to shipping papers or MSDS

DOT HAZARD CLASS Not Regulated 34
Refer to shipping papers or MSDS

EPCRA YES NO 35

X _____ 36
If EPCRA, Please Sign Here



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MATERIAL SAFETY DATA SHEET

Trade Name: Johnsens Heavy Duty DOT 3 Brake Fluid
 MSDS NO. 2224
 Revision Date: 03/10/2009
 Date Printed 04/06/2009

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade Name: Johnsens Heavy Duty DOT 3 Brake Fluid
 Chemical Family: GLYCOL ETHER
 Synonyms: None
 Emergency Telephone (24 hr.): CHEMTREC 1-800-424-9300 During normal business hours CST 817-645-6088.

Supplier: Technical Chemical Company, P.O. Box 139, Cleburne, Texas 76033

2. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight %	OSHA TWA	OSHA STEL	OSHA SKIN
Diisopropanolamine 110-97-4	1-3	Not Listed	Not Listed	Not Listed
Diethylene glycol 111-46-6	1-10	Not Listed	Not Listed	Not Listed
Triethylene glycol 112-27-6	1-20	Not Listed	Not Listed	Not Listed
Diethylene glycol monobutyl ether 112-34-5	1-5	Not Listed	Not Listed	Not Listed
Triethylene glycol monomethyl ether 112-35-6	7-30	Not Listed	Not Listed	Not Listed
triethylene glycol monoethyl ether 112-50-5	15-40	Not Listed	Not Listed	Not Listed
Tetraethylene glycol 112-60-7	1-20	Not Listed	Not Listed	Not Listed
Triethylene glycol monobutyl ether 143-22-6	1-25	Not Listed	Not Listed	Not Listed
poly(ethylene oxide) 25322-68-3	1-5	Not Listed	Not Listed	Not Listed
Pentaethylene glycol 4792-15-8	1-10	Not Listed	Not Listed	Not Listed
Sodium phosphate 7601-54-9	1-5	Not Listed	Not Listed	Not Listed
Polyethylene glycol monomethyl ether 9004-74-4	5-50	Not Listed	Not Listed	Not Listed
Polyethylene glycol monobutyl ether. 9004-77-7	1-20	Not Listed	Not Listed	Not Listed

MATERIAL SAFETY DATA SHEET

Trade Name: Johnsens Heavy Duty DOT 3 Brake Fluid
 MSDS NO. 2224
 Revision Date: 03/10/2009
 Date Printed: 04/06/2009

Component	ACGIH TLV TWA	ACGIH TLV STEL	ACGIH TLV Ceiling
Diisopropanolamine 110-97-4	Not Listed	Not Listed	Not Listed
Diethylene glycol 111-46-6	Not Listed	Not Listed	Not Listed
Triethylene glycol 112-27-6	Not Listed	Not Listed	Not Listed
Diethylene glycol monobutyl ether 112-34-5	Not Listed	Not Listed	Not Listed
Triethylene glycol monomethyl ether 112-35-6	Not Listed	Not Listed	Not Listed
triethylene glycol monoethyl ether 112-50-5	Not Listed	Not Listed	Not Listed
Tetraethylene glycol 112-60-7	Not Listed	Not Listed	Not Listed
Triethylene glycol monobutyl ether 143-22-6	Not Listed	Not Listed	Not Listed
poly(ethylene oxide) 25322-68-3	Not Listed	Not Listed	Not Listed
Pentaethylene glycol 4792-15-8	Not Listed	Not Listed	Not Listed
Sodium phosphate 7601-54-9	Not Listed	Not Listed	Not Listed
Polyethylene glycol monomethyl ether 9004-74-4	Not Listed	Not Listed	Not Listed
Polyethylene glycol monobutyl ether 9004-77-7	Not Listed	Not Listed	Not Listed

3. HAZARDS IDENTIFICATION

Emergency Overview:

Danger: May be fatal if swallowed. This material is an eye irritant. May cause allergic skin reaction. Vapors are mildly to markedly irritating to the lungs depending on the exposure level. Ingestion may cause abdominal discomfort, nausea, and vomiting. May produce central nervous system depression and kidney damage.

**HMS Classification:
NFPA Rating:**

Health: 2 Flammability: 1 Physical Hazard: 0
 Health: 2 Flammability: 1 Reactivity: 0

4. FIRST AID MEASURES

Eye Contact:

In case of contact, or suspected contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention immediately after flushing.

Ingestion:

Induce vomiting immediately as directed by medical personnel. Never give fluids or induce vomiting if the victim is unconscious or having convulsions.

Inhalation:

If inhaled, remove to fresh air. If not breathing give artificial respiration, preferably mouth-to-mouth. If breathing is difficult give oxygen. Get medical attention. Vapors or mists from this material can irritate the nose, throat and lungs, and cause signs and symptoms of central nervous system depression, depending on the concentration and duration of exposure.

Skin Contact:

Wash with soap and water. Remove contaminated clothing and shoes, and launder before reuse. Get medical attention if irritation persists.

MATERIAL SAFETY DATA SHEET

Trade Name: Johnsens Heavy Duty DOT 3 Brake Fluid
MSDS NO. 2224
Revision Date: 03/10/2009
Date Printed: 04/06/2009

5. FIRE FIGHTING MEASURES

Flammable Properties

Flash Point °F(°C): >135C. (>275 F.)
Flash Point Method: TAG Closed Cup
Flammable Limits in Air - Lower (%): Not Determined
Flammable Limits in Air - Upper (%): Not Determined
Autoignition Temperature °F(°C): Not Determined
Extinguishing Media: Water fog, carbon dioxide, foam, dry chemical. DO NOT use straight water streams.
Protection Of Fire-Fighters:

Special Fire-Fighting Procedures:

Wear approved positive-pressure self-contained breathing apparatus and protective clothing. Do not release runoff from fire control methods to sewers or waterways. Fight from a maximum distance or use unmanned hose holders or monitor nozzles. Containers can build up pressure if exposed to heat; cool with flooding quantities of water until well after the fire is out. Withdraw immediately in case of rising sound from venting safety devices or discoloration of vessel.

Hazardous Combustion Products: Aerosol Comments:

Carbon Dioxide. Carbon Monoxide. Unidentified organic compounds.
Not Applicable

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Spill Procedures:

Wear appropriate protective clothing and equipment to prevent skin and eye contact.
Avoid all sources of ignition; heat, sparks and open flames. Contain any liquid from leaking containers. Wear protective equipment specified. Ventilate spill area. Soak up material with absorbent and place in chemical waste container.

Action to be taken if material is released or spilled:

If clean-up is not immediate, cover spill with plastic or canvas to keep dry.

Environmental Precautions:

Do not allow to enter sanitary drains, sewer or surface and subsurface waters.

7. HANDLING AND STORAGE

Handling and Storage:

Do Not Swallow. Store in a cool, dry place. Use only in a well ventilated area. Keep container closed when not in use to prevent contact with acidic, basic or oxidizing materials.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Eyes: Skin Protection: Respiratory Protection:

Exhaust ventilation. Eyewash stations. Showers.
Chemical goggles; also wear a face shield if splashing hazard exists.
Avoid skin contact. Wear protective clothing and gloves. Rubber, Neoprene or Vinyl.
An approved respirator (i.e. NIOSH, etc.) should be worn when exposures are expected to exceed the applicable limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear, yellow to amber colloidal liquid
Odor: MILD
pH Value: 10 - 11.5
Vapor Pressure: Not Determined
Vapor Density (Air=1): Not Determined
Boiling Point (°F): 450 F
Melting/Freezing Point: -58 F. (-50 C.)
Solubility in Water: SOLUBLE
Bulk Density at 20°C: 8.33 - 9.02 lb/gal
Molecular Weight: Mixture
Specific Gravity (H2O=1): 1.000 - 1.070 @ 4 C.
Viscosity: Not determined.
Evaporation Rate: <.01
VOC Content(%): 0 (CARB Method 310)
Decomposition Temperature: Not Known

MATERIAL SAFETY DATA SHEET

Trade Name: Johnsens Heavy Duty DOT 3 Brake Fluid
 MSDS NO. 2224
 Revision Date: 03/10/2009
 Date Printed: 04/06/2009

10. STABILITY AND REACTIVITY

Chemical Stability: STABLE.
Conditions to Avoid: Keep away from heat, sparks and flame.
Materials to Avoid: Avoid contact with acidic, basic or oxidizing agents.
Hazardous Decomposition Products: Carbon monoxide. Carbon dioxide. Unknown organic compounds.
Hazardous Polymerization: WILL NOT OCCUR

11. TOXICOLOGICAL INFORMATION

Toxicological Data:

Component	Route	Species	Dose
Diisopropanolamine 110-97-4	Inhalation	Rats	Not known.
Diethylene glycol 111-46-6	Inhalation	Rats	Not known.
Triethylene glycol 112-27-6	Inhalation	Rats	Not known.
Diethylene glycol monobutyl ether 112-34-5	Inhalation	Rats	Not known.
Triethylene glycol monomethyl ether 112-35-6	Inhalation	Rats	Not known.
triethylene glycol monoethyl ether 112-50-5	Inhalation	Rats	Not known.
Tetraethylene glycol 112-60-7	Inhalation	Rats	Not known.
Triethylene glycol monobutyl ether 143-22-6	Inhalation	Rats	Not known.
poly(ethylene oxide) 25322-68-3	Inhalation	Rats	Not known.
Pentaethylene glycol 4792-15-8	Inhalation	Rats	Not known.
Sodium phosphate 7601-54-9	Inhalation	Rats	Not known.
Polyethylene glycol monomethyl ether 9004-74-4	Inhalation	Rats	Not known.
Polyethylene glycol monobutyl ether 9004-77-7	Inhalation	Rats	Not known.

Carcinogenicity:

MATERIAL SAFETY DATA SHEET

Trade Name: Johnsens Heavy Duty DOT 3 Brake Fluid
 MSDS NO. 2224
 Revision Date: 03/10/2009
 Date Printed 04/06/2009

Component	IARC	NTP	OSHA
Diisopropanolamine 110-97-4	Not Listed	Not Listed	Not Listed
Diethylene glycol 111-46-6	Not Listed	Not Listed	Not Listed
Triethylene glycol 112-27-6	Not Listed	Not Listed	Not Listed
Diethylene glycol monobutyl ether 112-34-5	Not Listed	Not Listed	Not Listed
Triethylene glycol monomethyl ether 112-35-6	Not Listed	Not Listed	Not Listed
triethylene glycol monoethyl ether 112-50-5	Not Listed	Not Listed	Not Listed
Tetraethylene glycol 112-60-7	Not Listed	Not Listed	Not Listed
Triethylene glycol monobutyl ether 143-22-6	Not Listed	Not Listed	Not Listed
poly(ethylene oxide) 25322-68-3	Not Listed	Not Listed	Not Listed
Pentaethylene glycol 4792-15-8	Not Listed	Not Listed	Not Listed
Sodium phosphate 7601-54-9	Not Listed	Not Listed	Not Listed
Polyethylene glycol monomethyl ether 9004-74-4	Not Listed	Not Listed	Not Listed
Polyethylene glycol monobutyl ether 9004-77-7	Not Listed	Not Listed	Not Listed

12. ECOLOGICAL INFORMATION

Remarks: Ecological testing has not been conducted on this product.

13. DISPOSAL CONSIDERATION

Waste Classification: No specific component of this material is listed as a Hazardous Substance CERCLA (40 CFR 261). However, this product contains various ethylene glycols and glycol ethers which are each included as a broad category on the CERCLA Hazardous substances list.

Waste Management: Recovery and reuse, rather than disposal, should be the ultimate goal of handling efforts.

Disposal Method: Disposal should be made in accordance with federal, state and local regulations.

14. TRANSPORTATION INFORMATION

U.S. DOT:

Proper Shipping Name:	Not Regulated
Hazard Class:	Not Regulated
UN/NA Number:	Not Applicable
DOT Packing Group:	Not Applicable

IMDG:

Proper Shipping Name:	Not Applicable
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MATERIAL SAFETY DATA SHEET

Trade Name: Johnsens Heavy Duty DOT 3 Brake Fluid
 MSDS NO. 2224
 Revision Date: 03/10/2009
 Date Printed: 04/06/2009

14. TRANSPORTATION INFORMATION

Hazard Class: Non-Hazardous
 Hazard Subclass: Not Applicable
 UN No.: Not Applicable
 Packing Group: Not Applicable
 Marine Pollutant: No

15. REGULATORY INFORMATION

US Federal Regulations:

Component	SARA 313	SARA 302	TPQ	RQ
Diisopropanolamine 110-97-4	Not Listed	Not Listed	Not Listed	Not Listed
Diethylene glycol 111-46-6	Not Listed	Not Listed	Not Listed	Not Listed
Triethylene glycol 112-27-6	Not Listed	Not Listed	Not Listed	Not Listed
Diethylene glycol monobutyl ether 112-34-5	Not Listed	Not Listed	Not Listed	Not Listed
Triethylene glycol monomethyl ether 112-35-6	Not Listed	Not Listed	Listed.	Not Listed
triethylene glycol monoethyl ether 112-50-5	Not Listed	Not Listed	Not Listed	Not Listed
Tetraethylene glycol 112-60-7	Not Listed	Not Listed	Not Listed	Not Listed
Triethylene glycol monobutyl ether 143-22-6	Not Listed	Not Listed	Not Listed	Not Listed
poly(ethylene oxide) 25322-68-3	Not Listed	Not Listed	Not Listed	Not Listed
Pentaethylene glycol 4792-15-8	Not Listed	Not Listed	Not Listed	Not Listed
Sodium phosphate 7601-54-9	Not Listed	Not Listed	Not Listed	Not Listed
Polyethylene glycol monomethyl ether 9004-74-4	Not Listed	Not Listed	Not Listed	Not Listed
Polyethylene glycol monobutyl ether 9004-77-7	Not Listed	Not Listed	Not Listed	Not Listed

US OSHA HEALTH CLASSIFICATION:

No specific component of this material is listed as a Hazardous Substance CERCLA (40 CFR 261). However, this product contains various ethylene glycols and glycol ethers which are each included as a broad category on the CERCLA Hazardous substances list.

SARA 311/312 Hazard Categories:

Delayed

State Regulations:

MATERIAL SAFETY DATA SHEET

Trade Name: Johnsens Heavy Duty DOT 3 Brake Fluid
 MSDS NO. 2224
 Revision Date: 03/10/2009
 Date Printed: 04/06/2009

Component	California Prop. 65 Cancer list	California - Prop 65 Developmental Toxicity	California Prop. 65 Reproductive Female	California Prop. 65 Reproductive Male
Diisopropanolamine 110-97-4	Not Listed	Not Listed	Not Listed	Not Listed
Diethylene glycol 111-46-6	Not Listed	Not Listed	Not Listed	Not Listed
Triethylene glycol 112-27-6	Not Listed	Not Listed	Not Listed	Not Listed
Diethylene glycol monobutyl ether 112-34-5	Not Listed	Not Listed	Not Listed	Not Listed
Triethylene glycol monomethyl ether 112-35-6	Not Listed	Not Listed	Not Listed	Not Listed
triethylene glycol monoethyl ether 112-50-5	Listed.	Not Listed	Not Listed	Not Listed
Tetraethylene glycol 112-60-7	Not Listed	Not Listed	Not Listed	Not Listed
Triethylene glycol monobutyl ether 143-22-6	Not Listed	Not Listed	Not Listed	Not Listed
poly(ethylene oxide) 25322-68-3	Not Listed	Not Listed	Not Listed	Not Listed
Pentaethylene glycol 4792-15-8	Not Listed	Not Listed	Not Listed	Not Listed
Sodium phosphate 7601-54-9	Not Listed	Not Listed	Not Listed	Not Listed
Polyethylene glycol monomethyl ether 9004-74-4	Not Listed	Not Listed	Listed.	Not Listed
Polyethylene glycol monobutyl ether 9004-77-7	Not Listed	Not Listed	Not Listed	Not Listed

U.S. TSCA: One or more components of this product is not listed on the TSCA Inventory.
Canadian Inventory: One or more components of this product is not listed on the Canadian DSL or NDSL Inventory.

Consumer Product Safety Improvement Act of 2008 General Conformity Certification

The Supplier identified in Section 1 of this MSDS has evaluated this product and certifies it to be labeled and packaged in compliance with the applicable provisions of the Federal Hazardous Substance Act as stated in 16 CFR 1500 and enforced by the Consumer Product Safety Commission, and where applicable the products that require Child Resistant Closures are packaged in accordance with the Poison Prevention Packaging Act as stated in 16 CFR 1700 and enforced by the Consumer Product Safety Commission. All closures have been tested in accordance with the latest protocols. No other testing is required to certify compliance with the above. The date of manufacture is stamped on the product container.

16. OTHER INFORMATION

General Notes: Do not allow undiluted material or large quantities to reach groundwater, bodies of water or sewer system.

MATERIAL SAFETY DATA SHEET

Trade Name: Johnsens Heavy Duty DOT 3 Brake Fluid
MSDS NO. 2224
Revision Date: 03/10/2009
Date Printed 04/06/2009

16. OTHER INFORMATION

Disclaimer:

The information and recommendations contained herein are based upon tests believed to be reliable. However, the manufacturer/distributor of this product does not guarantee their accuracy or completeness NOR SHALL ANY OF THIS INFORMATION CONSTITUTE A WARRANTY, WHETHER EXPRESSED OR IMPLIED, AS TO THE SAFETY OF THE GOODS, THE MERCHANTABILITY OF THE GOODS, OR THE FITNESS OF THE GOODS FOR A PARTICULAR PURPOSE. Adjustment to conform to actual conditions of usage may be required. The manufacturer/distributor assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied.



HAZARDOUS MATERIALS INVENTORY FORM

FORM 3

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Page 1 of 1 2

FACILITY ID# 3 0 0 3 5 38 BUSINESS NAME Battery Systems Inc 3

I. FACILITY INFORMATION

CHEMICAL LOCATION 12400 Industry St, Garden Grove, Ca 92841 4

CONFIDENTIAL LOCATION EPCRA Yes No 5 MAP # 1 6 GRID # D-5 7

II. CHEMICAL INFORMATION

CHEMICAL NAME Non Chlorinated Hydrocarbon WASTE Yes 8 TRADE SECRET Yes No 11
If EPCRA see instructions

COMMON NAME Johnsen Non Chlorinated Brake Parts Cleaner 9 An EHS Chemical Yes No 12
*If EHS is "Yes", all amounts must be LBS

CAS # 10 FIRE CODE HAZARD CLASSES (supplied by GGFD) 13

TYPE (Check one item only) a. PURE b. MIXTURE c. WASTE 14 RADIOACTIVE Yes No 15 CURIES 16

PHYSICAL STATE (Check one item only) a. SOLID b. LIQUID c. GAS 17 FED HAZARD CATEGORIES a. FIRE b. REACTIVE c. PRESSURE RELEASE 18
 d. ACUTE HEALTH e. CHRONIC HEALTH

AVERAGE DAILY AMOUNT 244 19 MAXIMUM DAILY AMOUNT 402 20 ANNUAL WASTE AMOUNT 0 21 STATE WASTE CODE 0 22

UNITS a. GALLONS b. CUBIC FEET 23 DAYS ON SITE 365 24 LARGEST CONTAINER 13oz 25
 c. POUNDS d. TONS
*If EHS, amount must be in pounds.

STORAGE CONTAINER (Check all that apply) a. ABOVEGROUND TANK e. PLASTIC DRUM i. VAT m. CYLINDER q. TANK WAGON 26
 b. UNDERGROUND TANK f. NONMETALLIC DRUM l. FIBER DRUM n. GLASS CONTAINER r. RAIL CAR
 c. TANK INSIDE BLDG g. METAL CONTAINER j. BAG(S) o. PLASTIC CONTAINER s. TOTE BIN
 d. STEEL DRUM h. CARBOY k. BOX(S) p. IN MACH OR EQUIP t. OTHER

STORAGE PRESSURE a. AMBIENT b. ABOVE AMBIENT c. BELOW AMBIENT 27

STORAGE TEMPERATURE a. AMBIENT b. ABOVE AMBIENT c. BELOW AMBIENT d. CRYOGENIC 28

%WT	HAZARDOUS COMPONENT (For mixture or waste only)	EHS	CAS #
1 65-75 29	Acetone 30	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 31	67-64-1 32
2 10-15 29	Toluene 30	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 31	108-88-3 32
3 5-15 29	Carbon Dioxide 30	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 31	124-38-9 32
4 5-10 29	Methyl Alcohol 30	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 31	67-56-1 32
5 29	30	<input type="checkbox"/> Yes <input type="checkbox"/> No 31	32

If more hazardous components are present at greater than 1% by weight if non-carcinogenic, or 0.1% by weight if carcinogenic, attach additional sheets of paper capturing the required information.

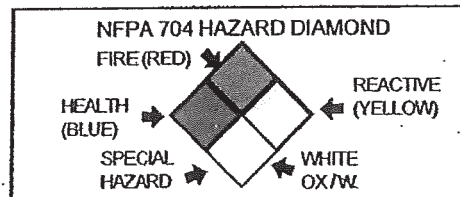
PLACARDING INFORMATION

UNDOT # Not applicable 33
Refer to shipping papers or MSDS

DOT HAZARD CLASS 34
Refer to shipping papers or MSDS

EPCRA YES NO 35

X 36
If EPCRA, Please Sign Here



MAKE AS MANY COPIES OF CHEMICAL INVENTORY FORM AS NEEDED

MATERIAL SAFETY DATA SHEET

Trade Name: Johnsens Non-chlorinated Brake Part Cleaner (VOC Compliant) 12/13 oz
MSDS NO. 2417C
Revision Date: 02/11/2009
Date Printed: 02/11/2009

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade Name: Johnsens Non-chlorinated Brake Part Cleaner (VOC Compliant) 12/13 oz
Chemical Family: Non-Chlorinated Hydrocarbon
Synonyms: None
Emergency Telephone (24 hr.): 24-Hour Emergency Information: CHEMTREC (800) 424-9300
Supplier: Technical Chemical Company, P.O. Box 139, Cleburne, Texas 76033

2. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight %	OSHA TWA	OSHA STEL	OSHA SKIN
Acetone 67-64-1	65-75	Not Listed	Not Listed	Not Listed
Toluene 108-88-3	10-15	Not Listed	Not Listed	Not Listed
Carbon Dioxide 124-38-9	5-15	Not Listed	Not Listed	Not Listed
Methyl Alcohol 67-56-1	5-10	Not Listed	Not Listed	Not Listed

Component	Weight %	OSHA Z PEL	OSHA Z TWA	OSHA Z Ceiling
Acetone 67-64-1	65-75	2400 mg/m ³ 1000 ppm	1800 mg/m ³ 750 ppm	Not Listed
Toluene 108-88-3	10-15	Not Listed	200 ppm 375 mg/m ³ 100 ppm	300 ppm
Carbon Dioxide 124-38-9	5-15	9000 mg/m ³ 5000 ppm	18000 mg/m ³ 10000 ppm	Not Listed
Methyl Alcohol 67-56-1	5-10	260 mg/m ³ 200 ppm	260 mg/m ³ 200 ppm	Not Listed

Component	ACGIH TLV TWA	ACGIH TLV STEL	ACGIH TLV Ceiling
Acetone 67-64-1	500 ppm	750 ppm	Not Listed
Toluene 108-88-3	50 ppm	Not Listed	Not Listed
Carbon Dioxide 124-38-9	5000 ppm	30000 ppm	Not Listed
Methyl Alcohol 67-56-1	200 ppm	250 ppm	Not Listed

Other: This product does not contain Normal Hexane (N-Hexane).

3. HAZARDS IDENTIFICATION

Emergency Overview:

Danger: Poison. Extremely Flammable. Content under pressure. Ingestion of even small amounts of methanol can cause blindness and death. This material is an eye and skin irritant. Harmful if absorbed through the skin. Keep away from heat, sparks and flame. Gross inhalation overexposure may cause: respiratory track irritation, kidney damage, blood, liver damage, lung damage and central nervous system depression.

HMIS Classification: NFPA Rating:

Health: *2 Flammability: 3 Physical Hazard: 2
Health: 2 Flammability: 3 Reactivity: 0

MATERIAL SAFETY DATA SHEET

Trade Name: Johnsens Non-chlorinated Brake Part Cleaner (VOC Compliant) 12/13 oz
MSDS NO. 2417C
Revision Date: 02/11/2009
Date Printed 02/11/2009

4. FIRST AID MEASURES

Eye Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.
Ingestion: If swallowed, do NOT induce vomiting. Call a physician immediately. Never give anything by mouth to an unconscious person. If vomiting occurs, keep head lower than hips to prevent aspiration.
Inhalation: If inhaled, remove to fresh air. If not breathing give artificial respiration, preferably mouth-to-mouth. If breathing is difficult give oxygen. Get medical attention.
Skin Contact: In case of contact, immediately flush skin with plenty of soap and water for at least 15 minutes. Get medical attention. Remove contaminated clothing and shoes, and launder before reuse.

5. FIRE FIGHTING MEASURES

Flammable Properties

Flash Point °F(°C): -4 F (Lowest Component)
Flash Point Method: Not Determined
Flammable Limits in Air - Lower (%): 1.2% (Lowest Component)
Flammable Limits in Air - Upper (%): 7.1% (Lowest Component)
Autoignition Temperature °F(°C): 725 F (Lowest Component)
Extinguishing Media: Water. Dry chemical. Carbon dioxide. Alcohol foam. Use water spray to keep containers cool that are exposed to heat or flames.

Protection Of Fire-Fighters:

Special Fire-Fighting Procedures: Wear approved positive-pressure self-contained breathing apparatus and protective clothing. Vapor may cause flash fire.

Hazardous Combustion Products: Carbon Dioxide. Carbon Monoxide. Formaldehyde. Formic Acid.
Aerosol Comments: NFPA Level 3 Aerosol

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Wear appropriate protective clothing and equipment to prevent skin and eye contact.
Spill Procedures: Contain any liquid from leaking containers. Avoid all sources of ignition; heat, sparks and open flames.
Action to be taken if material is released or spilled: Do not puncture or incinerate container. Contents under pressure. Wear proper protective equipment as specified in the protective equipment section. Remove sources of ignition. Leaking containers should be removed to an isolated, well-ventilated area and transferred to other suitable containers. Wipe, scrape, or soak up in an inert material and put in a container intended for flammable materials for disposal. Persons not trained should evacuate area.
Environmental Precautions: Do not allow to enter sanitary drains, sewer or surface and subsurface waters. Keep out of lakes, ponds or streams.

7. HANDLING AND STORAGE

Handling and Storage: Caution: Contents under pressure. Keep away from heat and open flame. Use only in a well ventilated area. Ground and bond containers when transferring material. Avoid breathing vapors, if exposed to high vapor concentration, leave area at once. Avoid contact with skin and eyes. Do not puncture, incinerate or store above 120 F. Exposure to high temperatures may cause bursting. DO NOT store in the passenger compartment of an automobile.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Use in a well ventilated area. Local exhaust ventilation as necessary to maintain exposures to within applicable limits. Use explosion proof equipment. Eyewash stations. Showers.
Eyes: Chemical goggles; also wear a face shield if splashing hazard exists.
Skin Protection: Avoid skin contact. Wear protective clothing and gloves.
Respiratory Protection: Do not breath mist or vapor. Use in a well ventilated area. Appropriate respiratory protection shall be worn when applied engineering controls are not adequate to protect against inhalation exposure.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear colorless liquid.
Odor: MILD
pH Value: Not Determined
Vapor Pressure: Not Determined
Vapor Density (Air=1): Approximately 2.0

MATERIAL SAFETY DATA SHEET

Trade Name: Johnsens Non-chlorinated Brake Part Cleaner (VOC Compliant) 12/13 oz
 MSDS NO. 2417C
 Revision Date: 02/11/2009
 Date Printed: 02/11/2009

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point (°F): 133 F (Lowest Component)
 Melting/Freezing Point: < -110 F.
 Solubility in Water: approximately 75%
 Bulk Density at 20°C: Not Determined
 Molecular Weight: Mixture
 Specific Gravity (H20=1): .82
 Viscosity: Not Determined.
 Evaporation Rate: Not Determined
 VOC Content(%): 19.91%
 Decomposition Temperature: Not Determined

10. STABILITY AND REACTIVITY

Chemical Stability: Stable under normal conditions of handling, use and transportation.
Conditions to Avoid: Keep away from heat, sparks and flame. Avoid any source of ignition. Do not expose to heat or store at temperatures above 120 F.
Materials to Avoid: Strong oxidizers. Chromic Anhydride. Phosphorous Trioxide. Lead Perchlorate. Perchloric Acid and Ethyl Alcohol. Iodine. Mercuric Oxide and Ethyl Alcohol. Sodium or Potassium Hydroxide and Chloroform. Nitric acid. Sulfuric Acid. Alkalies. Chlorine compounds. Potassium t-butoxide. Certain reactive metals, hydrides, moist cesium monoxide, or lithium acetylene carbide diamino may ignite. Passing carbon dioxide over a mixture of sodium peroxide and aluminum or magnesium may explode.
Hazardous Decomposition Products: Carbon monoxide. Carbon dioxide. Formaldehyde. Formic acid.
Hazardous Polymerization: WILL NOT OCCUR

11. TOXICOLOGICAL INFORMATION

Toxicological Data:

Component	Route	Species	Dose
Acetone 67-64-1	Inhalation	Rats	LC50 50100 mg/m ³ /8H
Toluene 108-88-3	Inhalation	Rats	LC50 49 gm/m ³ /4H
Carbon Dioxide 124-38-9	NA	NA	Not known.
Methyl Alcohol 67-56-1	Inhalation	Rats	LC50 64,000 ppm

Carcinogenicity:

Component	IARC	NTP	OSHA
Acetone 67-64-1	Not Listed	Not Listed	Not Listed
Toluene 108-88-3	Group 3 (not classifiable)	Not Listed	Not Listed
Carbon Dioxide 124-38-9	Not Listed	Not Listed	Not Listed
Methyl Alcohol 67-56-1	Not Listed	Not Listed	Not Listed

12. ECOLOGICAL INFORMATION

Remarks: Ecological testing has not been conducted on this product.

13. DISPOSAL CONSIDERATION

Waste Classification: Residues and spilled material are hazardous waste due to ignitability.
Waste Management: Recovery and reuse, rather than disposal, should be the ultimate goal of handling efforts.

MATERIAL SAFETY DATA SHEET

Trade Name: Johnsens Non-chlorinated Brake Part Cleaner (VOC Compliant) 12/13 oz
 MSDS NO. 2417C
 Revision Date: 02/11/2009
 Date Printed 02/11/2009

13. DISPOSAL CONSIDERATION

Disposal Method: Disposal should be made in accordance with federal, state and local regulations.

14. TRANSPORTATION INFORMATION

U.S. DOT:
 Proper Shipping Name: ORM-D CONSUMER COMMODITY
 Hazard Class: ORM-D
 UN/NA Number: Not Applicable
 DOT Packing Group: Not Applicable

IMDG:
 Proper Shipping Name: Aerosols (Limited Quantity)
 Hazard Class: 2.1
 Hazard Subclass: Not determined.
 UN No.: UN1950
 Packing Group: Not Applicable.
 Marine Pollutant: No

15. REGULATORY INFORMATION

US Federal Regulations:

Component	SARA 313	SARA 302	TPQ	RQ
Acetone 67-64-1	Not Listed	Not Listed	Not Listed	Not Listed
Toluene 108-88-3	Listed.	Not Listed	Not Listed	Not Listed
Carbon Dioxide 124-38-9	Not Listed	Not Listed	Not Listed	Not Listed
Methyl Alcohol 67-56-1	Listed.	Not Listed	Not Listed	Not Listed

US OSHA HEALTH CLASSIFICATION: Hazardous per OSHA 29 CFR 1910.1200
SARA 311/312 Hazard Categories: Not Determined.

State Regulations:

Component	California Prop. 65 Cancer list	California - Prop 65 Developmental Toxicity	California Prop. 65 Reproductive Female	California Prop. 65 Reproductive Male
Acetone 67-64-1	Not Listed	Not Listed	Not Listed	Not Listed
Toluene 108-88-3	Not Listed	Listed: January 1, 1991 Developmental toxin.	Not Listed	Not Listed
Carbon Dioxide 124-38-9	Not Listed	Not Listed	Not Listed	Not Listed
Methyl Alcohol 67-56-1	Not Listed	Not Listed	Not Listed	Not Listed



HAZARDOUS MATERIALS INVENTORY FORM

FORM 3

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FACILITY ID#	30035	38	BUSINESS NAME	3
			Battery Systems Inc	

I. FACILITY INFORMATION

CHEMICAL LOCATION	12400 Industry St, Garden Grove, Ca 92841			4					
CONFIDENTIAL LOCATION EPCRA	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	5	MAP #	1	6	GRID #	D-4	7

II. CHEMICAL INFORMATION

CHEMICAL NAME	Petroleum hydrocarbon Oil	WASTE	<input type="checkbox"/> Yes	8	TRADE SECRET	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	11
COMMON NAME	Johnsens Power steering Fluid			9	An EHS Chemical	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	12
CAS #	10	FIRE CODE HAZARD CLASSES (supplied by GGFD)		13	If EPCRA see instructions			

TYPE (Check one item only)	<input type="checkbox"/> a. PURE	<input checked="" type="checkbox"/> b. MIXTURE	<input type="checkbox"/> c. WASTE	14	RADIOACTIVE	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	15	CURIES	16	
PHYSICAL STATE (Check one item only)	<input type="checkbox"/> a. SOLID	<input checked="" type="checkbox"/> b. LIQUID	<input type="checkbox"/> c. GAS	17	FED HAZARD CATEGORIES	<input checked="" type="checkbox"/> a. FIRE	<input type="checkbox"/> b. REACTIVE	<input type="checkbox"/> c. PRESSURE RELEASE	18	<input type="checkbox"/> d. ACUTE HEALTH	<input type="checkbox"/> e. CHRONIC HEALTH

AVERAGE DAILY AMOUNT	423	19	MAXIMUM DAILY AMOUNT	834	20	ANNUAL WASTE AMOUNT	0	21	STATE WASTE CODE	0	22
UNITS	<input checked="" type="checkbox"/> a. GALLONS	<input type="checkbox"/> b. CUBIC FEET	<input type="checkbox"/> c. POUNDS	<input type="checkbox"/> d. TONS	23	DAYS ON SITE	365	24	LARGEST CONTAINER	1 gal	25

STORAGE CONTAINER (Check all that apply)	<input type="checkbox"/> a. ABOVEGROUND TANK	<input type="checkbox"/> e. PLASTIC DRUM	<input type="checkbox"/> i. VAT	<input type="checkbox"/> m. CYLINDER	<input type="checkbox"/> q. TANK WAGON	26
	<input type="checkbox"/> b. UNDERGROUND TANK	<input type="checkbox"/> f. NONMETALLIC DRUM	<input type="checkbox"/> j. FIBER DRUM	<input type="checkbox"/> n. GLASS CONTAINER	<input type="checkbox"/> r. RAIL CAR	
	<input type="checkbox"/> c. TANK INSIDE BLDG	<input type="checkbox"/> g. METAL CONTAINER	<input type="checkbox"/> k. BAG(S)	<input checked="" type="checkbox"/> o. PLASTIC CONTAINER	<input type="checkbox"/> s. TOTE BIN	
	<input type="checkbox"/> d. STEEL DRUM	<input type="checkbox"/> h. CARBOY	<input type="checkbox"/> l. BOX(S)	<input type="checkbox"/> p. IN MACH OR EQUIP	<input type="checkbox"/> t. OTHER	

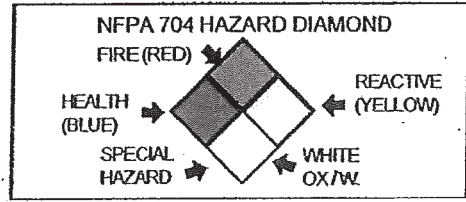
STORAGE PRESSURE	<input checked="" type="checkbox"/> a. AMBIENT	<input type="checkbox"/> b. ABOVE AMBIENT	<input type="checkbox"/> c. BELOW AMBIENT	27	
STORAGE TEMPERATURE	<input checked="" type="checkbox"/> a. AMBIENT	<input type="checkbox"/> b. ABOVE AMBIENT	<input type="checkbox"/> c. BELOW AMBIENT	<input type="checkbox"/> d. CRYOGENIC	28

%WT	HAZARDOUS COMPONENT (For mixture or waste only)	EHS	CAS #
1 80-99 29	Heavy Hydrotreated Naphtenic Distillates 30	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 31	64745-52-5 32
2 20-39 29	Mineral Oil, PetroleumDistillates, Hydrotrated Heavy Paraffinic 30	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 31	64742-54-7 32
3 0-5 29	Dipropylene Glycol Methyl Ether Acetate 30	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 31	88917-22-0 32
4 0-5 29	Glycol Ether DB 30	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 31	112-34-5 32
5 29	30	<input type="checkbox"/> Yes <input type="checkbox"/> No 31	32

If more hazardous components are present at greater than 1% by weight if non-carcinogenic, or 0.1% by weight if carcinogenic, attach additional sheets of paper capturing the required information.

PLACARDING INFORMATION

UNDOT #	Not applicable	33
Refer to shipping papers or MSDS		
DOT HAZARD CLASS	Not Applicable	34
Refer to shipping papers or MSDS		
EPCRA	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	35
X		36
If EPCRA, Please Sign Here		



MAKE AS MANY COPIES OF CHEMICAL INVENTORY FORM AS NEEDED

MATERIAL SAFETY DATA SHEET

Trade Name: Johnsens PowerSteering Fluid
MSDS NO. 4611
Revision Date: 03/01/2002

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade Name: Johnsens PowerSteering Fluid
Chemical Family: PETROLEUM HYDROCARBON OIL
Synonyms: None
Emergency Telephone (24 hr.): CHEMTREC 1-800-424-9300
Supplier:
Technical Chemical Company, P.O. Box 139, Cleburne, Texas 76033

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient/CAS No.	wt. %	OSHA PEL TWA	OSHA PEL Ceiling Limits	ACGIH TLV TWA	ACGIH TLW STEL
Heavy Hydrotreated Naphthenic Distillates (petroleum) 64742-52-5	50-99	Not known	Mist 5 mg/m ³	TLV Mist 5 mg/m ³ 8 HR.	Not Known
Mineral Oil, petroleum distillates, hydrotreated (severe) heavy paraffinic 64742-54-7	20-50	None Established	None Established	None Established	None Established
Glycol Ether DB 112-34-5	0-5	None Established	None Established	None Established	None Established
Dipropylene Glycol Methyl Ether Acetate 88917-22-0	0-5	None Established	None Established	None Established	None Established

3. HAZARDS IDENTIFICATION

Emergency Overview: May irritate the skin. This material is an eye irritant. Caution: Combustible

4. FIRST AID MEASURES

Eye Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

Ingestion: Do Not Induce Vomiting. This material is practically non-toxic if ingested in small amounts (tablespoonful). Swallowing amounts larger may cause injury. Seek medical attention.

Inhalation: If inhaled, remove to fresh air. If not breathing give artificial respiration, preferably mouth-to-mouth. If breathing is difficult give oxygen. Get medical attention.

Skin Contact: Wash with soap and water. Remove contaminated clothing and launder before reuse. If irritation persists or signs of toxicity occur, seek medical attention. If product is injected into or under the skin, or into any part of the body, the individual should be evaluated immediately by a physician as a surgical emergency.

5. FIRE FIGHTING MEASURES

Flammable Properties

Flash Point °F(°C): >200 F
Flash Point Method: TAG Closed Cup
Flammable Limits in Air - Lower (%): Not Determined
Flammable Limits in Air - Upper (%): Not Determined
Autoignition Temperature °F(°C): Not Determined
Extinguishing Media: Foam. Water. Dry chemical.

Protection Of Fire-Fighters:

Special Fire-Fighting Procedures: Wear approved positive-pressure self-contained breathing apparatus and protective clothing. Do not direct a solid stream of water or foam into hot, burning pools; this may cause frothing and increase fire intensity.

Hazardous Combustion Products: Fumes and Smoke. Carbon Monoxide. Aldehydes.

Aerosol Comments: Not Applicable

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Wear appropriate protective clothing and equipment to prevent skin and eye contact.

Spill Procedures: Contain any liquid from leaking containers.

Trade Name: Johnsens PowerSteering Fluid **MSDS NO.** 4611

Wear proper protective equipment as specified in the protective equipment section. Remove sources of ignition. Increase area ventilation. Absorb spills on inert material such as perlite, vermiculite, sand or dirt. Place in double polyethylene bags. Isolate from other waste materials.

Environmental Precautions: Do not allow to enter sanitary drains, sewer or surface and subsurface waters.

7. HANDLING AND STORAGE

Handling and Storage: Keep container closed when not in use. Avoid contact with skin and eyes. Use only in a well ventilated area. Caution: Combustible. Keep away from heat and open flame. Keep away from food and smoking materials. Wash hands before eating and smoking.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Showers. Eyewash stations. Use local exhaust.
Eyes: Wear safety glasses or goggles to protect against exposure.
Skin Protection: Use chemical resistant gloves for prolonged skin contact. Wash hands and other exposed areas with mild soap and water before eating, drinking, smoking and when leaving work.
Respiratory Protection: Use in a well ventilated area. Use approved NIOSH respiratory protection if TLV exceeded..... Or over exposure is likely.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Colorless to light yellow liquid	pH Value:	Not Determined
Odor:	MILD PETROLEUM	Vapor Density (Air=1):	Not Determined
Vapor Pressure:	Not Determined	Melting/Freezing Point:	Not determined.
Boiling Point (°F):	>400 F	Bulk Density at 20°C:	Not Determined
Solubility in Water:	<4%	Evaporation Rate:	Not Determined
Molecular Weight:	Mixture	Specific Gravity (H2O=1):	.9 approx.
Viscosity:	Not determined.	Decomposition Temperature:	Not Known
VOC Content(%):	Not determined.		

10. STABILITY AND REACTIVITY

Chemical Stability: STABLE.
Conditions to Avoid: Keep away from heat, sparks and flame.
Materials to Avoid: Strong oxidizing agents. Strong acids. Concentrated oxygen. Sodium Hydrochlorite and Calcium Hydrochlorite as this presents a serious explosion hazard.
Hazardous Decomposition Products: Carbon monoxide. and other asphxiants.
Hazardous Polymerization: WILL NOT OCCUR

11. TOXICOLOGICAL INFORMATION

Toxicological Data:

Ingredient/CAS No.	wt. %	Route	Species	Dose
Heavy Hydrotreated Naphthenic Distillates (petroleum) 64742-52-5	50-99	NA	NA	Not known.
Mineral Oil, petroleum distillates, hydrotreated (severe) heavy paraffinic 64742-54-7	20-50	Oral	Rats	LD50 >15 gm/kg
Glycol Ether DB 112-34-5	0-5	Oral	Rats	LD50 5660 mg/kg
Dipropylene Glycol Methyl Ether Acetate 88917-22-0	0-5	NA	NA	Not known.

Carcinogenicity:

Ingredient/CAS No.	wt. %	IARC	NTP	OSHA
Heavy Hydrotreated Naphthenic Distillates (petroleum) 64742-52-5	50-99	Not Listed	Not Listed	Not Listed
Mineral Oil, petroleum distillates, hydrotreated (severe) heavy paraffinic 64742-54-7	20-50	Not Listed	Not Listed	Not Listed

Trade Name: Johnsens PowerSteering Fluid **MSDS NO.** 4611

Glycol Ether DB 112-34-5	0-5	Not Listed	Not Listed	Not Listed
Dipropylene Glycol Methyl Ether Acetate 88917-22-0	0-5	Not Listed	Not Listed	Not Listed

12. ECOLOGICAL INFORMATION

Ecological testing has not been conducted on this product.

13. DISPOSAL CONSIDERATION

Waste Classification: Not determined.

Waste Management: Not determined.

Disposal should be made in accordance with federal, state and local regulations.

14. TRANSPORTATION INFORMATION

U.S. DOT:

Proper Shipping Name: Not Regulated
Hazard Class: Not Regulated
UN/NA Number: Not Applicable
DOT Packing Group: Not Applicable

IMDG:

Proper Shipping Name: Not Regulated
Hazard Class: Not Regulated
Hazard Subclass: Not determined.
UN No.: Not Applicable
Packing Group: Not Applicable
Marine Pollutant: No

15. REGULATORY INFORMATION

US Federal Regulations:

Ingredient/CAS No.	wt. %	SARA 313	SARA 302	RQ	TPQ
Heavy Hydrotreated Naphthenic Distillates (petroleum) 64742-52-5	50-99	Not Listed	Not Listed	NA	NA
Mineral Oil, petroleum distillates, hydrotreated (severe) heavy paraffinic 64742-54-7	20-50	Not Listed	Not Listed	NA	NA
Glycol Ether DB 112-34-5	0-5	Not Listed	Not Listed	NA	NA
Dipropylene Glycol Methyl Ether Acetate 88917-22-0	0-5	Not Listed	Not Listed	NA	NA

SARA 311/312 Hazard Categories: Not Determined.

State Regulations:

Ingredient/CAS No.	wt. %	California Prop. 65 Cancer list	California Prop. 65 Developmental Toxicity	California Prop. 65 Reproductive Female	California Prop. 65 Reproductive Male

Trade Name: Johnsens PowerSteering Fluid **MSDS NO.** 4611

Heavy Hydrotreated Naphthenic Distillates (petroleum) 64742-52-5	50-99	Not Listed	Not Listed	Not Listed	Not Listed
Mineral Oil, petroleum distillates, hydrotreated (severe) heavy paraffinic 64742-54-7	20-50	Not Listed	Not Listed	Not Listed	Not Listed
Glycol Ether DB 112-34-5	0-5	Not Listed	Not Listed	Not Listed	Not Listed
Dipropylene Glycol Methyl Ether Acetate 88917-22-0	0-5	Not Listed	Not Listed	Not Listed	Not Listed

U.S. TSCA:

The components of this product are listed on the TSCA Inventory.

16. OTHER INFORMATION

General Notes:

Do not allow undiluted material or large quantities to reach groundwater, bodies of water or sewer system.

Disclaimer:

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