

MATERIAL SAFETY DATA SHEET

Trade Name: Johnsens Heavy Duty Hydraulic Brake Fluid
MSDS NO. 2234
Revision Date: 10/15/2008
Date Printed 12/30/2008

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade Name: Johnsens Heavy Duty Hydraulic 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 |

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| Component | Weight % | OSHA Z PEL | OSHA Z TWA | OSHA Z Ceiling |
|--|----------|------------|------------|----------------|
| 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 | 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 |
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| 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:

May be fatal if swallowed. Content under pressure. 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. Warning: Extremely Flammable.

HMIS Classification: NFPA Rating:

Health: 2 Flammability: 4 Physical Hazard: 2
HEALTH 2, FLAMMABILITY 4, 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.

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5. FIRE FIGHTING MEASURES

Flammable Properties

Flash Point °F(°C): Not Determined
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: Carbon Dioxide. Carbon Monoxide. Unidentified organic compounds.
Aerosol Comments: Not Applicable

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Wear appropriate protective clothing and equipment to prevent skin and eye contact.
Spill Procedures: 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: Exhaust ventilation. 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. Rubber, Neoprene or Vinyl.
Respiratory Protection: 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: Colorless to light yellow liquid
Odor: MILD
pH Value: Not Determined
Vapor Pressure: Not Determined
Vapor Density (Air=1): Not Determined
Boiling Point (°F): Not determined
Melting/Freezing Point: Not determined
Solubility in Water: SOLUBLE
Bulk Density at 20°C: Not determined
Molecular Weight: Mixture
Specific Gravity (H2O=1): Not determined
Viscosity: Not determined.
Evaporation Rate: Not determined
VOC Content(%): 75%
Decomposition Temperature: Not Known

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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:

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| 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: Consumer Commodity
Hazard Class: ORM-D
UN/NA Number: Not Applicable
DOT Packing Group: Not Applicable

IMDG:
Proper Shipping Name: Aerosols (Limited quantity)

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14. TRANSPORTATION INFORMATION

Hazard Class: 2.1
 Hazard Subclass: Not Applicable
 UN No.: UN 1950
 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:

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| 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.

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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.