Safety Data Sheet

SDS No. 12095

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

DURALIFE® WATER GLYCOL FIRE RESISTANT HYDRAULIC FLUID FR 46
Product Use : WATER GLYCOL FIRE RESISTANT HYDRAULIC FLUID
Manufacturer :
AMTECOL, Inc.
810 Wright Ave, Richmond, CA 94804, U.S.A.
www.amtecol.com
Transportation Emergency & Emergency spill information :
Call CHEMTREC : (+1) 703-527-3887 (outside the U.S.), 1-800-424-9300 (in the U.S.)
Health Emergency : Amtecol Emergency Information Center : 1-866-268-1888
Other Product Information :
Technical Assistance/SDS info & Customer Service : 1-510-235-7979 Email : info@amtecol.com

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification
ACUTE TOXICITY: ORAL - Category 4 SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE
DAMAGE/ EYE IRRITATION - Category 2B SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) central nervous system (CNS) and kidneys - Category 2

Label Elements

EMERGENCY OVERVIEW

- HARMFUL OR FATAL IF SWALLOWED
- CAUSES EYE IRRITATION
- MAY CAUSE DIZZINESS, DROWSINESS AND REDUCED ALERTNESS
- POSSIBLE BIRTH DEFECT HAZARD – CONTAINS MATERIAL THAT MAY CAUSE BIRTH DEFECTS BASED ON ANIMAL DATA
- MAY CAUSE DAMAGE TO KIDNEY

IMMEDIATE HEALTH EFFECTS
EYE : Contact with the eyes causes irritation. Symptoms may include pain, tearing, reddening, swelling and impaired vision .
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 : Toxic , may be harmful or fatal if swallowed .
INHALATION : The vapor or fumes from this material may cause respiratory irritation . Symptoms of respiratory irritation may include coughing and difficulty breathing .
DELAYED OR OTHER HEALTH EFFECTS
Contains material that may be harmful to the developing fetus based on animal data .
TARGET ORGANS : Contains material that may cause damage to the following organ(s) following repeated ingestion based on animal data : Kidney

SECTION 3. COMPOSITION INFORMATION/ INGREDIENTS

COMPONENTS	CAS NUMBER	% WEIGHT
DIETHYLENE GLYCOL 2,2-OXYBISETHANOL	111-46-6	40- 50
MORPHOLINE	110-91-8	<1

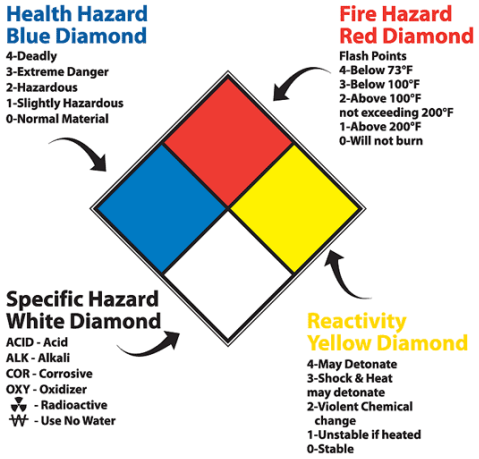
SECTION 4. FIRST AID MEASURES

Eye Contact: Flush eyes with water immediately while holding the eyelids open. Remove contact lenses, if worn, after initial flushing, and continue flushing for at least 15 minutes. Get immediate medical attention.
Skin Contact: 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(Swallowing): If swallowed, get medical attention. Do not induce vomiting. Never give anything by mouth to an unconscious person.
Inhalation(Breathing): 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. FIREFIGHTING MEASURES

Fire Classification:
OSHA Classification (29 CFR 1910.1200): Not classified by OSHA as flammable or combustible.
Flammable Properties:
Flashpoint: (Pensky-Martens Closed Cup) > 120 °C (248 °F)
Autoignition: No data available
Flammability (Explosive) Limits (% by volume in air): Lower: No data available
Upper: No data available
Extinguishing Media : Use dry chemical, foam, water fog or carbon dioxide CO_2 to extinguish flames.

NFPA 704 HAZARD RATINGS:



Protection of Fire Fighters:
Fire Fighting Instructions: This material will burn although it is not easily ignited. See Section 7 for proper handling and storage. 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.
Accidental Release Measures : Stop the source of the leak or release. Clean up releases as soon as possible, observing precautions in Exposure Controls/Personal Protection. Contain liquid to prevent further contamination of soil, surface water or ground-water. Clean up small spills using appropriate techniques such as sorbent materials or pumping. Where feasible and appropriate, remove contaminated soil.
Recommended measures are based on the most likely spillage scenarios for this material; however local conditions and regulations may influence or limit the choice of appropriate actions to be taken.
Reporting: Follow prescribed procedures for reporting and responding to larger releases. 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.
Do not get in eyes, on skin, or on clothing. Keep out of the reach of children. Wash thoroughly after handling.
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'.
Conditions for safe storage: Keep container(s) tightly closed and properly labeled. Use and store this material in cool, dry, well-ventilated area away from heat and all sources of ignition. Store only in approved containers. Keep away from any incompatible material . Protect container(s) against physical damage.
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 residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. "Empty" drums should be completely drained, properly bunged, and promptly shipped to the supplier or a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations. Before working on or in tanks which contain or have contained this material, refer to OSHA regulations, ANSI Z49.1, and other references pertaining to cleaning, repairing, welding, or other contemplated operations.

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: If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits, additional engineering controls may be required.

Use in a well-ventilated area.
Note: State, local or other agencies or advisory groups may have established more stringent limits. Consult an industrial hygienist or similar professional, or your local agencies, for further information.

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.
A respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed whenever workplace conditions warrant a respirator's use. Air purifying respirators provide limited protection and cannot be used in atmospheres that exceed the maximum use concentration (as directed by regulation or the manufacturer's instructions), in oxygen deficient (less than 19.5 percent oxygen) situations, or under conditions that are immediately dangerous to life and health (IDLH).
Consult local authorities for appropriate values.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Bright	**Pour Point :** < - 76 ºF (-60 ºC)
Odor : Petroleum odor	**Solubility in water :** Complete
Physical State : Liquid	**Viscosity @ 100 ºC**: 46.5 cSt
Evaporation Rate (nBuAc=1): No data available	**Vapor Pressure:** 13.2 mmHg @ 68 °F (20°C)
Boiling Point : 223 ºF (106 ºC)	**Vapor Density (air=1) :** NA
Melting Point : No data available	**pH :** NA
Specific Gravity : 1.075@15.6 ºC(60 ºF)	**Flammability (Explosive) Limits (% by volume in air):** Lower: Not Applicable Upper: Not Applicable

SECTION 10. STABILITY AND REACTIVITY

Reactivity: This material is not expected to react.
Possibility of hazardous reactions: Hazardous reactions not anticipated.
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: Not anticipated under normal conditions of use. During use in engines, contamination of oil with low levels of hazardous fuel combustion by-products may occur. Repeated and prolonged skin contact can cause drying and cracking.
Hazardous Polymerization: Hazardous polymerization will not occur.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects
Serious Eye Damage/Irritation: The eye irritation hazard is based on evaluation of data for product components.
Skin Corrosion/Irritation: The skin irritation hazard is based on evaluation of data for product components.
Skin Sensitization: The skin sensitization hazard is based on evaluation of data for product components.
Acute Dermal Toxicity: The acute dermal toxicity hazard is based on evaluation of data for product components.
Acute Oral Toxicity: The acute oral toxicity hazard is based on evaluation of data for product components.
Acute Inhalation Toxicity: The acute inhalation toxicity hazard is based on evaluation of data for product components.
Additional Toxicology Information:
This product contains diethylene glycol (DEG). The estimated oral lethal dose is about 50 cc (1.6 oz) for an adult human. DEG has caused the following effects in laboratory animals: liver abnormalities, kidney damage and blood abnormalities. It has been suggested as a cause of the following effects in humans: liver abnormalities, kidney damage, lung damage and central nervous system damage. Components in this formulation, when tested separately (usually by ingestion), have caused GI, testicular and CNS effects, nausea and vomiting. Continuous ingestion of a diet containing one of the components of this formulation at 2% or 4% for two years produced liver and kidney damage and bladder stones in rats.
Bladder tumors, caused by repeated injury by bladder stones, were also produced. One component was associated with fetal toxicity in animal studies. One component caused birth defects in animals following ingestion of large doses. One component was slightly toxic to the offspring of treated female rats.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity
This material is not expected to be harmful to aquatic organisms. The ecotoxicity hazard is based on an evaluation of data for the components or a similar material.
Environmental Fate
Ready Biodegradability: This material is 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. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

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: HYDRAULIC SYSTEM FLUID;NOT REGULATED AS A HAZARDOUS MATERIAL FOR TRANSPORTATION UNDER 49 CFR
IMO/IMDG Shipping Description: NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORTATION UNDER THE IMDG CODE
ICAO/IATA Shipping Description: NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORTATION UNDER ICAO

SECTION 15. REGULATORY INFORMATION

CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs (in pounds):
This material does not contain any chemicals subject to the reporting requirements of SARA 302 and 40 CFR 372.
CERCLA/SARA - Section 311/312 (Title III Hazard Categories)
Acute (Immediate) Health Hazard: Yes
Chronic (Delayed) Health Hazard: Yes
Fire Hazard: No
Pressure Hazard: No
Reactive Hazard: No

REGULATORY LISTS SEARCHED:
01-1=IARC Group 1
01-2A=IARC Group 2A
01-2B=IARC Group 2B
02=NTP Carcinogen
03=EPCRA 313
04=CA Proposition 65
05=MA RTK
06=NJ RTK
07=PA RTK
The following components of this material are found on the regulatory lists indicated.
Diethylene glycol 07

CHEMICAL INVENTORIES:

All components comply with the following chemical inventory requirements: AICS (Australia), EINECS(European Union), ENCS (Japan), IECSC (China), KECI (Korea), PICCS (Philippines), TSCA (UnitedStates).

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: (Brake fluid)

WHMIS CLASSIFICATION:

Class D, Division 2, Subdivision A: Very Toxic Material
Chronic Toxic Effects
Class D, Division 2, Subdivision B: Toxic Material -
Skin or Eye Irritation

SECTION 16. OTHER INFORMATION

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).

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

OSHA - Occupational Safety and Health Administration	TWA - Time Weighted Average
STEL - Short-term Exposure Limit	PEL - Permissible Exposure Limit
ACGIH - American Conference of Government Industrial Hygienists	CAS - Chemical Abstract Service Number
GHS - Globally Harmonized System	SDS - Safety Data Sheet
API - American Petroleum Institute	IMO/IMDG - International Maritime Dangerous Goods Code
DOT - Department of Transportation (USA)	NCEL - New Chemical Exposure Limit
IARC - International Agency for Research on Cancer	NFPA - National Fire Protection Association (USA)
EPA - Environmental Protection Agency	SCBA - Self-Contained Breathing Apparatus
TLV - Threshold Limit Value	NTP - National Toxicology Program (USA)
HMIS -Hazardous Materials Identification System	WHMIS -Workplace Hazardous Materials Information System
NIOSH-National Institute for Occupational Safety and Health	TSCA-Toxic Substances Control Act
CASRN - Chemical Abstracts Service	CERCLA - The Comprehensive Environmental

Registry Number	Response, Compensation, and Liability Act
INSHT - National Institute for Health and Safety at Work	IOPC - International Oil Pollution Compensation
LEL - Lower Explosive Limit	NE - Not Established
SARA - Superfund Amendments and Reauthorization Act	UEL - Upper Explosive Limit

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Disclaimer of Warranty : The above information is based on the data of which we are aware and is believed to be correct as of the data 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 modification 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.