



NFPA

HMIS



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1. PRODUCT AND COMPANY IDENTIFICATION

DOT 3 BRAKE FLUID

Potential Health Effects

Principal Routes of Exposure

Acute Toxicity

Eyes

Skin

Inhalation

Emergency Telephone Number

Manufactured by:

Recommended Use

Product Code

Product Name

Emergency Overview

Physical State

Odor

Sensitivity to Mechanical Impact

Sensitivity to Static Discharge

Protective Equipment and Precautions for Firefighters

Hazardous Combustion Products

Unsuitable Extinguishing Media

Suitable Extinguishing Media

Flash Point

Not Available

Normal products of combustion; carbon dioxide, carbon monoxide.

Wear positive pressure self-contained breathing apparatus (SCBA). Use water to cool containers exposed to flames. When using water or foam, frothing may occur, especially if sprayed into containers of hot, burning liquid.

Structural firefighters' protective clothing will only provide

2. HAZARDS IDENTIFICATION

3. COMPOSITION/INFORMATION ON INGREDIENTS

4. FIRST AID MEASURES

5. FIRE-FIGHTING MEASURES

by dizziness, weakness, and nausea.
Do not ingest. Ingestion of large quantities may be fatal.

Other

Chronic Effects

Repeated Inhalation, ingestion or skin absorption of glycol ethers over time may result in toxicity symptoms and may adversely affect the liver and kidneys. Chronic glycol ether inhalation has resulted in tremor, lethargy, headache, blurred vision, personality changes and coma.

Aggravated Medical Conditions

Environmental Hazard

Overexposure may aggravate pre-existing eye and skin conditions.

See Section 12 for additional Ecological Information.

Formula	Mixture	CAS-No	Weight %
Polyethylene Glycol Ethers		112-50-5	50-85
Polyethylene Glycol		23322-68-3	15-50

4. FIRST AID MEASURES

Eye Contact

Flush with water for 15 minutes thoroughly and continue flushing until irritation subsides.

Skin Contact

Wash with soap and water thoroughly. Remove contaminated clothing and wash before reuse. If redness or irritation occurs, seek medical attention.

Inhalation

Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.

Ingestion

Never give anything by mouth to an unconscious person. If person is conscious, give large quantities of water immediately. Induce vomiting. Get immediate medical attention.

Notes to Physician

Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flammable Properties

Not flammable.

Flash Point

270°F

Suitable Extinguishing Media

Water Fog, Carbon dioxide (CO₂), Foam, Dry chemical.

Unsuitable Extinguishing Media

Not Available

Hazardous Combustion Products

Normal products of combustion; carbon dioxide, carbon monoxide.

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limited protection. .

NFPA	Health Hazard	1 Flammability	1 Stability	0 Physical and Chemical Hazards
-	-	-	-	-

6. ACCIDENTAL RELEASE MEASURES**Personal Precautions**

Use personal protective equipment. Avoid contact with skin, eyes, and clothing. Ensure adequate ventilation.

Methods for Containment

Dike far ahead of liquid spill for later disposal. Pick up free liquid for recycle and/or disposal. Residual liquid and/or solid can be absorbed on inert material.

Evacuation Procedures
Large Spill
Fire

Consider initial downwind evacuation for at least 150 meters (500 feet). If tank, rail car or tank car is involved in a fire, isolate for 1600 meters (1 mile) in all directions; also consider initial evacuation for 1600 meters (1 mile) in all directions.

Reporting Requirements

Spills that enter a water body must be reported immediately to the USEPA's National Response Center at (800)424-8802. Check with your local and state regulators regarding their reporting requirements.

7. HANDLING AND STORAGE

Handling Do not pressure, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition if they may explode. See NFPA 30 and OSHA 1910.106 – flammable and combustible liquids.

Storage Store away from heat, sparks, open flame, or strong oxidizing agents in closed and properly labeled containers. Empty containers retain product residue (liquid, and/or vapor) and can be dangerous.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION**Exposure Guidelines**

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Polyethylene Glycol Ethers 112-50-5	None listed	None listed	None listed
Polyethylene Glycol 25322-68-3	None listed	None listed	None listed

Engineering Measures Additional area ventilation or local exhaust may be required to maintain air concentrations below recommended limits.

Personal Protective Equipment
Eye/Face Protection

Safety glasses or face shield where splashing is possible. Full face-shield to be worn during emergencies.

As needed to prevent repeated skin contact. Solvent resistant gloves should be used if needed.

Not normally needed. During emergencies wear respirator. Remove and wash contaminated clothing before re-use. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear, amber liquid	Odor	Slight etheric odor
Physical State	Liquid	pH	pH
Flash Point	410°F	Autoignition Temperature	Not Determined
Boiling Point/RANGE	455-475°F	Freezing Point	Not Determined
Explosion Limits	N/A	Flammability Limits in Air	N/A
Specific Gravity	1.038-1.04	Solubility	Complete
Evaporation Rate	N/A	Vapor Pressure	>0.1 @ 20°C
Vapor Density	N/A	Density	N/A

10. STABILITY AND REACTIVITY

Stability	Stable under recommended storage conditions.
Incompatible Products	Open Flame and strong oxidizing agents.
Conditions to Avoid	Heat, flames, and sparks.
Hazardous Decomposition Products	Decomposition and combustion products may include smoke, carbon dioxide, carbon monoxide, and toxic fumes.

Hazardous Polymerization

None under normal processing.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity	Product Information	Test on similar materials show a low order of acute oral and dermal toxicity.
	Acute Oral Effects	Test on similar materials indicates low order of acute toxicity.
	Acute Inhalation Effects	Low acute toxicity expected on inhalation at ambient condition.
	Skin Effects	Practically non-toxic if absorbed. Other similar highly refined products have not shown skin tumors in mouse skin painting studies.
	Eye Irritation	Minimal irritation on contact. Eye irritation slightly or practically non-irritating base on similar products.

Component Information			
Chemical Name	Chemical Name	LD50 Oral	LC50 Dermal
Polyethylene Glycol Ethers 112-50-5	Rabbit 10.6 g/kg	Rabbit 8.2 g/kg	Not available
Polyethylene Glycol 25322-68-3	Rat 28 g/kg	Rabbit >20 g/kg	Not available

Chronic Toxicity	Prolonged exposure may cause chronic effects.
Carcinogenicity	Not considered a potential carcinogen base on IP346 DMSO of less than 3.0 M%
Target Organ Effects	Respiratory system, Eyes, Skin,
Genotoxicity	This product is considered non-mutagenic and has negative potential for tumor development based on from Modified Ames Assay, with Mutagenic Index of less than 1.0.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Clean Air Act Amendments of 1990.

CERCLA

Chemical Name	Toxicity to Algae	Toxicity to Fish	Microtox	Daphnia Magna (Water Flea)
Polyethylene Glycol Ethers 112-50-5	10,000 mg/L	Primatepates promelles, LC50 > 10,000 mg/L; 96-hr		48-hr LC50 10,000 mg/L; 48-hr
Polyethylene Glycol 25322-68-3		Carassius auratus: >5000 mg/L	Phyto bacterium: EC50 = 100,000 mg/L; 15 minutes	

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method Dispose of in accordance with local regulations. Keep this product out of sewers and waterways.

Contaminated Packaging Dispose of in accordance with local regulations.

14. TRANSPORT INFORMATION

DOT	Not regulated
IATA	Not regulated
IMDG/IMO	Not regulated

15. REGULATOR INFORMATION**International Inventories**

	TSCA	DSL	EINECS/ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Polyethylene Glycol Ethers 112-50-5	Present	x	203-978-9	x	x	x	x	x
Polyethylene Glycol 25322-68-3	Present	x	(NLP 500-038-2)	x	x	KE-20228	x	x

U.S. Federal Regulations**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does contain chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372. - Polyethylene Glycol Ethers

SARA 313/312 Hazard Categories	No
Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

If spilled into navigable waters it is reportable to National Response Center, 800-424-8802. Reportable Quantity = Oil Sheen present on navigable water surface. (40 CFR 116; 401.15)

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contain any substances regulated as hazardous air pollutants (HAPs) under Section 112 of the

16. OTHER INFORMATION**Prepared By**

Safety Department

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Revision Note

Not applicable

Disclaimer

The information provided on this MSDS is correct to the best of our knowledge, information, and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of MSDS

