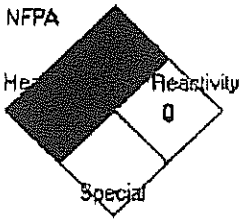
MSDS - Material Safety Data Sheet

Product Name: DOT 3 HEAVY DUTY BRAKE FLUID

MSDS No.: M4440

I. Basic Information

Manufacturer: RADIATOR SPECIALTY COMPANY
Address: 600 RADIATOR ROAD
City, ST Zip: INDIAN TRAIL, NC 28079
Emergency Contact: Rocky Mountain Poision Control Center
Emergency Telephone Number: 303-623-5716
Contact: Robert Geer
Information Telephone Number: 704-686-3430



Last Update: 04/19/2007 **Expiration Date:**

Chemical State: [X] Liquid [ ] Gas [ ] Solid

Chemical Type: [ ] Pure [X] Mixture

0	Reactivity
C	Pers. Protection

II. Ingredients

[ ] Trade Secret

CAS No.	Chemical Name	% Range	EHS	NTP	IARC	SUB Z	SARA 313	OSHA PEL	ACGIH TLV	Other Limits
112-34-5	2-Butoxyethoxy-2-ethanol	<=30.0					X	N/E	N/E	
111-46-6	Diethylene Glycol	<=60.0						N/E	N/E	50 ppm
111-90-0	Diethylene glycol monoethyl ether	<=7%						N/E	N/E	
6881-94-3	Diethylene glycol monopropyl ether	<=10.0						N/E	N/E	
25322-68-3	Poly(ethylene oxide)	<=50.0						N/E	N/E	
9004-77-7	Polyethylene glycol monobutyl ether	<=60.0						N/E	N/E	
9004-74-4	Polyethylene glycol monomethyl ether	<=50.0						N/E	N/E	
55068-41-2	Polyethylene/polypropylene glycol ethyl ether	<=60.0%						N/E	N/E	
9063-06-3	Polyethylene/Polypropylene Glycol Methyl Ether	<=60.0						N/E	N/E	
112-60-7	Tetraethylene Glycol	<=30%						N/E	N/E	
23783-42-8	Tetraethylene Glycol Monomethyl Ether	<=20%						N/E	N/E	
112-27-6	Triethylene glycol	<=30.0						N/E	N/E	100 mg/r
143-22-6	Triethylene glycol monobutyl ether	<=70.0					X	N/E	N/E	
112-50-5	Triethylene glycol monoethyl ether	<=85.0						N/E	N/E	

III. Hazardous Identification

Hazard Category:

[X] Acute [X] Chronic [ ] Fire [ ] Pressure [ ] Reactive

Hazardous Identification Information:

Danger: Harmful or fatal if swallowed. May cause CNS depression. Eye and Skin Irritant.

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IV. First Aid Measures

Route(s) of Entry:

Absorption, Inhalation, and Ingestion.

Health Hazards (Acute and Chronic):

Exposure to high concentrations of mist generated at room temperature may cause lung injury and liver/kidney dysfunction. Skin contact may cause sensitization and allergic skin reaction. Components of this formulation have caused slight embryofetal toxicity (delayed development), but no increase in birth defects in laboratory animals.

Signs and Symptoms:

EYE CONTACT: Causes severe irritation, experienced as discomfort or pain, excess blinking and tear production, marked excess redness and swelling of the conjunctiva.
SKIN CONTACT: Prolonged or repeated contact may cause discomfort and local redness. Prolonged or repeated contact may cause defatting and drying of the skin.
INHALATION: Short-term health effects are not expected from vapor generated at ambient temperature.
INGESTION: Slightly toxic. May cause abdominial discomfort, nausea, and vomiting.

Medical Conditions Generally Aggravated by Exposure:

Skin contact may aggravate an existing dermatitis.

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:

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

V. Fire Fighting Measures

Flash Point: 212°F **Lower Explosive Limit:** ND **Upper Explosive Limit:** ND

F.P. Method:

Fire Extinguishing Media: Water Fog, Foam, Carbon Dioxide, Dry Chemical

Special Fire Fighting Procedures:

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

Unusual Fire and Explosion:

Carbon dioxide, carbon monoxide, nitrogen oxides and various hydrocarbons.

VI. Accidental Release Measures

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

Prevent run-off to sewers, streams, or other bodies of water. If run-off occurs, notify proper authorities as required that a spill has occured.

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VII. Handling and Storage

Precautions to be Taken:

Avoid contact with eyes, skin, and clothing. Avoid repeated breathing of mist. Keep containers closed. Use with adequate ventilation. Wash thoroughly after handling.

Other Precautions:

Store in cool, dry area away from heat sources. Avoid high temperatures in the presence of strong bases, acids, strong oxidizing agents. Do not mix this product with nitrites or other nitrosating agent becuase nitrosamines may be formed. Keep containers tightly closed.

VIII. Exposure Controls/Personal Protection

Ventilation Requirements:

General (mechanical) room ventilation is expected to be satisfactory. Avoid breathing mist.

As Ethylene Glycol Vapors ACGIH -TLV recommends a ceiling level of 39.4 ppm (v)
OSHA - PEL recommends a ceiling level of 50 ppm (v)

Personal Protective Equipment:

Safety glasses and goggles for bulk handling. Use nitrile or neoprene gloves. Other protective equipment: eye bath and shower.

IX. Physical and Chemical Properties

Boiling Point: >401°F

Melting Point: NA

Evaporation Rate (Butyl Acetate = 1): <0.01

Vapor Pressure (mm Hg.): <0.1

Specific Gravity (H20 = 1): 1.02400

Vapor Density (AIR = 1): N/D

Solubility in Water: Soluble

Appearance and Odor:

Other Information: N/D

X. Stability and Reactivity

Stability:

Stable

Incompatibility (Materials to Avoid):

Strong alkalies. High temperatures in the presence of strong bases, acids, strong oxidizing agents. Do not mix this product with nitrites or other nitrosating agent becuase nitrosamines may be formed.

Decomposition/By Products:

Carbon monoxide and/or carbon dioxide. Oxides of nitrogen.

Hazardous Polymerization:

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Will not occur.

XI. Toxicological Information:

Contains one or more amines which may react with nitrites to form nitrosamines.

XII. Ecological Information:

No data available

XIII. Disposal Considerations:

DISPOSAL: This container may be recycled in a recycling centers when empty. Before offering for recycling, empty the can or bottle by using the product according to the label. 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:

U.S. Department of Transportation (DOT)
Non-Bulk: Not Regulated
Bulk: Not Regulated

Air: IATA Regulated: no

International Information:
Vessel: IMDG Regulated: no
Air: ICAO Regulated: no

XV. Regulatory Information:

USA TSCA: All chemicals used are listed on the TSCA Inventory.

SARA, SECTION 313 TITLE III: This product contains glycol ethers which are subject to reporting requirement.

WARNING: This product contains chemicals known to the State of California to cause birth defects or other reproductive harm.

STATE/LOCAL:
Pennsylvania Right-to-Know Chemicals:
Diethylene Glycol (111-46-6)
Triethylene Glycol (112-27-6)
Triethylene Glycol Monobutyl Ether (143-22-6)
Diethylene Glycol Monobutyl Ether (112-34-5)
Diisopropanolamine (110-97-4)

New Jersey Right-to-Know Chemicals:
Triethylene Glycol (143-22-6)

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

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