

MSDS - Material Safety Data Sheet**Product Name: DOT 4 HEAVY DUTY BRAKE FLUID**

MSDS No.: M4512/6

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--181 1**Emergency Contact:** RMPDC (877-740-5015)**Emergency Telephone Number:** 303-623-5716**Emergency Restrictions:****Product Name:** DOT 4 HEAVY DUTY BRAKE FLUID**MSDS No.:** M4512/6**Issue Date:** 11/07/2012**Supersedes Date:** 06/01/2010**II. Hazards Identification:****EMERGENCY OVERVIEW**

May be Harmful or fatal if swallowed. Eye and Skin Irritant. May cause allergic skin reaction

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, Inhalation, and Ingestion.

Health Hazards (Acute and Chronic):

Chronic Effects: Repeated exposure may result in drying of the skin and mucous membranes.

Signs and Symptoms:

Eyes: Causes severe irritation experienced as discomfort or pain, excess blinking and tear production, with marked excess redness and swelling of the conjunctiva.

Skin: No adverse effects expected with exposure to skin. Brief contact may cause slight irritation. Prolonged contact, as with clothing wetted with material, may cause more severe irritation and discomfort, seen as local redness and swelling.

Inhalation: Vapors are mildy to markedly irritating to the lungs depending on the exposure level.

Ingestion: Ingestion may be fatal..May cause abdominal discomfort, nausea, and vomiting. May produce central nervous system depression and kidney damage.

Carcinogenicity: This compound contains no ingredients at concentration of 0.1% or greater that are carcinogens or suspect carcinogen.

Medical Conditions Generally Aggravated by Exposure:

Pre-existing skin, eye and respiratory disorders may be aggravated by exposure to this product. Impaired kidney function from pre-existing disorder may be aggravated by exposure to this product.

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
Borate Esters	Proprietary	Not Available	
Corrosion Inhibitor	Proprietary	Not Available	
Glycols	Proprietary	Not Available	
Glycols Ethers	Proprietary	Not Available	

MSDS - Material Safety Data Sheet

Product Name: DOT 4 HEAVY DUTY BRAKE FLUID

MSDS No.: M4512/6

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:

Carbon dioxide, carbon monoxide and unidentified organic compounds.

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.

Methods for Containment:

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

Methods for Cleanup:

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

Other Information:

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:

Handling Precautions:

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

Storage Precautions:

MSDS - Material Safety Data Sheet**Product Name: DOT 4 HEAVY DUTY BRAKE FLUID****MSDS No.: M4512/6**

Store in cool, dry area away from heat sources. Avoid high temperatures in the presence of strong bases, acids, strong oxidizing agents. Keep container closed.

VIII. Exposure Controls/Personal Protection:

Chemical Name	OSHA PEL	ACGIH TLV	Other Limits
Glycols	N/E	N/E	N/E
Glycols Ethers	N/E	N/E	N/E
Borate Esters	N/E	N/E	N/E
Corrosion Inhibitor	N/E	N/E	Not Available

Engineering Controls:

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

Personal Protective Equipment:

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

IX. Physical and Chemical Properties:**Boiling Point:** >480°F**Boiling Range:** N/D**Solubility In Water:** Soluble**Flash Point:** 275°F**Odor Threshold:** N/D**Vapor Density (AIR = 1):** >1**pH Range:** 8.0 - 11.5**Decomposition Temp:** N/D**Lower Explosive Limit:** N/D**Specific Gravity (H2O = 1):** 1.05**Other Information:** N/D**Melting Point:** NA**Freezing Point:** N/D**Evaporation Rate (Butyl Acetate = 1):** <0.01**Flash Point Method:** TCC**Appearance and Odor:** Transparent yellow to amber with mild ether like odor**Vapor Pressure (mm Hg.):** N/D**Partition Coefficient:** N/D**Auto-ignition Temp:** N/D**Upper Explosive Limit:** N/D**X. Stability and Reactivity:****Stability:**

Stable

Conditions to Avoid:

Avoid heat sources.

Incompatible Materials:

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

MSDS - Material Safety Data Sheet**Product Name: DOT 4 HEAVY DUTY BRAKE FLUID****MSDS No.: M4512/6****Hazardous Decomposition Products:**

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

Possibility of Hazardous Reactions:

Will not occur.

XI. Toxicological Information:

N/D

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:**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:**

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:

SARA 313 Reportable Chemicals:

Glycol Ethers (proprietary)

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

State RTK Chemicals:

Glycol Ethers (proprietary)

MSDS - Material Safety Data Sheet

Product Name: DOT 4 HEAVY DUTY BRAKE FLUID

MSDS No.: M4512/6

XVI. Other Information:

Chemical State: Liquid Gas Solid

Chemical Type: Pure Mixture

Hazard Category:

Acute Chronic Fire

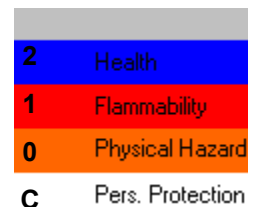
Pressure Reactive



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! WEARING CONTACT LENSES IS INADVISABLE WHEN USING THIS PRODUCT.

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



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.