

SECTION 1: IDENTIFICATION

1.1. Product Identifier

Product Form: Mixture

Product Name: DOT 4 Brake Fluid, DOT 4 Heavy Duty Brake Fluid

Product Code: BF4-12, BF4-32

Synonyms: Automotive Brake fluid

1.2. Intended Use of the Product

Automotive Brake Fluid

1.3. Name, Address, and Telephone of the Responsible Party

Company

MASTER CHEMICAL

4635 Willow Drive

Medina, MN 55340

T 612-478-2360

1.4. Emergency Telephone Number

Emergency Number: CHEM-TEL (800) 255-3924 24 Hour Assistance

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

Classification (GHS-US)

Skin irritation, 2 H315

Serious Eye Damage/Eye Irritation, 2A H319

Acute oral Toxicity, 4 H302

Full text of H-phrases: see section 16

2.2. Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US)



Signal Word (GHS-US) : Danger

Hazard Statements (GHS-US) : H315: Causes skin irritation
H319: Causes serious eye irritation
H302: Harmful if swallowed

Precautionary Statements (GHS-US) : P280, P264, P270: Wear eye protection/face protection. Wear protective Gloves. Wash face, hands, mouth, and exposed skin thoroughly after handling. Do not eat drink or smoke when handling this product.
P305 + P351 + P338, P337 + P313, P302 + P352, P321, P332 + P313, P362 + P364, P301 + P312, P330: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. IF ON SKIN: Wash with plenty of water for several minutes. Specific Treatment: Wash affected area with soap and water, rinse thoroughly. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention. IF SWALLOWED: Call a POISON CENTER if you feel unwell. Rinse Mouth.
P501: Dispose of contents/container in accordance with all local, state, national and international regulations.

2.3. Other Hazards

None Known

2.4. Unknown Acute Toxicity (GHS-US)

32 percent of the mixture consists of ingredient(s) of unknown acute toxicity.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**3.1. Substances**

Not applicable

3.2. Mixture

Name	Product Identifier	% (w/w)	Classification (GHS-US)
Triethylene glycol, monoethyl ether	(CAS No) 112-50-5	20 – 30	Skin irritation, 2: H315
Diethylene glycol, monoethyl ether	(CAS No) 111-90-0	10 – 20	Serious Eye Damage/ Irritation, 2A: H319
Diethylene glycol monobutyl ether	(CAS No) 112-34-5	5 – 10	Acute Toxicity, Dermal, 5: H313 Serious Eye Damage/ Irritation, 2A: H319
Diethylene glycol	(CAS No) 111-46-6	3 – 8	Acute Toxicity, Oral, 4: H302 Skin Irritation, 3: H316 Eye Irritation, 2B: H320

*The specific chemical identity and/or exact percentage of composition have been withheld as a trade secret within the meaning of the OSHA Hazard Communication Standard [29 CFR 1910.1200].

Full text of H-phrases: see section 16

SECTION 4: FIRST AID MEASURES**4.1. Description of First Aid Measures**

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label if possible).

Inhalation: Move to fresh air

Skin Contact: Wash skin thoroughly with soap and water or use recognized skin cleanser. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Eye Contact: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 15 minutes. Call a physician or Poison Control Center immediately.

Ingestion: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Drink plenty of water. Call a POISON CENTER or doctor/physician if exposed or you feel unwell.

4.2. Most Important Symptoms and Effects both Acute and Delayed

General: No known significant effects or critical hazards.

Inhalation: No known significant effects or critical hazards.

Skin Contact: If skin irritation occurs: Get medical advice/attention.

Eye Contact: Burning red eyes irritation

Ingestion: No known significant effects or critical hazards.

Chronic Symptoms: No known significant effects or critical hazards.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If you feel unwell, seek medical advice (show the label where possible).

SECTION 5: FIRE-FIGHTING MEASURES**5.1. Extinguishing Media**

Suitable Extinguishing Media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media: none

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: None known

Explosion Hazard: Product is not explosive.

Reactivity: Hazardous reactions will not occur under normal conditions.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire. Under fire conditions, hazardous fumes will be present.

Firefighting Instructions: No specific instructions.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Under fire conditions, may produce fumes, smoke, oxides of carbon and hydrocarbons.

Other Information: Refer to Section 9 for flammability properties.

Reference to Other Sections

Refer to section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Avoid all contact with skin, eyes, or clothing.

6.1.1. For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

6.1.2. For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Stop leak if safe to do so.

6.2. Environmental Precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and Material for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Spills should be contained with mechanical barriers. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

6.4. Reference to Other Sections

See Heading 8. Exposure controls and personal protection. For further information refer to section 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Additional Hazards When Processed: Put on appropriate personal protective equipment (see Section 8). Do not swallow.

Avoid contact with eyes, skin and clothing. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations.

Storage Conditions: Store in a dry, cool place. Keep container tightly closed when not in use. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials. Do not store in unlabeled containers.

Incompatible Materials: strong oxidizing agents

7.3. Specific End Use(s)

Automotive Brake Fluid

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), NIOSH (REL), OSHA (PEL), Canadian provincial governments, or the Mexican government.

8.2. Exposure Controls

Appropriate Engineering Controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure all national/local regulations are observed.

Personal Protective Equipment: Protective goggles. Gloves.



Materials for Protective Clothing: No special equipment required.

Hand Protection: Wear chemically resistant protective gloves.

Eye Protection: Chemical goggles or safety glasses.

Skin and Body Protection: Wear suitable protective clothing.



DOT 4 Brake Fluid

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations

Version BRAKEF4.001

Respiratory Protection: No special protective equipment required.

Environmental Exposure Controls: Do not allow the product to be released into the environment.

Consumer Exposure Controls: Do not eat, drink or smoke during use.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State	: Liquid
Appearance	: Amber
Odor	: Etheric
Odor Threshold	: Not available
pH	: 10.5
Evaporation Rate	: Not available
Melting Point	: Not available
Freezing Point	: Not available
Boiling Point	: > 230 °C
Flash Point	: 203 °C (COC)
Auto-ignition Temperature	: Not available
Decomposition Temperature	: Not available
Flammability (solid, gas)	: Not available
Lower Flammable Limit	: Not available
Upper Flammable Limit	: Not available
Vapor Pressure	: Not available
Relative Vapor Density at 20 °C	: Not available
Relative Density	: Not available
Specific Gravity	: 1.06
Solubility	: Completely soluble
Partition Coefficient: N-Octanol/Water	: Not available
Viscosity	: <1500 CST
Viscosity, Kinematic	: Not Available
Explosive Properties	: Product is not explosive
Explosion Data – Sensitivity to Mechanical Impact	: Not expected to present an explosion hazard due to mechanical impact
Explosion Data – Sensitivity to Static Discharge	: Not expected to present an explosion hazard due to static discharge
VOC Content	: None

SECTION 10: STABILITY AND REACTIVITY

- 10.1. **Reactivity:** No specific test data related to reactivity available for this product or its ingredients.
- 10.2. **Chemical Stability:** Stable under recommended handling and storage conditions (see section 7).
- 10.3. **Possibility of Hazardous Reactions:** Under normal condition of storage and use, hazardous reactions will not occur.
- 10.4. **Conditions to Avoid:** None known based on information supplied.
- 10.5. **Incompatible Materials:** strong oxidizing agents
- 10.6. **Hazardous Decomposition Products:** Carbon oxides

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on Toxicological Effects - Product

Acute Toxicity: Oral, 4

LD50 and LC50 Data:

Numerical Measures of toxicity for the final product calculated based on chapter 3.1 of the GHS Document.	
LD50 Oral	2244 mg/kg
LD50 Dermal	2710 mg/kg



DOT 4 Brake Fluid

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According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations

Version BRAKEF4.001

Skin Corrosion/Irritation: Causes mild skin irritation

Eye Damage/Irritation: Causes serious eye irritation

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Teratogenicity: Not classified

Carcinogenicity: Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Not classified

Symptoms/Injuries After Skin Contact: Repeated or prolonged skin contact may cause irritation.

Symptoms/Injuries After Eye Contact: Eye Contact with liquid may cause irritation including stinging, burning, tearing, or reddening of the eyes.

Symptoms/Injuries After Ingestion: Ingestion is likely to be harmful or have adverse effects.

Chronic Symptoms: No information available

11.2. Information on Toxicological Effects - Ingredient(s)

See 11.1

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecology - General: The environmental impact of this product has not been fully investigated.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Diethylene glycol monoethyl ether		LC50 96 h: 11400-15700 mg/L flow-through (Oncorhynchus mykiss) LC50 96 h: 11600-16700 mg/L flow-through (Pimephales promelas) LC50 96 h: 19100-23900 mg/L flow-through (Lepomis macrochirus) LC50 96 h: = 10000 mg/L static (Lepomis macrochirus) LC50 96 h: = 13400 mg/L flow-through (Salmo gairdneri)		EC50 48 h: 3940 - 4670 mg/L (Daphnia magna)
Tetraethylene glycol	EC50 96 h: > 1000 mg/L (Pseudokirchneriella subcapitata)	LC50 96 h: > 1000 mg/L static (Oncorhynchus mykiss)	EC50 > 100 mg/L 6 h	EC50 48 h: > 1000 mg/L (Daphnia magna)
Triethylene glycol		LC50 96 h: 56200-63700 mg/L flow-through (Pimephales promelas) LC50 96 h: = 10000 mg/L static (Lepomis macrochirus) LC50 96 h: = 61000 mg/L flow-through (Lepomis macrochirus)	EC50 = 850 mg/L 5 min	EC50 48 h: = 42426 mg/L (Daphnia magna)
Diethylene glycol monobutyl ether	EC50 96 h: > 100 mg/L (Desmodesmus subspicatus)	LC50 96 h: = 1300 mg/L static (Lepomis macrochirus)		EC50 24 h: = 2850 mg/L (Daphnia magna) EC50 48 h: > 100 mg/L (Daphnia magna)
Diethylene glycol		LC50 96 h: = 75200 mg/L flow-through (Pimephales promelas)	EC50 = 29228 mg/L 15 min	EC50 48 h: = 84000 mg/L (Daphnia magna)



DOT 4 Brake Fluid

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations

Version BRAKEF4.001

12.2. Persistence and Degradability

Not available

12.3. Bioaccumulative Potential

Not available

12.4. Mobility in Soil

Chemical Name	Log Pow
Diethylene glycol monoethyl ether	-0.8
Diethylene glycol	-1.98

12.5. Other Adverse Effects

Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Sewage Disposal Recommendations: This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements. **Waste Disposal Recommendations:** Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

SECTION 14: TRANSPORT INFORMATION

- 14.1. In Accordance with DOT Not regulated for transport
- 14.2. In Accordance with IMDG Not regulated for transport
- 14.3. In Accordance with IATA Not regulated for transport
- 14.4. In Accordance with TDG Not regulated for transport

SECTION 15: REGULATORY INFORMATION

15.1. US Federal Regulations

SARA Section 311/312 Hazard Classes	Acute Health Hazard
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SARA 313 This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	CAS-No	Weight %	SARA 313 - Threshold Values %
Triethylene glycol monoethyl ether	112-50-5	20-30	1.0
Diethylene glycol monobutyl ether	112-34-5	5-10	1.0

15.2. US State Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Illinois	Rhode Island
Triethylene glycol, monoethyl ether			X	X	
Triethylene glycol			X		X
Diethylene glycol monoethyl ether			X	X	

15.3. Canadian Regulations

This material is listed or exempted.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision Date : 05/11/2015

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.



DOT 4 Brake Fluid

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GHS Full Text Phrases:

H315	Causes skin irritation
H319	Causes serious eye irritation
H313	May be harmful in contact with skin
H302	Harmful if swallowed
P280	Wear eye protection/face protection.
P280	Wear protective gloves.
P264	Wash face, hands, mouth, and exposed skin thoroughly after handling.
P302 + P352	IF ON SKIN: Wash with plenty of water for several minutes.
P321	Specific Treatment: Wash affected area with soap and water, rinse thoroughly.
P332 + P313	If skin irritation occurs: Get medical advice/attention.
P362 + P364	Take off contaminated clothing and wash before reuse.
P337 + P313	If eye irritation persists: Get medical advice attention.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.
P312	Call a POISON CENTER if you feel unwell.
P270	Do not eat drink or smoke when using this product.
P301 + P312	IF SWALLOWED: Call a POISON CENTER if you feel unwell.
P330	Rinse Mouth
P501	Dispose of contents/container in accordance with all local, state, national and international regulations.

Party Responsible for the Preparation of This Document

Master Chemical
4635 Willow Drive
Medina, MN 55340
T 612-478-2360

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

North America GHS US 2012 & WHMIS 2