



Material Safety Data Sheet

Series 600 DOT 4 Racing Brake Fluid

Date : 08/15/2012
Version : 3

Section 1. Product and company identification

Product name

Series 600 DOT 4 Racing Brake Fluid

Material uses

Brake fluids.

Supplier/Manufacturer

AMSOIL INC.
 925 Tower Avenue
 Superior, WI 54880

Code

BF4

MSDS authored by

AMSOIL INC.

In case of emergency

CHEMTREC, U.S. : 1-800-424-9300
 International: +1-703-527-3887

Section 2. Hazards identification

Emergency overview

- Color** : Colorless to yellow.
- Physical state** : Liquid.
- Odor** : Ether.
- Signal word** : WARNING!
- Hazard statements** : CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. MAY BE HARMFUL IF SWALLOWED. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.
- Precautions** : Do not breathe vapor or mist. Do not ingest. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.
- OSHA/HCS status** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
- Routes of entry** : Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

- Inhalation** : Irritating to respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
- Ingestion** : May be harmful if swallowed.
- Skin** : Irritating to skin.
- Eyes** : Irritating to eyes.

Potential chronic health effects

- Chronic effects** : Contains material that may cause target organ damage, based on animal data.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : No known significant effects or critical hazards.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : No known significant effects or critical hazards.
- Target organs** : Contains material which may cause damage to the following organs: kidneys, the nervous system, liver, gastrointestinal tract, upper respiratory tract, skin, central nervous system (CNS), eye, lens or cornea, testes.

Over-exposure signs/symptoms

| | |
|--|--|
| Inhalation | : Adverse symptoms may include the following: respiratory tract irritation coughing |
| Ingestion | : No specific data. |
| Skin | : Adverse symptoms may include the following: irritation redness |
| Eyes | : Adverse symptoms may include the following: pain or irritation watering redness |
| Medical conditions aggravated by overexposure | : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product. |
| See toxicological information (Section 11) | |

Section 3. Composition/information on ingredients

United States

| Name | CAS number | % |
|-------------------------------------|------------|---------|
| 2-Aminoethanol | 141-43-5 | 10 - 30 |
| Triethylene glycol monomethyl ether | 112-35-6 | 0.1 - 1 |

Canada

| Name | CAS number | % |
|----------------|------------|---------|
| 2-Aminoethanol | 141-43-5 | 10 - 30 |

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Section 4. First aid measures

| | |
|---------------------------|---|
| Eye contact | : Immediately flush eyes with plenty of water for at least 20 minutes, occasionally lifting the upper and lower eyelids. Get medical attention if symptoms occur. |
| Skin contact | : After contact with skin, wash immediately with plenty of soap and water. Get medical attention if symptoms occur. |
| Inhalation | : Move exposed person to fresh air. Get medical attention if symptoms occur. |
| Ingestion | : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Call medical doctor or poison control center immediately. |
| Notes to physician | : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. |

Section 5. Fire-fighting measures

| | |
|------------------------------------|---|
| Flammability of the product | : No specific fire or explosion hazard. |
| Extinguishing media | |
| Suitable | : Use an extinguishing agent suitable for the surrounding fire. |
| Not suitable | : None known. |

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- Hazardous decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

- Personal precautions** : Provide adequate ventilation. Put on appropriate personal protective equipment (see Section 8).

- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods for cleaning up

- Small spill** : Absorb with an inert dry material and place in an appropriate waste disposal container. Dispose via a licensed waste disposal contractor.

- Large spill** : Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

Section 7. Handling and storage

- Handling** : Put on appropriate personal protective equipment (see Section 8). Avoid contact with used product. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Empty containers retain product residue and can be hazardous. Do not reuse container.

- Storage** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

United States

| Ingredient | Exposure limits |
|----------------|--|
| 2-Aminoethanol | <p>ACGIH TLV (United States, 1/2011). STEL: 15 mg/m³ 15 minute(s). STEL: 6 ppm 15 minute(s). TWA: 7.5 mg/m³ 8 hour(s). TWA: 3 ppm 8 hour(s).</p> <p>NIOSH REL (United States, 6/2009). STEL: 15 mg/m³ 15 minute(s). STEL: 6 ppm 15 minute(s). TWA: 8 mg/m³ 10 hour(s). TWA: 3 ppm 10 hour(s).</p> <p>OSHA PEL (United States, 6/2010). TWA: 6 mg/m³ 8 hour(s). TWA: 3 ppm 8 hour(s).</p> |

Canada

| Occupational exposure limits | | TWA (8 hours) | | | STEL (15 mins) | | | Ceiling | | | |
|------------------------------|-----------------|---------------|-------------------|-------|----------------|-------------------|-------|---------|-------------------|-------|-----------|
| Ingredient | List name | ppm | mg/m ³ | Other | ppm | mg/m ³ | Other | ppm | mg/m ³ | Other | Notations |
| 2-Aminoethanol | US ACGIH 1/2011 | 3 | 7.5 | - | 6 | 15 | - | - | - | - | [3] |
| | AB 4/2009 | 3 | 7.5 | - | 6 | 15 | - | - | - | - | |
| | BC 9/2011 | 3 | - | - | 6 | - | - | - | - | - | |
| | ON 7/2010 | 3 | 7.5 | - | 6 | 15 | - | - | - | - | |
| | QC 9/2011 | 3 | 7.5 | - | 6 | 15 | - | - | - | - | |

[3]Skin sensitization

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : Personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures : No special ventilation requirements. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Hygiene measures : Ensure that eyewash stations and safety showers are close to the workstation location. Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.

Respiratory : Not required under normal conditions of use. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Ensure a MSHA/NIOSH-approved respirator or equivalent is used.

Hands : Use gloves appropriate for work or task being performed. Recommended: Natural rubber (latex).

Eyes : Safety eyewear should be used when there is a likelihood of exposure. Recommended: Safety glasses with side shields.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. No special protective clothing is required. Recommended: Coveralls.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

Section 9. Physical and chemical properties

| | | | |
|-------------------------|---|----------------------------------|------------------------------------|
| Physical state | : Liquid. | Odor | : Ether. |
| Color | : Colorless to yellow. | pH | : 7 |
| Flash point | : Closed cup: 146.1°C (295°F) [Pensky-Martens.] | Auto-ignition temperature | : Not available. |
| Flammable limits | : Not available. | Melting point/Pour point | : <-59°C (<-74.2°F) |
| Boiling point | : 361.8°C (683.2°F) | Vapor pressure | : <0.0013 kPa (<0.01 mm Hg) [20°C] |
| Relative density | : 1.08 | Vapor density | : Not available. |
| Volatility | : Not available. | Evaporation rate | : Not available. |
| Viscosity | : Kinematic: 0.02 cm ² /s (2 cSt) (100°C) Kinematic: 10.65 cm ² /s (1065 cSt) (40°C) | Solubility | : Not available. |

Section 10. Stability and reactivity

| | |
|---|--|
| Chemical stability | : The product is stable. |
| Conditions to avoid | : No specific data. |
| Materials to avoid | : Reactive or incompatible with the following materials: oxidizing materials, acids and alkalis. |
| Hazardous decomposition products | : Under normal conditions of storage and use, hazardous decomposition products should not be produced. |
| Possibility of hazardous reactions | : Under normal conditions of storage and use, hazardous reactions will not occur. |
| Hazardous polymerization | : Under normal conditions of storage and use, hazardous polymerization will not occur. |

Section 11. Toxicological information

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|-------------------------|-----------|---------|------------|----------|
| 2-Aminoethanol | LD50 Oral | Rat | 1720 mg/kg | - |

Chronic toxicity

There is no data available.

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|-------------------------|--------------------------|---------|-------|----------|-------------|
| 2-Aminoethanol | Eyes - Severe irritant | Rabbit | - | 250 µg | - |
| | Skin - Moderate irritant | Rabbit | - | 505 mg | - |

Sensitizer

Skin : There is no data available.

Respiratory : There is no data available.

Carcinogenicity

There is no data available.

Mutagenicity

There is no data available.

Teratogenicity

There is no data available.

Reproductive toxicity

There is no data available.

Section 12. Ecological information

Ecotoxicity : No known significant effects or critical hazards.

Aquatic ecotoxicity

| Product/ingredient name | Result | Species | Exposure |
|-------------------------|---|---|----------------------------------|
| 2-Aminoethanol | Acute EC50 80000 ug/L Fresh water Acute LC50 >100000 ug/L Marine water Acute LC50 170000 ug/L Fresh water | Algae - Isochrysis galbana Crustaceans - Crangon crangon - Adult Fish - Carassius auratus - 3.3 g | 96 hours 48 hours 96 hours |

Persistence/degradability

There is no data available.

Section 13. Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. This material and its container must be disposed of in a safe way. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Empty containers or liners may retain some product residues. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

Section 14. Transport information

DOT/TDG/IMDG/IATA : Not regulated.

Section 15. Regulatory information

United States

HCS Classification : Irritating material
Target organ effects

U.S. Federal regulations : **United States inventory (TSCA 8b)**: Not determined.

SARA 302/304/311/312 extremely hazardous substances: No products were found.

SARA 302/304 emergency planning and notification: No products were found.

SARA 302/304/311/312 hazardous chemicals: 2-Aminoethanol; Triethylene glycol monomethyl ether

SARA 311/312 MSDS distribution - chemical inventory - hazard identification: 2-Aminoethanol: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard; Triethylene glycol monomethyl ether: Immediate (acute) health hazard, Delayed (chronic) health hazard

- Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs)** : Listed
- Clean Air Act Section 602 Class I Substances** : Not listed
- Clean Air Act Section 602 Class II Substances** : Not listed
- DEA List I Chemicals (Precursor Chemicals)** : Not listed
- DEA List II Chemicals (Essential Chemicals)** : Not listed

SARA 313

| | Product name | CAS number | Concentration |
|--|-------------------------------------|-------------------|----------------------|
| Form R - Reporting requirements | Triethylene glycol monomethyl ether | 112-35-6 | 0.1 - 1 |
| Supplier notification | Triethylene glycol monomethyl ether | 112-35-6 | 0.1 - 1 |

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

State regulations

- Massachusetts** : The following components are listed: 2-Aminoethanol
- New York** : None of the components are listed.
- New Jersey** : The following components are listed: 2-Aminoethanol; Triethylene glycol monomethyl ether
- Pennsylvania** : The following components are listed: 2-Aminoethanol; Triethylene glycol monomethyl ether

California Prop. 65

No products were found.

Canada

- WHMIS (Canada)** : Class D-2B: Material causing other toxic effects (Toxic).

Canadian lists

- Canadian NPRI** : None of the components are listed.
- CEPA Toxic substances** : None of the components are listed.
- Canada inventory** : Not determined.

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

Section 16. Other information**United States**

- Label requirements** : CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. MAY BE HARMFUL IF SWALLOWED. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.
- Hazardous Material Information System (U.S.A.)** :

| | | | |
|------------------|---|---|--|
| Health | * | 1 | Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868. |
| Flammability | | 1 | |
| Physical hazards | | 0 | |
| | | | The customer is responsible for determining the PPE code for this material. |

National Fire Protection Association (U.S.A.) :



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Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.