



Prepared according to Global Harmonized System (GHS) standards

## SECTION 1

## CHEMICAL PRODUCT IDENTIFICATION

Polaris Sales Inc.  
2100 Highway 55  
Medina, MN 55340  
Tel: 763-542-0500

Product Trade Name:

**Polaris DOT 4 Brake Fluid**

CAS Number: Mixture  
Synonyms/Other: N/A  
Part Number(s): N/A  
Recommended Use: Brake fluid.  
Restrictions on Use: Not determined.  
Created Date: 5/27/2015  
Preparation/Revision Date: 5/27/2015  
Emergency Phone Number: 1-800-424-9300 (CHEMTREC)  
SDS CODE: 1880

## SECTION 2

## HAZARD IDENTIFICATION

Appearance: Yellow fluid  
Odor: Ammoniacal  
Classification: Skin corrosion / irritation category 2  
Eye damage / irritation category 1  
Aspiration toxicant category 2  
Reproductive toxicant category 2

Target Organs: Not applicable.

Pictogram(s):



Signal Word:

DANGER

Hazard Statement:

H305 - May be harmful if swallowed and enters airways  
H315 - Causes skin irritation  
H318 - Causes serious eye damage  
H361 - Suspected of damaging fertility or the unborn child  
H362 - May cause harm to breast-fed children

Other Hazards:

Not determined.

Prevention:

P201 - Obtain special instructions before use  
P202 - Do not handle until all safety precautions have been read and understood  
P260 - Do not breathe dust/fume/gas/mist/vapours/spray  
P263 - Avoid contact during pregnancy/while nursing  
P264 - Wash ... thoroughly after handling  
P280 - Wear protective gloves/protective clothing/eye protection/face protection  
P281 - Use personal protective equipment as required



**Response:**

P321 - Specific treatment (see Section 4)  
P331 - Do NOT induce vomiting  
P362 - Take off contaminated clothing and wash before reuse  
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician  
P302+P352 - IF ON SKIN: Wash with soap and water  
P304+P341 - IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing  
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing  
P308+P313 - IF exposed or concerned: Get medical advice/attention  
P332+P313 - If skin irritation occurs: Get medical advice/attention

**Storage Procedures:**

P405 - Store locked up

**Disposal:**

P501 - Dispose of contents and container in accordance with federal, state, and local regulations

**Other:**

See section 11 for complete health hazard information.

**SECTION 3**

**COMPOSITION OF INGREDIENTS**

Component	CAS Number	Percentage (by weight)
Triethylene glycol monomethyl ether borate ester	30989-05-0	15 - 40%
Triethylene glycol monomethyl ether	112-35-6	10 - 30%
Polyethylene glycol monomethyl ether	9004-74-4	10 - 30%
Triethylene glycol monobutyl ether	143-22-6	8.0 - 18%
Polyethylene glycol monobutyl ether	9004-77-7	7.0 - 13%
Tetraethylene glycol	112-60-7	1.0 - 10%
Pentaethylene glycol	4792-15-8	1.0 - 5.0%
Triethylene glycol	112-27-6	1.0 - 5.0%
Diisopropanolamine	110-97-4	0.1 - 1.5%
2,6-Di-tert-butyl-p-cresol (BHT)	128-37-0	0.1 - 1.0%
Diethylene glycol monomethyl ether	111-77-3	0.1 - 1.0%
Sodium hydroxide	1310-73-2	0.1 - 1.0%

The balance of components do not contribute to the overall classification of the fluid, according to the GHS Standard.

**SECTION 4**

**FIRST AID MEASURES**

**Eye Contact:**

Avoid direct contact. Wear chemical protective gloves, if necessary. Remove source of exposure or move person to fresh air. Rinse eyes cautiously with lukewarm, gently flowing water for several minutes, while holding the eyelids open. Remove contact lenses, if present and easy to do. Take care not to rinse contaminated water into the unaffected eye or onto the face. Immediately call a doctor.

**Skin Contact:**

Avoid direct contact. Wear chemical protective clothing, if necessary. Take off contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Wash skin with lukewarm, gently flowing water and mild soap until product is removed. Call a doctor if you feel unwell. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before re-use.

**Inhalation:**

Get medical advice or attention if you feel unwell or are concerned.

**Ingestion:**

Rinse mouth. Do NOT induce vomiting. Immediately call a doctor. If vomiting occurs naturally, lie on your side, in the recovery position.

**Other:**

If exposed or concerned: Get medical advice/attention (carcinogen).



## SECTION 5

## FIRE FIGHTING MEASURES

<b>Flash Point:</b>	132°C by Cleveland Open Cup Tester.
<b>Flammable limits:</b>	Not determined.
<b>Extinguishing media:</b>	Use dry chemical, alcohol foam, all purpose AFFF or carbon dioxide to extinguish fire.
<b>Special firefighting procedures:</b>	DO NOT direct a solid stream of water or foam into hot, burning pools of liquid since this may cause frothing and increase fire intensity. Frothing can be violent and possibly endanger any firefighter standing too close to the burning liquid. Use water spray to cool fire exposed containers and structures until fire is out if it can be done with minimal risk. Avoid spreading burning material with water used for cooling purposes. Wear full firefighting turn-out gear (full Bunker gear), and respiratory protection (SCBA).
<b>Unusual fire &amp; explosion hazards:</b>	Dense smoke may be generated while burning. Toxic fumes, gases or vapors may evolve on burning. High temperatures may create heavy flammable vapors that may settle along ground level and low spots to create an invisible fire hazard.
<b>Byproducts of combustion:</b>	Fires involving this product may release oxides of carbon, phosphorus, nitrogen and sulfur; reactive hydrocarbons and irritating vapors.
<b>Autoignition temperature:</b>	Not determined.
<b>Explosion data:</b>	Not determined. Care should always be exercised in dust/mist areas.
<b>Other:</b>	Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

## SECTION 6

## ACCIDENTAL RELEASE MEASURES

<b>Spill control procedures (land):</b>	Immediately turn off or isolate any source of ignition (pilot lights, electrical equipment, flames, heaters, etc.). Evacuate area and ventilate. Personnel wearing proper protective equipment should contain spill immediately with inert materials (sand, earth, chemical spill pads of cotton) by forming dikes. Dikes should be placed to contain spill in a manner that will prevent material from entering sewers and waterways. Large spill, once contained, may be picked up using explosion proof, non-sparking vacuum pumps, shovels, or buckets, and disposed of in suitable containers for disposal. Clean up residue with an appropriate solvent. If a large spill occurs notify appropriate authorities. In case of road spill or accident contact Chem-Trec (800-424-9300).
<b>Spill control procedures (water):</b>	Try to contain large spills with floating booms to prevent spill from spreading. Remove from surface by skimming or with suitable adsorbents. If a large spill occurs notify appropriate authorities (normally the National Response Center or Coast Guard at 800-424-8802).
<b>Waste disposal method:</b>	Do not empty into drains. All disposals must comply with federal, state, and local regulations. The material, if spilled or discarded may be a regulated waste. Refer to state and local regulations. Department of Transportation (DOT) regulations may apply for transporting this material when spilled. See Section 14.
<b>Other:</b>	CAUTION - If spilled material is cleaned up using a regulated solvent, the resulting waste mixture will be regulated.

## SECTION 7

## HANDLING AND STORAGE

<b>Handling procedures:</b>	Keep containers closed when not in use. Do not transfer to unmarked containers. Empty containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld, or use for any other purposes. Return drums to reclamation centers for proper cleaning and reuse. Handling temperatures should not exceed 60°C (140°F) to minimize danger of burns. Open containers carefully in a well ventilated area or use appropriate respiratory protection. Wash thoroughly after handling.
<b>Storage procedures:</b>	Store containers away from heat, sparks, open flame, or oxidizing materials. Extended storage at excessive temperatures may produce odorous and toxic fumes from product decomposition.



**Additional information:** No additional information.

## SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limits/standards for materials that can be formed when handling this product:

Component	Regulation	Type Of Listing	Value/Notation
Tetraethylene glycol	US WEEL	TWA Particulate	10 mg/m3
Triethylene glycol	DOW IHG	TWA Total	100 mg/m3
Diisopropanolamine	DOW IHG	TWA	10 ppm
2,6-Di-tert-butyl-p-cresol (BHT)	DOW IHG	TWA	10 mg/m3
	ACGIH	A Inhalable Fraction and V <sub>d</sub>	2 mg/m3
Diethylene glycol	DOW IHG	TWA	30 ppm
monomethyl ether	ACGIH	C	2 mg/m3
Sodium hydroxide	OSHA Z-1	TWA	2 mg/m3

NOTE: Limits/standards shown for guidance only. Follow applicable regulations.

No biological limits allocated.

- Personal protection:** Applicable mainly to persons in repeated contact situations such as packaging of product, service/maintenance, and cleanup/spill control personnel.
- Respiratory protection:** None required if ventilation is adequate. Otherwise a respiratory protection program meeting OSHA 1910.134 and ANSI Z88.2 requirements must be followed. Where misting may occur, wear an MSHA/NIOSH approved (or equivalent) half-mask form dust/mist air purifying respirator.
- Eye protection:** Eye protection is strongly recommended. Wear safety glasses with side shields or vented/splash proof goggles (ANSI Z87.1 or approved equivalent).
- Hand protection:** Impervious, chemically resistant gloves such as neoprene or nitrile rubber to avoid skin sensitization and absorption.
- Other protection:** Use of an apron and overboots of chemically impervious materials such as neoprene or nitrile rubber is recommended based on level of activity and exposure. If handling hot material use insulated protective equipment. Launder soiled clothes. Properly dispose of contaminated leather articles and other materials which cannot be decontaminated.
- Local control measures:** Use adequate ventilation when working with material in an enclosed area. Mechanical methods such as fume hoods or area fans may be used to reduce localized vapor/mist areas. If vapor or mist is generated when the material handled, adequate ventilation in accordance with good engineering practice must be provided to maintain concentrations below the specified exposure. Eyewash stations and showers should be available in areas where this material is used and stored.
- Other:** Consumption of food and drink should be avoided in work areas where product is present. Always wash hands and face with soap and water before eating, drinking or smoking.

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

- Appearance:** Yellow fluid
- Odor:** Ammoniacal
- Odor threshold:** Not determined.
- pH:** 7.7 (estimated)
- Melting/Freezing point:** Not determined.
- Initial boiling point:** 281.6 °C FMVSS 116  
170 °C FMVSS 116 Equilibrium Reflux Boiling Point, wet.  
279 °C FMVSS 116 Equilibrium Reflux Boiling Point, dry.



<b>Boiling range:</b>	Not determined.
<b>Flash point:</b>	132°C.
<b>Evaporation rate:</b>	Not determined.
<b>Flammability:</b>	Not determined.
<b>Upper flammable limit:</b>	Not determined.
<b>Lower flammable limit:</b>	Not determined.
<b>Vapor pressure:</b>	Not determined.
<b>Vapor density:</b>	Not determined.
<b>Relative density:</b>	1.053 at 20 °C (ASTM D1475)
<b>Solubility:</b>	Miscible in both water and oil.
<b>Partition Coefficient:</b>	Not determined.
<b>Auto-ignition temperature:</b>	Not determined.
<b>Decomposition temperature:</b>	Not determined.
<b>Viscosity:</b>	4.5 cSt at 40°C.
<b>Other</b>	Not applicable.

## SECTION 10

## STABILITY AND REACTIVITY

### Reactivity

<b>Chemical stability:</b>	Material is chemically stable at room temperatures and pressure.
<b>Hazardous polymerization:</b>	Will not occur.
<b>Conditions to avoid:</b>	Avoid high temperatures and product contamination.
<b>Incompatibility with other materials:</b>	Avoid contact with acids and strong oxidizing materials.
<b>Decomposition products:</b>	Smoke, carbon monoxide, carbon dioxide, and other aldehydes of incomplete combustion. Oxides of carbon, nitrogen, and sulfur; reactive hydrocarbons and irritating vapors.
<b>Other:</b>	Not applicable.

## SECTION 11

## TOXICOLOGICAL INFORMATION

### Acute toxicity (LD50) \*See note at the bottom of the section

<b>Oral:</b>	>5000 mg/kg
<b>Dermal:</b>	>5000 mg/kg
<b>Inhalation:</b>	>20.0 mg/l
<b>Skin irritation:</b>	Causes skin irritaton
<b>Eye irritation:</b>	Causes serious eye damage
<b>Dermal sensitization:</b>	Not expected to have a sensitizing effect.
<b>Respiratory sensitization:</b>	Not expected to have a sensitizing effect.
<b>Aspiration Hazard:</b>	Not applicable

### Chronic Toxicity

<b>Mutagenicity:</b>	Not suspected of causing genetic defects
<b>Carcinogenicity:</b>	Not suspected of causing cancer.
<b>Reproductive toxicity:</b>	Suspected of damaging fertility or the unborn child.
<b>STOT-single exposure:</b>	Not expected to have adverse effects.
<b>STOT-repeated exposure:</b>	Not expected to have long term adverse effects.
<b>Other:</b>	*All data in this section is based off calculations from Part 3 of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) utilizing information from the constituent components.



**SECTION 12**

**ECOLOGICAL INFORMATION**

**Environmental toxicity**

**Fish:** > 100 mg/l.  
**Invertebrates:** > 100 mg/l.  
**Aquatic plants:** > 100 mg/l.  
**Microorganism:** > 100 mg/l.  
**Persistence/Degradability:** This product is not expected to be readily biodegradable.  
**Bioaccumulation:** Not determined.  
**Mobility in soil:** Not determined.  
**Other:** All classifications are based on calculations in Part 4 of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) utilizing information from the constituent components.

**SECTION 13**

**DISPOSAL CONSIDERATIONS**

**Waste disposal:** This product unadulterated by other materials can be classified as a non-hazardous waste. Depending on use, used product may be regulated. Dispose of in a licensed facility. Do not discharge product in to sewer system. Dispose of containers by crushing or puncturing, so as to prevent unauthorized use of used containers. Waste management should be in full compliance with federal, state, and local laws.  
**Other:** The transportation, storage, treatment and disposal of RCRA waste material must be conducted in compliance with 40 CFR 262, 263, 264, 268 and 270. Chemical additions, processing or otherwise altering this material may make the waste management information presented in this SDS incomplete, inaccurate or otherwise inappropriate.

**SECTION 14**

**TRANSPORT INFORMATION**

**Land Transport (DOT):** Not regulated.  
**Proper Shipping Name:** Not applicable.  
**Land Transport (TDG):** Not regulated.  
**Proper Shipping Name:** Not applicable.  
**Sea Transport (IMDG):** Not regulated.  
**Proper Shipping Name:** Not applicable.  
**Air Transport (IATA):** Not regulated.  
**Proper Shipping Name:** Not applicable.  
**Other:** Not applicable.

**SECTION 15**

**REGULATORY INFORMATION**

**Federal Regulation**

**Clean water act/oil:** Not applicable.  
**TSCA:** All components of this material are listed in the U.S. TSCA Inventory.  
**Other TSCA:** Not applicable.  
**SARA title III:** Section 302/304 extremely hazardous substances: None.  
Section 311, 312 hazard categorization:  
Acute (immediate health effects): YES  
Chronic (delayed health effects): YES  
Fire (hazard): NO  
Reactivity (hazard): NO  
Pressure ( sudden release hazard): NO



Section 313 toxic chemicals:

No components present are at or greater than the de minimis (minimum reportable) concentration requirements for reporting.

Not determined.

**CERCLA:**

**State Regulations**

**Right-to-know**

**Other:**

Not determined.

A release of this product, as supplied, is exempt from reporting under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA). However, releases may be reportable to the Nation Response Center under the Clean Water Act, 33 U.S.C. 1321(b)(3) and (5) - see head of Section 15. Failure to report may result in substantial civil and criminal penalties.

Recommend contacting the local authorities in the event of any type of spill to determine local reporting requirements and also to aid in the cleanup.

**SECTION 16 OTHER INFORMATION**

	<b>NFPA 704</b>	<b>NPCA-HMIS</b>	<b>KEY</b>
<b>HEALTH:</b>	2	2	0 = Minimal
<b>FIRE:</b>	1	1	1 = Slight
<b>REACTIVITY:</b>	0	0	2 = Moderate
<b>SPECIFIC HAZARD:</b>	None	N/A	3 = Serious
<b>PROTECTION INDEX:</b>	N/A	B	4 = Severe

Version: I

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