



PENRAY SYNTHETIC DOT 4 BRAKE FLUID

Safety Data Sheet

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.

Date of issue: 05/28/2014

Revision date: 05/28/2014

Version: 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name : PENRAY SYNTHETIC DOT 4 BRAKE FLUID
Product code : 6432

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : DOT 4 brake fluid.

1.3. Details of the supplier of the safety data sheet

The Penray Companies, Inc.
440 Denniston Ct.
Wheeling, IL 60090
T (800) 373-6729
rotto@penray.com

1.4. Emergency telephone number

Emergency number : (800) 373-6729
CHEMTREC (800) 424-9300
CHEMTREC International +1 (703) 527-3887 24 hr

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Eye irritation 2A

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :



GHS07

Signal word (GHS-US) : Warning
Hazard statements (GHS-US) : Causes serious eye irritation.
Precautionary statements (GHS-US) : Wash hands thoroughly after handling. Wear eye protection/face protection. 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.

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

27 % of the mixture consists of ingredient(s) of unknown acute toxicity.

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	GHS-US classification
Diethylene glycol	(CAS No) 111-46-6	1 - 5	Acute Tox. 4 (Oral)
Triethylene glycol monobutyl ether	(CAS No) 143-22-6	1 - 5	Eye Dam. 1
3,6,9,12-Tetraoxahexadecan-1-ol	(CAS No) 1559-34-8	0.5 - 1.5	Eye Irrit. 2A

The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : If inhaled and if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.
First-aid measures after skin contact : In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician if irritation develops and persists.
First-aid measures after eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses, if worn. If irritation persists, get medical attention.

PENRAY SYNTHETIC DOT 4 BRAKE FLUID

Safety Data Sheet

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.

First-aid measures after ingestion : If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation : May cause respiratory irritation.
Symptoms/injuries after skin contact : May cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.
Symptoms/injuries after eye contact : Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.
Symptoms/injuries after ingestion : May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

4.3. Indication of any immediate medical attention and special treatment needed

Symptoms may not appear immediately. In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Powder, water spray, foam, carbon dioxide.
Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Products of combustion may include, and are not limited to: oxides of carbon.

5.3. Advice for firefighters

Protection during firefighting : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA). Use water spray to keep fire-exposed containers cool.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

6.2. Methods and material for containment and cleaning up

For containment : Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).
Methods for cleaning up : Scoop up material and place in a disposal container. Provide ventilation.

6.3. Reference to other sections

See section 8 for further information on protective clothing and equipment and section 13 for advice on waste disposal.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid contact with skin and eyes. Do not swallow. Avoid breathing gas/fumes/vapor/spray. Handle and open container with care. When using do not eat, drink or smoke.
Hygiene measures : Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep out of the reach of children. Keep container tightly closed. Store in a well-ventilated place

7.3. Specific end use(s)

Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Diethylene glycol (111-46-6)		
USA ACGIH	ACGIH TWA	Not applicable.
USA OSHA	OSHA PEL	Not applicable.
Triethylene glycol monobutyl ether (143-22-6)		
USA ACGIH	ACGIH TWA	Not applicable.
USA OSHA	OSHA PEL	Not applicable.
3,6,9,12-Tetraoxahexadecan-1-ol (1559-34-8)		
USA ACGIH	ACGIH TWA	Not applicable.
USA OSHA	OSHA PEL	Not applicable.

PENRAY SYNTHETIC DOT 4 BRAKE FLUID

Safety Data Sheet

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8.2. Exposure controls

Appropriate engineering controls	: Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.
Personal protective equipment	: Avoid all unnecessary exposure.
Hand protection	: Wear suitable gloves.
Eye protection	: Safety glasses or goggles are recommended when using product.
Skin and body protection	: Wear suitable protective clothing.
Respiratory protection	: In case of insufficient ventilation, wear suitable respiratory equipment.
Environmental exposure controls	: Maintain levels below Community environmental protection thresholds.
Other information	: Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking. Handle according to established industrial hygiene and safety practices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid.
Appearance	: No data available.
Colour	: Amber.
Odour	: Mild.
Odour threshold	: No data available.
pH	: 8.6
Relative evaporation rate (butylacetate=1)	: No data available.
Melting point	: No data available.
Freezing point	: < -50 °C (< -58 °F)
Boiling point	: > 232 °C (> 560 °F) @ 760 mm Hg
Flash point	: > 121 °C (> 250 °F)
Self ignition temperature	: 310 °C (590 °F)
Decomposition temperature	: No data available.
Flammability (solid, gas)	: Not flammable.
Vapour pressure	: No data available.
Relative vapour density at 20 °C	: No data available.
Relative density	: 1.06
Solubility	: Soluble in water.
Log Pow	: No data available.
Log Kow	: No data available.
Viscosity, kinematic	: No data available.
Viscosity, dynamic	: No data available.
Explosive properties	: No data available.
Oxidising properties	: No data available.
Explosive limits	: No data available.

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reaction known under conditions of normal use.

10.2. Chemical stability

Stable under normal storage conditions.

10.3. Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

10.4. Conditions to avoid

Incompatible materials. Sources of ignition.

10.5. Incompatible materials

Oxidizers.

10.6. Hazardous decomposition products

May include, and are not limited to: oxides of carbon.

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Safety Data Sheet

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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

6432

LD50 oral rat	> 2000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat (mg/l)	No data available.

Diethylene glycol (111-46-6)

LD50 oral rat	12565 mg/kg
LD50 dermal rabbit	11890 mg/kg

Triethylene glycol monobutyl ether (143-22-6)

LD50 oral rat	5300 mg/kg
LD50 dermal rabbit	3480 mg/kg

3,6,9,12-Tetraoxahexadecan-1-ol (1559-34-8)

LD50 oral rat	5175 mg/kg
LD50 dermal rat	> 4000 mg/kg

Skin corrosion/irritation	: Based on available data, the classification criteria are not met.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitisation	: Based on available data, the classification criteria are not met.
Germ cell mutagenicity	: Based on available data, the classification criteria are not met.
Carcinogenicity	: Based on available data, the classification criteria are not met.
Reproductive toxicity	: Based on available data, the classification criteria are not met.
Specific target organ toxicity (single exposure)	: Based on available data, the classification criteria are not met.
Specific target organ toxicity (repeated exposure)	: Based on available data, the classification criteria are not met.
Aspiration hazard	: Based on available data, the classification criteria are not met.
Symptoms/injuries after inhalation	: May cause respiratory irritation.
Symptoms/injuries after skin contact	: May cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.
Symptoms/injuries after eye contact	: Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.
Symptoms/injuries after ingestion	: May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : May cause long-term adverse effects in the aquatic environment.

12.2. Persistence and degradability

6432

Persistence and degradability	Not established.
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12.3. Bioaccumulative potential

6432

Bioaccumulative potential	Not established.
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12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : This material must be disposed of in accordance with all local, state, provincial, and federal regulations.

SECTION 14: Transport information

In accordance with DOT

14.1. UN number

Not applicable

14.2. UN proper shipping name

Not applicable

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Safety Data Sheet

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14.3. Additional information

Other information : No supplementary information available.
Special transport precautions : Do not handle until all safety precautions have been read and understood.

SECTION 15: Regulatory information

15.1. US Federal regulations

Diethylene glycol (111-46-6)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

EPA TSCA Regulatory Flag

Y2 - Y2 - indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

Triethylene glycol monobutyl ether (143-22-6)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

EPA TSCA Regulatory Flag

T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA.

3,6,9,12-Tetraoxahexadecan-1-ol (1559-34-8)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. US State regulations

6432

State or local regulations

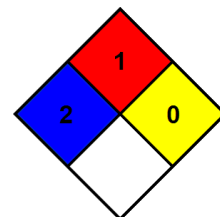
This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

SOURCE AGENCY CARCINOGEN CLASSIFICATIONS:

IARC	International Agency for Research on Cancer.
	1 - Carcinogenic to humans; 2A - Probably carcinogenic to humans; 2B - Possibly carcinogenic to humans; 3 - Not classifiable; 4 - Probably not carcinogenic to humans.
NTP	National Toxicology Program.
	1 - Evidence of Carcinogenicity; 2 - Known Human Carcinogens; 3 - Reasonably anticipated to be Human Carcinogen; 4 - Substances delisted from report on Carcinogens; 5 - Twelfth Report - Items under consideration.

SECTION 16: Other information

Indication of changes : None.
Date of issue : 05/28/2014
Other information : None.
NFPA health hazard : 2
NFPA fire hazard : 1
NFPA reactivity : 0



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