SAFETY DATA SHEET

1. Identification

Product identifier **DOT 3 Brake Fluid**

Other means of identification Not available.

Recommended use Brake fluid.

Recommended restrictions Use in accordance with supplier's recommendations.

Manufacturer / Importer / Supplier / Distributor information

Manufacturer/Supplier Granitize Products, Inc.
11022 Vulcan Street
South Gate, CA 90280-0893 US

Telephone: (562) 923-5438

Emergency CHEMTREC: (800) 424-9300
CHEMTREC International: 00 1-703-527-3887

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Skin corrosion/irritation Category 2

Serious eye damage/eye irritation Category 2A

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Signal word Warning

Hazard statement Causes serious eye irritation. Causes skin irritation.

Precautionary statement

Prevention Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.

Response If on skin: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. 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.

Storage Store away from incompatible materials.

Disposal Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC) None known.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Polyethylene glycol monomethyl ether	9004-74-4	5-50
Triethylene glycol ethyl ether	112-50-5	15-40
Triethylene glycol methyl ether	112-35-6	7-30
Triethylene glycol monobutyl ether	143-22-6	1-25
1,2-Bis(2-hydroxyethoxy)ethane	112-27-6	1-20
Propylene glycol monobutyl ether	9004-77-7	1-20

Tetraethylene glycol	112-60-7	1-20
Diethylene glycol	111-46-6	1-10
Pentaethylene glycol	4792-15-8	1-10
2-(2-Butoxyethoxy)-ethanol	112-34-5	1-5
Poly(oxy-1,2-ethanediyl) ethoxylated	25322-68-3	1-5
Sodium phosphate, tribasic	7601-54-9	1-5
Diisopropanolamine	110-97-4	1-3

Composition comments All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Inhalation Move into fresh air and keep at rest. If breathing is difficult, give oxygen. Get medical attention if discomfort develops or persists.

Skin contact Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing separately before reuse. Get medical attention. Destroy or thoroughly clean contaminated shoes.

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. Continue rinsing. Get medical attention.

Ingestion If swallowed, induce vomiting immediately as directed by medical personnel. Never give anything by mouth to a victim who is unconscious or is having convulsions.

Most important symptoms/effects, acute and delayed Irritant effects.

Indication of immediate medical attention and special treatment needed Keep victim warm. Keep victim under observation. Symptoms may be delayed.

General information Take off contaminated clothing and shoes immediately. Wash contaminated clothing before re-use. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire-fighting measures

Suitable extinguishing media Water. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical Contents under pressure. Pressurized container may explode when exposed to heat or flame.

Special protective equipment and precautions for firefighters Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.

Fire-fighting equipment/instructions Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Move containers from fire area if you can do so without risk. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. Containers should be cooled with water to prevent vapor pressure build up. Cool containers exposed to flames with water until well after the fire is out. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out. Water runoff can cause environmental damage.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Local authorities should be advised if significant spillages cannot be contained. Ventilate closed spaces before entering them. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Methods and materials for containment and cleaning up Prevent entry into waterways, sewers, basements or confined areas. Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible.

Large Spills: Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Following product recovery, flush area with water.

Small Spills: Wipe up spilled material and place in a suitable container for disposal. Clean surface thoroughly to remove residual contamination.

Never return spills in original containers for re-use.

Environmental precautions Prevent further leakage or spillage if safe to do so. Do not contaminate water.

7. Handling and storage

Precautions for safe handling Wear personal protective equipment. Avoid prolonged exposure. Use with adequate ventilation. Avoid contact with skin and eyes. Wash thoroughly after handling. When using, do not eat, drink or smoke. Do not re-use empty containers. Avoid release to the environment.

Conditions for safe storage, including any incompatibilities Keep container tightly closed in a cool, well-ventilated place. Keep away from food, drink and animal feedingstuffs. Keep out of the reach of children.

8. Exposure controls/personal protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
2-(2-Butoxyethoxy)-ethanol (CAS 112-34-5)	TWA	10 ppm	Inhalable fraction and vapor.

US. Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value	Form
1,2-Bis(2-hydroxyethoxy)ethane (CAS 112-27-6)	TWA	10 mg/m3	Particulate.
Diethylene glycol (CAS 111-46-6)	TWA	10 mg/m3	
Pentaethylene glycol (CAS 4792-15-8)	TWA	10 mg/m3	Particulate.
Poly(oxy-1,2-ethanediyl) ethoxylated (CAS 25322-68-3)	TWA	10 mg/m3	Particulate.
Sodium phosphate, tribasic (CAS 7601-54-9)	STEL	5 mg/m3	
Tetraethylene glycol (CAS 112-60-7)	TWA	10 mg/m3	Particulate.

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines Follow standard monitoring procedures.

Appropriate engineering controls Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear approved chemical safety goggles. Wear face-shield and protective suit for abnormal processing problems.

Skin protection

Hand protection Chemical resistant gloves are recommended.

Other Wear chemical-resistant gloves and protective clothing appropriate for risk of exposure. Contact glove manufacturer for specific information.

Respiratory protection Wear suitable respiratory protection. If permissible levels are exceeded use NIOSH mechanical filter / organic vapor cartridge or an air-supplied respirator.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product. Contaminated work clothing should not be allowed out of the workplace. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Appearance Clear, yellow to amber liquid.

Physical state Liquid.

Form Aerosol.

Color Clear, yellow, green or amber.

Odor Mild.

Odor threshold Not available.

pH 10 - 11.5

Melting point/freezing point -58 °F (-50 °C)

Initial boiling point and boiling range > 449.96 °F (> 232.2 °C)

Flash point > 275.0 °F (> 135.0 °C) Tag Closed Cup

Evaporation rate < 0.01

Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	1 - 1.07 g/ml (4 °C)
Solubility(ies)	
Solubility (water)	Soluble in water.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Bulk density	8.33 - 9.02 lb/gal
VOC (Weight %)	0 % CARB Method 310

10. Stability and reactivity

Reactivity	The product is non-reactive under normal conditions of use, storage and transport.
Chemical stability	Stable under normal temperature conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Heat, flames and sparks.
Incompatible materials	Strong oxidizing agents. Strong acids. Strong bases.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Ingestion	May cause discomfort if swallowed.
Inhalation	Under normal conditions of intended use, this material is not expected to be an inhalation hazard.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye irritation.
Symptoms related to the physical, chemical and toxicological characteristics	Irritant effects.

Information on toxicological effects

Acute toxicity May be harmful if swallowed.

Components	Species	Test Results
1,2-Bis(2-hydroxyethoxy)ethane (CAS 112-27-6)		
Acute		
Dermal		
LD50	Rabbit	22460 mg/kg
Oral		
LD50	Rat	15000 - 22000 mg/kg
2-(2-Butoxyethoxy)-ethanol (CAS 112-34-5)		
Acute		
Dermal		
LD50	Rabbit	2700 mg/kg
Oral		
LD50	Rat	4500 mg/kg

Components	Species	Test Results
Diisopropanolamine (CAS 110-97-4)		
Acute		
Dermal		
LD50	Rabbit	8000 mg/kg
Oral		
LD50	Guinea pig	2800 mg/kg
	Mouse	2120 mg/kg
	Rabbit	4700 mg/kg
	Rat	4765 mg/kg
Other		
LD50	Mouse	96 mg/kg
Sodium phosphate, tribasic (CAS 7601-54-9)		
Acute		
Oral		
LD50	Rat	4.8 mg/kg
Tetraethylene glycol (CAS 112-60-7)		
Acute		
Dermal		
LD50	Rabbit	22570 mg/kg
Oral		
LD50	Rat	32800 mg/kg
		29 g/kg
Triethylene glycol ethyl ether (CAS 112-50-5)		
Acute		
Dermal		
LD50	Rabbit	8200 mg/kg
Oral		
LD50	Rat	10600 mg/kg
Triethylene glycol methyl ether (CAS 112-35-6)		
Acute		
Dermal		
LD50	Rabbit	7100 mg/kg
Oral		
LD50	Rat	11300 mg/kg
Triethylene glycol monobutyl ether (CAS 143-22-6)		
Acute		
Dermal		
LD50	Rabbit	3.54 ml/kg
Oral		
LD50	Rat	5300 mg/kg

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/eye irritation Not classified.

Respiratory or skin sensitization

Respiratory sensitization Not classified.

Skin sensitization Not a skin sensitizer.

Germ cell mutagenicity Not classified.

Carcinogenicity Not classified.

Reproductive toxicity Not classified.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not available.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components		Species	Test Results
1,2-Bis(2-hydroxyethoxy)ethane (CAS 112-27-6)			
Aquatic			
Fish	LC50	Bluegill (Lepomis macrochirus)	> 10000 mg/l, 96 hours
Pentaethylene glycol (CAS 4792-15-8)			
Aquatic			
Fish	LC50	Atlantic salmon (Salmo salar)	> 1000 mg/l, 96 hours
Poly(oxy-1,2-ethanediyl) ethoxylated (CAS 25322-68-3)			
Aquatic			
Fish	LC50	Atlantic salmon (Salmo salar)	> 1000 mg/l, 96 hours
Sodium phosphate, tribasic (CAS 7601-54-9)			
Aquatic			
Fish	LC50	Western mosquitofish (Gambusia affinis)	28.5 mg/l, 96 hours
Tetraethylene glycol (CAS 112-60-7)			
Aquatic			
Fish	LC50	Atlantic salmon (Salmo salar)	> 1000 mg/l, 96 hours

Persistence and degradability Not available.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

2-(2-Butoxyethoxy)-ethanol (CAS 112-34-5)	0.56
Diisopropanolamine (CAS 110-97-4)	-0.82

Mobility in soil The product is water soluble and may spread in water systems.

Other adverse effects Not known.

13. Disposal considerations

Disposal instructions Dispose in accordance with all applicable regulations. Do not allow this material to drain into sewers/water supplies.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations.

Contaminated packaging Do not re-use empty containers.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not available.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

2-(2-Butoxyethoxy)-ethanol (CAS 112-34-5)	LISTED
Sodium phosphate, tribasic (CAS 7601-54-9)	LISTED
Triethylene glycol ethyl ether (CAS 112-50-5)	LISTED

Triethylene glycol methyl ether (CAS 112-35-6) LISTED
Triethylene glycol monobutyl ether (CAS 143-22-6) LISTED

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Triethylene glycol ethyl ether	112-50-5	15-40
Triethylene glycol methyl ether	112-35-6	7-30
Triethylene glycol monobutyl ether	143-22-6	1-25
2-(2-Butoxyethoxy)-ethanol	112-34-5	1-5

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

2-(2-Butoxyethoxy)-ethanol (CAS 112-34-5)
Triethylene glycol ethyl ether (CAS 112-50-5)
Triethylene glycol methyl ether (CAS 112-35-6)
Triethylene glycol monobutyl ether (CAS 143-22-6)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

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

US. Massachusetts RTK - Substance List

Diisopropanolamine (CAS 110-97-4)
Sodium phosphate, tribasic (CAS 7601-54-9)

US. New Jersey Worker and Community Right-to-Know Act

2-(2-Butoxyethoxy)-ethanol (CAS 112-34-5)
Sodium phosphate, tribasic (CAS 7601-54-9)
Triethylene glycol ethyl ether (CAS 112-50-5)
Triethylene glycol methyl ether (CAS 112-35-6)
Triethylene glycol monobutyl ether (CAS 143-22-6)

US. Pennsylvania Worker and Community Right-to-Know Law

1,2-Bis(2-hydroxyethoxy)ethane (CAS 112-27-6)
2-(2-Butoxyethoxy)-ethanol (CAS 112-34-5)
Diethylene glycol (CAS 111-46-6)
Diisopropanolamine (CAS 110-97-4)
Sodium phosphate, tribasic (CAS 7601-54-9)
Triethylene glycol ethyl ether (CAS 112-50-5)
Triethylene glycol methyl ether (CAS 112-35-6)
Triethylene glycol monobutyl ether (CAS 143-22-6)

US. Rhode Island RTK

2-(2-Butoxyethoxy)-ethanol (CAS 112-34-5)
Sodium phosphate, tribasic (CAS 7601-54-9)
Triethylene glycol ethyl ether (CAS 112-50-5)
Triethylene glycol methyl ether (CAS 112-35-6)
Triethylene glycol monobutyl ether (CAS 143-22-6)

US. California Proposition 65

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Not listed.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No

Country(s) or region	Inventory name	On inventory (yes/no)*
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

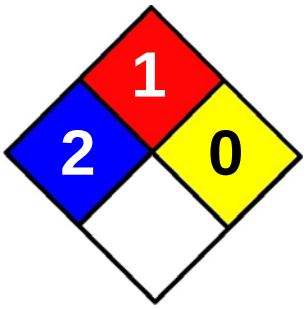
16. Other information, including date of preparation or last revision

Issue date 10-April-2014

Revision date -

Version # 01

NFPA Ratings



References C&L Inventory database.
Registry of Toxic Effects of Chemical Substances (RTECS)

Disclaimer The information in the sheet was written based on the best knowledge and experience currently available.