



DOT 3,4,5.1 BRAKE FLUID ANTI-RUST ADDITIVE

Date Prepared: 09/28/2016

SAFETY DATA SHEET

1. Product And Company Identification

PRODUCT NAME: BrakeShot™ Anti-Rust Additive for DOT 3,4,5.1 Brake Fluids
PRODUCT NUMBER: 3202-B

MANUFACTURER:
BrakeShot LLC
1076 East Commerce Dr #400
St. George, UT 84790

EMERGENCY AND ALL OTHER INFORMATION PHONE NUMBER:

(888)749-7977

PRODUCT USE: Automobile brake fluid additive
RESTRICTIONS ON USE: None identified

2. Hazards Identification

OSHA/HCS status: This material is considered hazardous by the OSHA Hazard Communications Standard (29 CFR 1910.120)

Health	Physical
Acute Oral Toxicity Category 4 Eye Damage Category 1 Skin Irritant Category 3 Specific Target Organ Toxicity – Repeated Exposure Category 2	Not Hazardous

Label elements



DANGER

Harmful if swallowed.
Causes serious eye damage.
Causes skin irritation.
May cause damage to kidneys, and liver through prolonged or repeated ingestion.

Prevention:

Do not breathe mist or vapors.
Wash exposed skin thoroughly after handling.
Do not eat, drink, or smoke when using this product.
Wear protective gloves, protective clothing, eye protection, or face protection.



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Response:

IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth.

IF ON SKIN: Wash with plenty of water and soap. If skin irritation

occurs: Get medical attention. Take off contaminated clothing.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a doctor.

Disposal:

Dispose of contents and container in accordance with local and national regulations.

3. Composition/Information On Ingredients

Component	CAS No.	Amount
Triethylene glycol monoethyle ether	112-50-5	1-85%
Diethylene glycol monoethyl ether	111-77-3	1-85%
Diethylene glycol	111-46-6	0-85%
Polypropylene glycol	25322-69-4	1-50%
Diethylene glycol monobutyl ether	112-34-5	0-5%
Diisopropanolamine	110-97-4	0-5%
Methyldiethanolamine	105-59-9	0-5%
Dibutylamine	111-92-2	0-5%

Any concentration shown as a range is to protect confidentiality or is due to batch variation. There are no additional ingredients in the proprietary corrosion inhibitor package 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.

4. First Aid Measures

INHALATION: Remove to fresh air if effects occur and seek medical attention.

SKIN CONTACT: Remove contaminated clothing. Wash all affected and exposed areas with soap and water. If skin irritation or redness develops or persists, seek medical attention.

EYE CONTACT: Exposed eyes should be immediately flushed with copious amounts of water using a steady stream for a minimum of 20 minutes. Seek immediate medical attention.

INGESTION: If swallowed, get immediate medical advice by calling a Poison Control Center or hospital emergency room. If advice is not available, take victim and product container to the nearest emergency treatment center or hospital. Do not attempt to give anything by mouth to an unconscious person.



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MOST IMPORTANT SYMPTOMS: Eye contact may cause irritation with possible corneal injury. May cause mild skin irritation or sensitization. Harmful if absorbed through the skin. Breathing high concentrations of vapors or mists may cause irritation, headache, dizziness, drowsiness, nausea, loss of sense of balance and visual disturbances. Swallowing may cause gastrointestinal disturbances including irritation, abdominal pain, back pain, nausea, vomiting, diarrhea, headache, dizziness, drowsiness, nausea, visual disturbances, decreased urine production, malaise, unconsciousness and liver or kidney damage. May cause chronic effects.

INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT, IF NEEDED: Seek immediate medical attention for eye contact, or large ingestions.

5. Firefighting Measures

SUITABLE EXTINGUISHING MEDIA: Use water spray or fog, foam, carbon dioxide or dry chemical. Cool fire exposed containers with water.

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL: A solid stream of water or foam directed into hot, burning liquid can cause frothing. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Burning may produce carbon monoxide, carbon dioxide, and nitrogen oxides.

SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE FIGHERS: Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored.

6: Accidental Release Measures

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES: Wear appropriate protective clothing and equipment (See Section 8).

METHODS AND MATERIALS FOR CONTAINMENT/CLEANUP: Collect with absorbent material and place in appropriate, labeled container for disposal.

7. Handling and Storage

PRECAUTIONS FOR SAFE HANDLING:

Avoid eye contact. Avoid prolonged skin contact. Avoid breathing vapors and mists. Use with adequate ventilation. Wash exposed skin thoroughly with soap and water after use.

Sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperature and pressure, or sudden ingress of air into vacuum equipment, may result in ignitions without any obvious ignition sources. Spills of this product on hot, fibrous insulation may result in spontaneous combustion.

Empty containers retain product residue and may be hazardous. Do not cut, weld, drill, etc. containers, even empty. Do not reuse empty containers unless properly cleaned.



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CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES: Keep away from excessive heat and open flames. Store in a cool, dry area.

NFPA CLASSIFICATION: Not Applicable

8. Exposure Controls / Personal Protection

EXPOSURE GUIDELINES

CHEMICAL	EXPOSURE LIMIT
Triethylene glycol monoethyl ether	Not Established
Diethylene glycol monoethyl ether	25 ppm TWA AIHA WEEL
Diethylene glycol	10 mg/m ³ TWA AIHA WEEL
Polypropylene glycol	10 mg/m ³ TWA AIHA WEEL
Diethylene glycol monobutyl ether	35 ppm TWA AIHA WEEL 10 ppm TWA ACGIH TLV (Inhalable fraction and vapor)
Diisopropanolamine	None Established
Methyldiethanolamine	None Established
Dibutylamine	5 ppm TWA AIHA WEEL

APPROPRIATE ENGINEERING CONTROLS: General ventilation should be adequate for normal use. For operations where the product is heated or misted and exposures may be excessive, mechanical ventilation such as local exhaust may be needed to minimize exposure.

PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY PROTECTION: None under normal use conditions. For operations where exposures may be excessive, a NIOSH approved respirator with an organic vapor cartridge and a dust/mist prefilter or supplied air respirator is recommended. Equipment selection depends on contaminant type and concentration. Select in accordance with 29 CFR 1910.134 and good industrial hygiene practice. For firefighting, use self-contained breathing apparatus.

GLOVES: Chemical resistant gloves such as PVC coated gloves are recommended to prevent prolonged/repeated skin contact.

EYE PROTECTION: Splash proof goggles are recommended to prevent eye contact.



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OTHER PROTECTIVE EQUIPMENT/CLOTHING: Protective clothing if needed to avoid prolonged/repeated skin contact. Suitable washing and eye flushing facilities should be available in the work area. Contaminated clothing should be removed and laundered or dry cleaned before re-use.

9. Physical and Chemical Properties

APPEARANCE:	Clear amber or yellow liquid	ODOR:	Mild odor
ODOR THRESHOLD:	Not determined	pH:	Not determined
MELTING/FREEZING POINT:	<-60°F (<-51°C)	BOILING POINT/RANGE:	>480°F (>248.9°C)
FLASH POINT:	> 250°F (>121°C) PMCC	EVAPORATION RATE:	Not determined
FLAMMABILITY (SOLID, GAS)	Not Applicable	FLAMMABILITY LIMITS:	LEL: Not determined UEL: Not determined
VAPOR PRESSURE:	< 0.01 mmHg @20°F	VAPOR DENSITY:	>1
RELATIVE DENSITY:	Not determined	SOLUBILITIES	Water
PARTITION COEFFICIENT (n-octanol/water)	Not determined	AUTOIGNITION TEMPERATURE:	Not determined
DECOMPOSITION TEMPERATURE:	Not determined	VISCOSITY:	Not determined

10. Stability and Reactivity

REACTIVITY: Normally unreactive

CHEMICAL STABILITY: Stable

POSSIBILITY OF HAZARDOUS REACTIONS: Under normal conditions of storage and use, hazardous reactions will not occur.

CONDITIONS TO AVOID: No data

INCOMPATIBLE MATERIALS: No data

HAZARDOUS DECOMPOSITION PRODUCTS: Under normal conditions of storage and use, hazardous reactions will not occur.

11. Toxicological Information

POTENTIAL HEALTH EFFECTS:

ACUTE HAZARDS:

INHALATION: None expected from short term exposures at ambient temperatures. At elevated temperatures, product may cause respiratory irritation, headache, dizziness, drowsiness, nausea, loss of sense of balance and visual disturbances. High concentrations of vapors at ambient temperatures may cause lung injury, liver dysfunction or kidney damage.

SKIN CONTACT: Prolonged or repeated exposure may cause mild irritation with redness and discomfort. Prolonged contact may cause defatting or drying of the skin.

EYE CONTACT: May cause irritation with tearing, blurred vision and possible corneal damage.

INGESTION: Ingestion may cause abdominal pain, back pain, nausea, vomiting, diarrhea, headache, dizziness, drowsiness, nausea, visual disturbances, decreased urine production, malaise, cardiopulmonary effects (metabolic acidosis), unconsciousness and liver or kidney damage.



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CHRONIC EFFECTS: Prolonged or repeated skin contact with this product may possibly lead to irritation and dermatitis. Prolonged or repeated exposures may cause damage to the central nervous system, blood, lung, liver or kidneys. Adverse reproductive effects may also occur. Prolonged or widespread contact may result in the absorption of potentially harmful amounts resulting in effects similar to those listed under ingestion. Massive contact with damaged skin or with material sufficiently hot to burn the skin may result in absorption of potentially lethal amounts.

CARCINOGENICITY LISTING: None of the components is listed as a carcinogen or potential carcinogen by IARC, NTP, ACGIH, or OSHA.

ACUTE TOXICITY VALUES:

Triethylene glycol monoethyl ether:	LD50: Oral Rat: Not available LD50: Skin Rabbit: Not available
Diethylene glycol monoethyl ether:	LD50: Oral Rat 2125 mg/kg LD50: Skin Rabbit: >3.6 mg/kg
Diethylene glycol:	LD50: Oral Rat 5,660 mg/kg LD50: Skin Rabbit: 2,700 mg/kg
Polypropylene glycol:	LD50: Oral Rat >2,000 mg/kg LD50: Skin Rabbit: >20,000 mg/kg
Diethylene glycol monobutyl ether:	LD50: Oral Rat 5,660 mg/kg LD50: Skin Rabbit: 2,700 mg/kg
Diisopropanolamine:	LD50: Oral Rat >4,000 mg/kg LD50: Skin Rabbit: >20,000 mg/kg
Methyldiethanolamine:	LD50: Oral Rat 1945 mg/kg LD50: Skin Rabbit: 2,700 mg/kg
Dibutylamine:	LD50: Oral Rat >189 mg/kg LD50: Skin Rabbit: 500 mg/kg

12. Ecological Information

ECOTOXICITY:



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Triethylene glycol monoethyl ether:	No information available
Diethylene glycol monoethyl ether:	LC50 Western mosquitofish >32,000 mg/L/96 hr.
Diethylene glycol:	LC50 Western mosquitofish >32,000 mg/L/96 hr.
Polypropylene glycol:	EC50 Daphnia magna (Water flea, neonate) >109 mg /L/48 hr.
Diethylene glycol monobutyl ether:	LC50 Lepomis macrochirus (Bluegill sunfish) 1300 mg/L/96 hr.
Diisopropanolamine:	LC50 Brachydanio rerio (Zebra Fish) >1000 -2200 mg/L/ 96 hr.
Methyldiethanolamine:	LC50 Salmo gairdneri 762 mg/L/96 hr.
Dibutylamine:	LC50 Lepomis macrochirus >10,000 mg/L/96 hr.

PERSISTENCE AND DEGRADABILITY:

Triethylene glycol monoethyl ether: Readily biodegradable
Diethylene glycol monoethyl ether: Readily biodegradable
Diethylene glycol: Readily biodegradable (>70% in 19 days).
Polypropylene glycol: Readily biodegradable
Diethylene glycol monobutyl ether: Readily biodegradable (95% in 5 days).
Diisopropanolamine: Achieved 39% of its theoretical oxygen demand using a sewage sludge following a 20 day incubation period.
Methyldiethanolamine: Was found to be non-biodegradable after 28 days.
Dibutylamine: Readily biodegradable

BIOACCUMULATIVE POTENTIAL:

Triethylene glycol: No information available
Diethylene glycol: An estimated BCF of 3 suggests the potential for bio concentration in aquatic organisms is low.
Diethylene glycol monobutyl ether: An estimated BCF of 3 suggests the potential for bio concentration in aquatic organisms is low.
Diisopropanolamine: An estimated BCF of 3 suggests the potential for bio concentration in aquatic organisms is low.
Methyldiethanolamine: An estimated BCF of 3.2 was calculated for N-methyldiethanolamine. This BCF suggests the potential for bio concentration in aquatic organisms is low.



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MOBILITY IN SOIL:

Triethylene glycol: Diethylene glycol is highly mobile in soil.

Diethylene glycol: Diethylene glycol is highly mobile in soil.

Diethylene glycol monobutyl ether: Is expected to have very high mobility in soil.

Diisopropanolamine: Is expected to have very high mobility in soil.

Methyldiethanolamine: Is expected to have very high mobility in soil.

OTHER ADVERSE EFFECTS: None known

13. Disposal Considerations

Dispose of product in accordance with all local, state/provincial and federal regulations.

14. Transport Information

U.S. DOT HAZARD CLASSIFICATION: Not Regulated

DOT MARINE POLLUTANTS: This product does not contain Marine Pollutants as defined in 49 CFR 171.8.

IMDG CODE SHIPPING CLASSIFICATION: Not Regulated

CANADIAN TDG CLASSIFICATION: Not Regulated

15. Regulatory Information

EPA SARA 311/312 HAZARD CLASSIFICATION: Acute Health, Chronic Health

PROTECTION OF STRATOSPHERIC OZONE: This product is not known to contain or to have been manufactured with ozone depleting substances as defined in 40 CFR Part 82, Appendix A to Subpart A.

CERCLA SECTION 103: This product is not subject to CERCLA reporting requirements, however, many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

CALIFORNIA PROPOSITION 65: This product does not contain chemicals regulated under California Proposition 65.

EPA TSCA INVENTORY: All of the components of this material are listed on the Toxic Substances Control Act (TSCA) Chemical Substances Inventory.

CANADIAN ENVIRONMENTAL PROTECTION ACT: All of the ingredients are listed on the Canadian Domestic Substances List.

CANADIAN WHMIS CLASSIFICATION: Class D - Division 2 - Subdivision B - (Toxic material causing other chronic effects)



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This SDS has been prepared according to the criteria of the Controlled Products Regulation (CPR) and the MSDS contains all of the information required by the CPR.

EUROPEAN INVENTORY OF EXISTING COMMERCIAL CHEMICAL SUBSTANCES (EINECS): All of the ingredients are listed on the EINECS inventory.

AUSTRALIA: All of the ingredients of this product are listed on the Australian Inventory of Chemical Substances.

CHINA: All of the ingredients of this product are listed on the Inventory of Existing Chemical Substance in China (IECSC).

16. Other Information

NFPA Rating: Fire: 1

Health: 1

Instability: 0

REVISION SUMMARY: All Sections – conversion to Hazcom 2012 classification and labeling and format.

SDS Date of Preparation/Revision: September 28, 2017

This SDS is directed to professional users and bulk handlers of the product. Consumer products are labeled in accordance with Federal Hazardous Substances Act regulations.

While BrakeShot LLC believes that the data contained herein are factual and the opinions expressed are those of qualified experts regarding the results of tests conducted, the data are not to be taken as a warranty or representation for which BrakeShot LLC assumes legal responsibility. They are offered for your consideration, investigation and verification. Any use of these data and information must be determined by the user to be in accordance with applicable federal, state and local laws and regulations.

If more information is needed, please contact:

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