

1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY

Product Name:	GAUGE Brake Fluid DOT 4 (High Boiling Point Glycol Ether Based)
Product Code:	GE-BF-DOT4-SERIES
Recommended Use:	Hydraulic brake and clutch systems in automotive and commercial vehicles
Manufacturer:	GAUGE ENERGY CO., LTD. Office: Pickering, Ontario, Canada & Dar es Salaam, Tanzania
Website & Contact:	www.gaugeenergy.com

2. HAZARD IDENTIFICATION

Classification (GHS): Eye Irritation Category 2A; Specific Target Organ Toxicity (Repeated Exposure) Category 2.

Signal Word: Warning. **Pictograms:** Exclamation mark, Health hazard.

Hazard Statements: H319 Causes serious eye irritation. H373 May cause damage to organs through prolonged or repeated exposure (kidneys via ingestion).

Precautionary Statements: P260 Do not breathe mist/vapours. P280 Wear eye protection/face protection. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present. P314 Get medical advice/attention if you feel unwell.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name / Component	CAS Number	Weight %	GHS Classification
Glycol Ethers (Polyethylene glycol monoalkyl ethers)	111-46-6 / 112-60-7	60 – 80%	Acute Tox. 4 (Oral), STOT RE 2
Borate Ester Esters / Polyglycol Borate Esters	107-21-1 (Glycol component)	20 – 35%	Eye Irrit. 2, Repr. 2
Corrosion Inhibitors & Antioxidants	Proprietary Mixture	1 – 5%	Skin Sens. 1, Aquatic Chronic 3

4. FIRST-AID MEASURES

Inhalation: Remove victim to fresh air. If not breathing, give artificial respiration. Seek medical attention if symptoms develop.

Skin Contact: Remove contaminated clothing. Wash affected skin thoroughly with soap and water. Get medical attention if irritation persists.

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Get immediate medical attention.

Ingestion: Never give anything by mouth to an unconscious person. Do NOT induce vomiting without medical advice. Seek immediate medical attention.

5. FIRE-FIGHTING MEASURES

Extinguishing Media:	Alcohol-resistant foam, dry chemical powder, carbon dioxide (\$CO_2\$), water spray or fog.
Specific Hazards:	Combustible liquid. Vapours are heavier than air and may travel along ground. Burning may release carbon monoxide (\$CO\$) and carbon dioxide (\$CO_2\$).

Protective Equipment:	Wear self-contained breathing apparatus (SCBA) and full protective firefighting turnout gear.
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6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Use appropriate personal protective equipment. Avoid contact with skin, eyes, and clothing. Ensure adequate ventilation.

Environmental Precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains, surface water, or groundwater.

Clean-up Methods: Soak up with inert absorbent material (e.g., sand, silica gel, universal binder). Dispose of waste in accordance with local regulations.

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Keep container tightly closed. Do not eat, drink, or smoke when using.

Storage: Store in original tightly closed container in a cool, dry, well-ventilated area away from moisture and strong oxidizing agents. Hygroscopic fluid.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Component	OSHA PEL	ACGIH TLV	Recommended Controls
Glycol Ethers / Diethylene Glycol	Not established	\$10~mg/m^3\$ (Aerosol)	Use chemical splash goggles, butyl rubber or neoprene gloves, and lab coat/apron. Provide local exhaust ventilation.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance / State:	Clear to amber mobile liquid	Boiling Point:	> 230°C (ERBP min 230°C)
Odour:	Mild, characteristic	Flash Point:	> 100°C (Closed Cup)
Wet Boiling Point:	> 155°C	Density @ 20°C:	1.020 – 1.070 g/ml
Solubility in Water:	Miscible in all proportions	pH:	7.0 – 11.5

10. STABILITY AND REACTIVITY

Reactivity: Stable under normal conditions of use and storage.

Chemical Stability: Hygroscopic. Absorbs moisture from the air, which lowers boiling point.

Incompatible Materials: Strong oxidizing agents, strong acids, strong bases, sources of ignition.

Hazardous Decomposition: Carbon oxides, toxic organic vapours under fire conditions.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity: Oral LD50 (Rat) approx. 12,000 mg/kg (for base glycol ether components).

Skin / Eye Irritation: Causes serious eye irritation. Prolonged skin contact may cause mild irritation.

Chronic Effects: May cause damage to kidneys through prolonged or repeated ingestion.

12. ECOLOGICAL INFORMATION

Ecotoxicity: Low acute toxicity to aquatic organisms. LC50 (Fish) > 100 mg/L.

Persistence & Degradability: Readily biodegradable in water.

13. DISPOSAL CONSIDERATIONS

Waste Treatment: Dispose of in accordance with local, state, and national environmental regulations. Do not discharge brake fluid into municipal sewers or natural waterways.

14. TRANSPORT INFORMATION

UN Number:	Not regulated as a dangerous good for transport (DOT, IMDG, IATA).
Special Precautions:	Keep containers tightly sealed against moisture ingress during transport.

15. REGULATORY INFORMATION

Safety & Environmental Regulations: Compliant with FMVSS No. 116 (DOT 4), ISO 4925, and SAE J1704 specifications. Manufactured under GAUGE ENERGY standards (www.gaugeenergy.com).

16. OTHER INFORMATION

Disclaimer: This Safety Data Sheet for GAUGE Brake Fluid DOT 4 is compiled in good faith based on current standards. No warranty is expressed or implied regarding accuracy of data.