GLYCOGEN BRAKE FLUID
DOT 4

MATERIAL SAFETY DATA SHEET

SECTION #1: PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME: GLYCOGEN BRAKE FLUID DOT 4

MANUFACTURER/SUPPLIER'S NAME:

GENERAL PETROLEUM PRODUCTS
SUITE 1802 -1803, BEL RASHEED
TOWER, BUHEIRA CORNICHE,
P.O. BOX 46670, SHARJAH, UAE
TEL: 00971 6 5754717
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24 HOURS EMERGENCY: Call GP LUBE (800-475823)

PRODUCT USE: BRAKE FLUID

SECTION #2: COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL NATURE: Ethylene Glycol.

SUBTANCES CONTRIBUTING TO HAZARDS:

The following components of this product are listed as toxic chemicals in 40 CFR 372.65 and are present at levels which could require reporting and customer notification under Section 313 and 40 CFR Part 372:

COMPONENTS CAS NUMBER Reporting Threshold
Triethylene glycol monobutyl ether 143226 1.0 %
Triethylene glycol monomethyl ether 112356 1.0 %
Diethylene glycol 111466 1.0 %
Tetraethylene glycol monobutyl ether 1559349 1.0 %
Tetraethylene glycol 112607 1.0 %
Triethylene glycol 112505 1.0 %
Tetraethylene glycol monoethyl ether 3,6,9,12,15,18-Hexaoxaicosane 23601390 1.0 %
Diethylene glycol monobutyl ether 112345 1.0 %
Triethylene glycol 112276 1.0 %
Polyethylene glycol monomethyl ether 9004744 1.0 %
Diethylene glycol monomethyl ether 111900 1.0 %

SECTION #3: HAZARD IDENTIFICATION

ADVERSE HUMAN HEALTH EFFECTS: **WARNING! CAUSES EYE IRRITATION**.

Inhalation: Short-term harmful health effects are not expected from vapor generated at ambient temperature.

Eye Contact: Causes moderate to severe irritation, experienced as discomfort or pain, excess blinking and tear production, with marked excess redness and swelling of the conjunctiva. Corneal injury may occur.

Skin Contact: May cause minor irritation with itching and possible slight local redness. A single prolonged exposure is not likely to result in the material being absorbed.

Effects of Repeated Overexposure: Drying and cracking of the skin may result from prolonged exposure to this material because of its defatting action.

Skin Absorption: Repeated prolonged contact may result in the absorption of potentially harmful amounts of material.

Ingestion: Single dose oral toxicity is considered to be low. May cause abdominal discomfort, nausea, and vomiting.Chronic, Prolonged or Repeated Overexposure may cause injury.

Other Effects of Overexposure: Skin contact may cause sensitization and an allergic skin reaction in a small proportion of individuals.

ENVIRONMENTAL EFFECTS: Don't reject this product into the environment.

ECOTOXICITY
The toxicity of this material to aquatic organisms has not been evaluated. Consequently, this material should be kept out of sewage and drainage systems and all bodies of water.

ENVIRONMENTAL FATE
No bioconcentration is expected because of the relatively high water solubility. Potential for mobility id very high (Koc 0-50). Soil organic carbon/water partition coefficient (Koc) is estimated <50. Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

PERSONAL PROTECTIVE EQUIPMENT

Eye/Face Protection: Wear protective equipment to prevent eye contact. Selection of protective equipment may include safety glasses, chemical goggles, face shields, or a combination depending on the work operations conducted. Immediately flush eyes with water and continue washing for 15 minutes. Remove contact lenses, if worn. Obtain medical attention if discomfort persists

Skin Protection: Wear protective clothing to prevent skin contact. Selection of protective clothing may include gloves, apron, boots, and complete facial protection depending on operations conducted. Suggested materials for protective gloves include: Polyvinyl chloride coated. Remove contaminated clothing. Wash skin with soap and water. Obtain medical attention if irritation persists. Wash clothing before reuse

Respiratory Protection: None expected to be needed. General (mechanical) room ventilation is expected to be satisfactory. Determine if airborne concentrations are below the recommended occupational exposure limits for jurisdiction of use. If airborne concentrations are above the acceptable limits, wear an approved respirator that provides adequate protection from this material, such as: Air-Purifying Respirator for Organic Vapors.
Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection. If any symptoms develop, remove to fresh air. Seek medical attention if symptoms continue.
Inhalation: Note to Physicians: There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.

Ingestion: If a large quantity (several ounces) has been swallowed, and if patient is fully conscious, give two glasses of water. Seek medical attention immediately. Induce vomiting only if prescribed by a physician.

PHYSICAL AND CHEMICAL HAZARDS:

Chemical Stability: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
Incompatibility With Other Materials: Avoid contact with acetaldehyde, acids, chlorine, ethylene oxide, isocyanates, strong oxidizing agents, calcium hypochlorite, zinc. Do not use with aluminum equipment > 120°F.
Hazardous Decomposition Products: May for carbon dioxide and carbon monoxide
Hazardous Polymerization: Hazardous polymerization will not occur.

SECTION #4: FIRST AID MEASURES

IN CASE OF SERIOUS MANIFESTATIONS, CALL IN A DOCTOR OR EMERGENCY MEDICAL CARE

ROUTE OF EXPOSURE:

INHALATION:	Short-term harmful health effects are not expected from vapor generated at ambient temperature. Inhalation of heavy concentrations of vapour, fumes or spray, may cause mild irritation of the throat. Transport the person into fresh air, keep warm and allow to rest.
SKIN CONTACT:	Immediately remove all soiled or stained clothing. Wash the affected area immediately and repeatedly with soap and water. May cause minor irritation with itching and possible slight local redness. A single prolonged exposure is not likely to result in the material being absorbed.
Skin Absorption:	Repeated prolonged contact may result in the absorption of potentially harmful amounts of material.
Other Effects of Overexposure:	Skin contact may cause sensitization and an allergic skin reaction in a small proportion of individuals.
CONTACT WITH THE EYES:	Causes moderate to severe irritation, experienced as discomfort or pain, excess blinking and tear production, with marked excess redness and swelling of the conjunctiva. Corneal injury may occur. Keep eyes open and rinse immediately and repeatedly with water for at least 15 minutes
INGESTION:	Single dose oral toxicity is considered to be low. May cause abdominal discomfort, nausea, and vomiting.Chronic, Prolonged or Repeated Overexposure may cause injury.
ASPIRATION:	If the product is believed to have entered the lungs (in case of vomiting, for example), Transport the person into fresh air, keep warm and allow to rest & take the person to hospital for immediate care

SECTION #5: FIRE FIGHTING MEASURES

Fire-fighting measures

Flash point	>125 °C (Closed cup) Pensky-Martens.
Flammability of theproduct	may be combustible at high temeperature
Products of combustion	These products are carbon oxides nitrogen oxides
Unusual fire/explosionhazards	This material is not explosive as defined by established regulatory criteria.
Fire-fighting media andinstructions	In case of fire, use water fog, foam, dry chemicals, or carbon dioxide. Do not use water jet.
Protective clothing (fire)	Fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

EXTINGUISHING MEDIA:	Foam, Dry chemical and CO_2.
HAZARDOUS COMBUSTION PRODUCTS:	Normal combustion products, CO and CO_2. May form: carbon dioxide and carbon monoxide, various hydrocarbons.
SPECIAL FIRE FIGHTING PROCEDURES:	Water or foam may cause frothing which can be violent and possibly endanger the life of the firefighter. Wear a self-contained breathing apparatus with a full facepiece operated in the positive pressure demand mode with appropriate turn-out gear and chemical resistant personal protective equipment. Refer to the personal protective equipment section of this MSDS.

SECTION #6: ACCIDENTAL RELEASE MEASURES

SPILL AND LEAK PROCEDURES:

Small Spill

Absorb liquid on vermiculite, floor absorbent or other absorbent material.

Large Spill

Prevent run-off to sewers, streams or other bodies of water. If run-off occurs, notify proper authorities as required, that a spill has occured. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source, dike area of spill to prevent spreading, pump liquid to salvage tank. Remaining liquid may be taken up on sand, clay, earth, floor absorbent, or other absorbent material and shoveled into containers.

SECTION #7: HANDLING AND STORAGE

Handling

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed.

Storage

Not applicable

PREVENTION OF FIRE & EXPLOSION:	Empty containers may contain flammable or explosive vapours Product-impregnated cloths and paper or material used to mop up spills can constitute a fire hazard. Do not allow these to accumulate in a pile. Discard these with all safety precautions immediately after use.
PRECAUTIONS:	Avoid static electricity build up with connection to earth. By arranging and setting up machinery and equipment so as to avoid accidental spills and splashes onto hot machine parts and electrical contacts.
TO BE AVOIDED:	Do not store exposed to the elements.
INCOMPATIBLE PRODUCTS:	Dangerous reaction with strong oxidizing Agents.

PACKAGING MATERIALS:

RECOMMENDED:	Use only hydrocarbon-resistant containers, joints, pipes, etc. Keep in original container if possible; otherwise, transfer all indications on the regulatory label to the new container.

SECTION #8: EXPOSURE CONTROLS / PERSONAL PROTECTION

VENTILATION:	Mechanical ventilation is recommended.
RESPIRATORY PROTECTION:	If mist present, chemical cartridge respirator is recommended.
GLOVES:	Resistant gloves (Viton, nitrile, Neoprene) are recommended when handling this material.

EYE PROTECTION:	Chemical safety goggles are recommended.
OTHER PROTECTION:	In confined spaces or where the risk of skin exposure is higher, resistant clothing or apron should be worn.

SECTION #9: PHYSICAL & CHEMICAL DATA

PHYSICAL STATE:	Liquid
COLOR:	Transparent light yellow
ODOR:	Slight
pH:	7.0 to 11.50
FLASH POINT (closed cup)	Pensky-Martens ASTM D 93 156°C, 312°F
AUTO IGNITION TEMPERATURE:	No data
EXPLOSION LIMITS:	Not Applicable
DENSITY:	1.035
SOLUBILITY:	Soluble in water
VISCOSITY:	Kinematic viscosity at 100°C: 1.50 cSt

SECTION #10: STABILITY AND REACTIVITY

STABILITY:	The product is stable under normal temperatures of storage, handling and use.
Incompatibility With Other Materials:	Avoid contact with acetaldehyde, acids, chlorine, ethylene oxide, isocyanates, strong oxidizing agents, calcium hypochlorite, zinc. Do not use with aluminum equipment > 120°F.

CONDITIONS TO AVOID:	Heat (temperatures above flash point), sparks, ignition points, flames, static electricity.
MATERIALS TO AVOID:	Avoid contact with strong oxidizing agents.
DANGEROUS DECOMPOSITON PRODUCTS:	May form: carbon dioxide and carbon monoxide, various hydrocarbons.

SECTION #11: TOXICOLOGICAL INFORMATION

ACUTE TOXICITY/LOCAL EFFECTS

INHALATION:	Risk is improbable under normal conditions of use. Inhalation of important concentration of vapour or aerosols may cause irritation of the upper respiratory tract. Short-term harmful health effects are not expected from vapor generated at ambient temperature.
CONTACT WITH SKIN:	Risk is improbable under normal conditions of use. May cause minor irritation with itching and possible slight local redness. A single prolonged exposure is not likely to result in the material being absorbed
INGESTION:	In case of ingestion of small quantities, no important effect observed. in case of ingestion of larger amounts: abdominal pain, diarrhea,... Single dose oral toxicity is considered to be low. May cause abdominal discomfort, nausea, and vomiting.Chronic, Prolonged or Repeated Overexposure may cause injury.
SENSITIZATION:	Moderate to severe eye & skin irritation.

CHRONIC TOXICITY OR LONG-TERM TOXICITY

CONTACT WITH THE SKIN:	May cause minor irritation with itching and possible slight local redness. A single prolonged exposure is not likely to result in the material being absorbed.
Effects of Repeated Overexposure:	Drying and cracking of the skin may result from prolonged exposure to this material because of its defatting action.
Skin Absorption:	Repeated prolonged contact may result in the absorption of potentially harmful amounts of material.
CARCINOGENECITY:	This product is not regarded as carcinogenic. Brief or intermittent skin contact with this oil is not expected to have serious effects in humans if the oil is thoroughly removed by washing with soap and water.

SECTION #12: ECOLOGICAL INFORMATION

MOBILITY

AIR:	there is a slow loss by evaporation.
GROUND:	Given its physical and chemical characteristics, the product generally shows little mobility in the ground.
WATER:	The product is water soluble; should be kept out of sewage and drainage systems and all bodies of water.
PERSISTENCE AND DEGRADABILITY:	Experimental data on the finished product are not Available. However, the particular ingredients may not be biodegradable.
ECOTOXICITY:	The toxicity of this material to aquatic organisms has not been evaluated. Consequently, this material should be kept out of sewage and drainage systems and all bodies of water.

SECTION #13: DISPOSABLE CONSIDERATIONS

WASTE DISPOSAL:	Dispose in a safe manner in accordance with local/national regulations. If need be, collection by an authorized waste contractor and regeneration or incineration in an approved installation.
USED PACKAGING DISPOSAL:	Conform to the regulation in effect. Waste Management Information. dispose of in accordance with all applicable local, state and federal regulations.
INDUSTRIAL WASTE NUMBER EU:	Notice concerning the nomenclature of waste Law concerning the disposal of waste and the recycling of waste materials Relating regulation of the recovery of used oils : International, local, state Law concerning collection and conditions of disposal .

SECTION #14: TRANSPORT INFORMATION

UN CLASSIFICATION NO:	unregulated
ROAD (ADR) / RAIL (RID)/ ADNR:	Not restricted for transport.
MARINE (IMO-IMDG):	Not restricted for transport.
AIRLINE (ICAO / IATA):	Not restricted for transport

SECTION #15: REGULATORY INFORMATION

INTERNATIONAL , STATE & LOCAL.

SECTION #16: ADDITIONAL INFORMATION

Prepared by: General Petroleum Products - Technical Department
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