Xaerus XG 416 SERIES

Material Safety Data Sheet

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name in English: XAERUS XG 416 Series
Synonyms: NONE
Product Codes: Same
Supplier: Global Refrigerants (S) Pte Ltd
Address: No.9 TUAS LINK 1, SINGAPORE 638587
Website: www.globalrefrigerants.com.sg
Email: msds@globalrefrigerants.com.sg
Telephone: +6568633983
Telefax: +6568636330

CHEMICAL NAME: TRADE SECRET
CHEMICAL FAMILY: Synthetic Hydrocarbon
CHEMICAL FORMULA: NA
CAS NUMBER: 9003-13-8

PRODUCT USE: INDUSTRIAL LUBRICANT
PREPARED BY: CHEMICALS BUSINESS GROUP

SECTION 2- COMPOSITION/ INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>INGREDIENT NAME</th>
<th>Polypropylene glycol monobutyl ether</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name:</td>
<td>Polypropylene glycol</td>
</tr>
<tr>
<td>CAS Number:</td>
<td>9003-13-8</td>
</tr>
<tr>
<td>%WT</td>
<td>0.99</td>
</tr>
<tr>
<td>SARA 313 REPORTABLE</td>
<td>NA</td>
</tr>
<tr>
<td>Name:</td>
<td>Monobutyl ether</td>
</tr>
<tr>
<td>PROPRIETARY</td>
<td>0-20</td>
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<tr>
<td>ADDITIVES</td>
<td></td>
</tr>
<tr>
<td>OSHA PEL-TWA:</td>
<td>5</td>
</tr>
<tr>
<td>OSHA PEL- STEL:</td>
<td>NA</td>
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<tr>
<td>OSHA PEL- CEILING:</td>
<td>NA</td>
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<tr>
<td>ACGIH TLV-TWA:</td>
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<td>ACGIH TLV- STEL:</td>
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<tr>
<td>ACGIH TLV CEILING</td>
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</table>

SECTION 3 – HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

Routes of Entry: Inhalation, Dermal, Eyes

EYES: Essentially nonirritating to eyes.

SKIN: Brief contact is essentially nonirritating to skin.

SKIN CONTACT: Prolonged skin contact is unlikely to result in absorption of harmful amounts.

INGESTION: Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

INHALATION: At room temperature, exposure to vapour is minimal due to low volatility; single exposure is not likely to be hazardous.
**SECTION 4 – FIRST AID MEASURES**

**EYES:**
Flush eyes with water for at least 15 minutes. Remove contact lenses after 1-2 minutes of flushing. If irritation develops seek medical attention.

**SKIN:**
Wash affected area with soap and water.

**INGESTION:**
NO EMERGENCY MEDICAL TREATMENT NECESSARY.

**INHALATION:**
Move victim to fresh air. If symptoms persist, seek medical attention.

**NOTES TO PHYSICIAN OR FIRST**
No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition to the patient.

**SECTION 5 – FIRE-FIGHTING MEASURES**

**FLAMMABLE LIMITS IN AIR**

<table>
<thead>
<tr>
<th></th>
<th>UPPER</th>
<th>LOWER</th>
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<tbody>
<tr>
<td>(% by volume)</td>
<td>NA</td>
<td>NA</td>
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</tbody>
</table>

**FLASH POINT:**

| °F | 446 – 464 |
| °C | 230 – 240 |

**METHOD USED:** ASTM D-92

**AUTOIGNITION TEMPERATURE:**

| °F | NA |
| °C | NA |

**NFPA HAZARD CLASSIFICATION:**

- **HEALTH:** 0
- **FLAMMABILITY:** 1
- **REACTIVITY:** 0

**OTHER:**

- **HEALTH:** 0
- **FLAMMABILITY:** 1
- **REACTIVITY:** 0

**PROTECTION:**

**EXTINGUISHING METHOD:**
Dry chemical, CO2, Foam, water spray

**SPECIAL FIREFIGHTING PROCEDURES:**
Self contained breathing apparatus and protective clothing

**UNUSUAL FIRE AND EXPLOSION HAARDS:**
This material may burn, but will not ignite readily. If container is not properly cooled. It can rupture in the heat of a fire.

**HAZARDOUS DECOMPOSITION PRODUCTS:**
Fumes, smoke, carbon monoxide, carbon dioxide

**NOTES:**
Low hazard liquid can burn upon heating to elevated temperatures. Isolated immediate hazard area, keep authorized personnel out. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Cool equipment exposed to fire with water, if it can be done with minimal risk.

**SECTION 6 – ACCIDENTAL RELEASE MEASURES**

**ACCIDENTAL RELEASE MEASURES:**
Absorb the material with inert absorbent and dispose of in accordance with federal, state and local laws.
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SECTION 7 – HANDLING AND STORAGE

HANDLING AND STORAGE: NO Special precautionary measures should be needed under anticipated conditions to use

OTHER PRECAUTIONS: NA

NOTES: Ground containers when transferring to avoid static discharge

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION:

ENGINEERING CONTROLS:

VENTILATION: Good ventilation typically 10 air changes per minute should be used/

RESPIRATORY PROTECTION: Under intended handling conditions, no respiratory protection should be Needed

EYE PROTECTION: Approved safety glasses or goggles

SKIN PROTECTION: Protective clothing to minimize contact, gloves

HAND PROTECTION: Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur. Examples of preferred glove barrier materials include :butyl rubber. Ethyl vinyl alcohol laminated (EVAL). Examples of acceptable glove (PVC or VINYL). NITRY/BUTADIEND rubber (NITRILE or NBR). Notice: The selection of a specific glove for a particular Application and duration of use in a workplace should also take into account all relevant workplace factors such as but not limited to: other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection). Potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: NA

WORK HYGIENIC GUIDELINES: Follow standard safe industrial chemical handling practices.

EXPOSURE GUIDELINES: NA

NOTES: NONE

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES:

APPEARANCE: Clear to slightly yellow liquid

ODOR: Mild

PHYSICAL STATE: LIQUID

PH AS SUPPLIED: NA

PH (OTHER): NA

BOILING POINT: °F: > 392

MELTING POINT: °F: NM

VAPOR PRESSURE (MM HG): mmHg @20° C <0.01

VAPOR DENSITY (AIR=1) >1

SPECIFIC GRAVITY (H2O=1) 0.99 – 1.00
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EVAPORATION RATE: NM

BASIS (=1)

SOLUBILITY IN WATER: NEGLIBLE

PERCENT SOLIDS BY WEIGHT: NA

PERCENT VOLATILE: NIL

BY WEIGHT: °F: NM °C:

BY VOLUME: °F: NM °C:

VOLATILE ORGANIC COMPOUNDS:

WITH WATER: LBS/GAL NM

WITHOUT WATER: LBS/GAL NM

MOLECULAR WEIGHT NM

VISCOSITY @ 40°C: 68-220

SECTION 10– STABILITY AND REACTIVITY:

STABLE: X

UNSTABLE

STABILITY:

CONDITIONS TO AVOID (STABILITY) Excessive heat, high energy sources of ignition

IMCOMPATIBILITY (MATERIALS TO AVOID) Avoid contact with strong oxidizers, acids and bases

HAZARDOUS DECOMPOSITION OR BY PRODUCTS: Combustion can yield carbon, nitrogen, sulphur, Phosphorus and zinc oxides

HAZARDOUS POLYMERIZATION: Will not occur

CONDITIONS TO AVOID (POLYMERIZATION): NA

SECTION 11– TOXICOLOGICAL INFORMATION:

TOXICOLOGICAL INFORMATION: INGESTION: LD20 Rat, female 34, 200 mg/kg

SKIN ABSORPTION: LD50, Rabbit, male > 19,940 mg/kg

LD50, Rabbit, female > 15950 mg/kg

NOTES: Carcinogenicity, developed toxicity and reproductive Toxicity: No relevant information found

SECTION 12– ECOLOGICAL INFORMATION:

ECOTOXICITY: Material is slightly toxic to aquatic organisms on an acute basis (LC50/EC50 between 10 and 100 mg/L in the mosensitive specifies tested).

NOTES: OECD Biodegradation Tests: Material is not considered readily biodegradable.
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**SECTION 13 – DISPOSAL CONSIDERATIONS:**

WASTE DISPOSAL METHOD: Dispose of in accordance with all federal, state, and local laws. Product is suitable for burning in an enclosed controlled burner for fuel value. Do not dump into any sewers, on the ground, or into any body of water.

RCRA HAZARD CLASS: NA

**SECTION 14 – TRANSPORT INFORMATION:**

**US DEPARTMENT OF TRANSPORTATION**

SHIPPING DESCRIPTION: Not regulated

HAZARD CLASS: NA

ID NUMBER: NA

PACKING GROUP: NA

LABEL STATEMENT: NA

WATER TRANSPORTATION:

SHIPPING DESCRIPTION: Not regulated

HAZARD CLASS: NA

ID NUMBER: NA

PACKING GROUP: NA

LABEL STATEMENT: NA

AIR TRANSPORTATION:

SHIPPING DESCRIPTION: Not regulated

HAZARD CLASS: NA

ID NUMBER: NA

PACKING GROUP: NA

LABEL STATEMENT: NA

**SECTION 15– REGULATORY INFORMATION:**

**US FEDERAL REGULATIONS**

TSCA (TOXIC SUBSTANCE CONTROL ACT): All components listed on the TSCA inventory

CERCLA (COMPREHENSIVE RESPONSE COMPENSATION AND LIABILITY ACT): NA

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT):

311/312 HAZARD CATEGORIES: NA

313 REPORTABLE INGREDIENTS: NA

STATE REGULATIONS:

INTERNATIONAL REGULATIONS:

WHMIS HAZARD CLASS

HAZARDOUS DECOMPOSITION OR BY: Not regulated