Material Safety Data Sheet

Glycol Ether (RXSOL-20-2062-210)

1. Product and Company Identifaction

Product Name	RXSOL-20-2062-210
Product Type	GLYCOL ETHER

Supplier

RX MARINE INTERNATIONAL
105, A wing , BSEL , TECH PARK.
VASHI ,NEW BOMBAY 400703 INDIA

Phone	+91 22 65113333 / 5555 / 9999 / 27815540
Fax	+91 22 2781 1318 :::AOH :0091 9821214367
Email	**mail@rxmarine.com**
Website	**www.rxmarine.com**

2. Composition / informationon ingredients

Chemical Name	CAS Number	Concentration
1-Methoxy-2-propanol	000107-98-2	99% min.
2-Methoxy-l-propanol	001589-47-5	0.5%

3. Hazards Identification

EMERGENCY OVERVIEW

• Clear, colorless liquid. Slight ether odor. Flammable.

• Vapors may travel a long distance; ignition and/or flash back

• may occur. Warn public of downwind explosion hazard.

POTENTIAL HEALTH EFFECTS (See Section 11 for toxicological data.)

EYE: May cause slight transient (temporary) eye irritation. Corneal injury is unlikely.

SKIN: Prolonged or repeated exposure may cause skin irritation. Prolonged skin contact with very large amounts may cause drowsiness.

INGESTION: Single dose oral toxicity is considered to be extremely low. Small amounts swallowed incidental to normal handling

operations are not likely to cause injury; swallowing amounts larger than that may cause injury.

INHALATION: The odor is objectionable at 100 ppm; higher levels produce eye,nose, and throat irritation and are intolerable at 1000 ppm. Anesthetic effects are seen at or above 1000 ppm.

4. First Aid Measures

General information	Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
After inhalation	Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.In case of unconsciousness place patient stably in side position for transportation.

After skin contact	Immediately wash with water and soap and rinse thoroughly.
After eye contact	Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
After swallowing	Call for a doctor immediately.

5. Fire-fighting Measures

FLAMMABLE PROPERTIES

FLASH POINT: 88.OF, 31.1C

METHOD USED: Setaflash

AUTOIGNITION TEMPERATURE: 549F, 287C

FLAMMABILITY LIMITS LFL: 1.5 vol% @ 151C UFL: 13.74 vol% @ 151C

HAZARDOUS COMBUSTION PRODUCTS: During a fire, smoke may contain the original material in addition to unidentified toxic and/or irritating compounds.Hazardous combustion products may include and are not limited to: carbon monoxide, carbon dioxide.

OTHER FLAMMABILITY INFORMATION: Violent steam generation or eruption may occur upon application of direct water stream. Vapors are heavier than air and may travel a long distance and accumulate in low lying areas. Ignition and/or flash back may occur. Flammable mixtures may exist within the vapor space of containers at room temperature. Flammable concentration of vapor can accumulate at temperatures above 90 deg. F. Spills of these organic liquids on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion.

EXTINGUISHING MEDIA: Water fog or fine spray, carbon dioxide, dry chemical, foam. Alcohol resistant foams (ATC type) are preferred if available. General purpose synthetic foams (including AFFF) or protein foams may function, but much less effectively. Do not use direct water stream. Straight or direct water streams may not be effective to extinguish fire.

MEDIA TO BE AVOIDED: Do not use direct water stream.

FIRE FIGHTING INSTRUCTIONS: Keep people away. Isolate fire area and deny unnecessary entry. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Burning liquids may be extinguished by dilution with water. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Eliminate ignition sources. Stay upwind. Keep out of low areas where gases (fumes) can accumulate. Do not use direct water stream. May spread fire. Water may not be effective in extinguishing fire. Move container from fire area if this is possible without hazard.

PROTECTIVE EQUIPMENT FOR FIRE FIGHTERS: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, pants, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance

6. Accidental Release Measures

Person-related safety precautions: Not required.
Measures for environmental protection: Dilute with plenty of water. Do not allow to enter sewers/ surface or ground water.
Measures for cleaning/collecting: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose contaminated material as waste according to item 13. Ensure adequate ventilation.

7. Handling and Storage

Handling:
Information for safe handling: Ensure good ventilation/exhaustion at the workplace.Information about fire - and explosion protection: No special measures required.
Storage:
Requirements to be met by storerooms and receptacles: No special requirements.Information about storage in one common storage facility: Not required. Further information about storage conditions: Keep container tightly sealed.

8. Exposure controls and personal protection

ENGINEERING CONTROLS	: Local exhaust ventilation may be necessary for some operations.
PERSONAL PROTECTIVE EQUIPMENT EYE/FACE PROTECTION	: Use safety glasses.
SKIN PROTECTION	:When prolonged or frequently repeated contact could occur, use protective clothing impervious to this material. Selection of specific items such as faceshield, gloves, boots, apron, or full-body suit will depend on operation. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse.
RESPIRATORY PROTECTION	:When airborne exposure guidelines and/or comfort levels may be exceeded, use an approved air-purifying respirator

9. Physical and chemical properties

Appearance	: Clear, liquid.
Odor	: Slight ether; objectionable @ 100 ppm
Odorvapor Pressure	: 11.829 mmHg @ 25C
Vapor Density	: 3.12
Boiling Point	:248.3F, 120C
Specific Gravity	: 0.919 @ 25/25C
Volatile Organic Compounds (Voc) Content	: 919 g/L or 7.65 lb/gal as per Rule

10. Stability and reactivity

Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
Dangerous reactions No dangerous reactions known.
Dangerous decomposition products: No dangerous decomposition products known.

11. Toxicological information

(See Section 3 for Potential Health Effects. For

detailed toxicological data, write or call the address or nonemergency number shown in Section 1)

SKIN: The LD50 for skin absorption in rabbits is approximately 13,000 mg/kg (12

ml/kg). INGESTION: The oral LD50 for rats is 7200 mg/kg (6.6 ml/kg.).

MUTAGENICITY: In vitro mutagenicity studies were negative.

12. Ecological information

MOVEMENT & PARTITIONING: Bioconcentration potential is low (BCF less than 100 or Log Pow less than 3). Log octanol/water partition coefficient (log Pow) is estimated using structural fragment method to be -0.49. Soil organic carbon partition coefficient (log Koc) is estimated to be 0.2-1.0. Potential for mobility in soil is very high (Koc between 0 and 50). Henry',s Law Constant (H) is estimated to be 1.40E-06 atm-m3/mole.

DEGRADATION & PERSISTENCE: Biodegradation reached in Modified

OECD Screening Test (OECD Test No. 301 E) after 28 days: 96-0

20-Day biochemical oxygen demand (BOD20) is 1.14 p/p.

5-Day biochemical oxygen demand (BODS) is below detection limits.

Tropospheric half-life is estimated to be 3.1-7.8 hr.

Inhibitory concentration (IC50) in OECD Activated Sludge

Respiration Inhibition Test (OECD Test No. 209) is >1000 mg/L.

Theoretical oxygen demand (ThOD) is calculated to be 1.95 p/p.

Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

ECOTOXICITY: Material is practically non-toxic to aquatic organisms on an acute basis (LC50 greater than 100 mg/L in most sensitive species). Acute LC50 for fathead minnow (Pimephales promelas) is 20,800 mg/L. Acute LC50 for water flea

Daphnia magna is 23,300 mg/L. Growth inhibition EC50 for green alga Selenastrum capricornutum is >1000 mg/L.

Acute LC50 for golden orfe (Leuciscus idus)is 4600-10,000 mg/L.

13. Disposal considerations

Product:
Recommendation Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Uncleaned packaging:
Recommendation: Disposal must be made according to official regulations.
Recommended cleansing agents: Water, if necessary together with cleansing agents.

14. Transport information

Land transport ADR/RID (cross-border)
• ADR/RID class: -

15. Regulatory information

NOTICE: The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations. See other sections for health and safety information.

U.S. REGULATIONS

SARA 313 INFORMATION: To the best of our knowledge, this product contains no chemical subject to SARA Title III Section 313 supplier notification requirements.

SARA HAZARD CATEGORY: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

• delayed health hazard

• fire hazard

TOXIC SUBSTANCES CONTROL ACT (TSCA):

All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory.

The CAS Number for TSCA is 107-98-2.

STATE RIGHT-TO-KNOW: The following product components are cited on certain state lists as mentioned. Non-listed components may be shown in the composition section of the MSDS.

CHEMICAL NAME CAS NUMBER LIST

---------- ---------- ----------

2-PROPANOL, 1-METHOXY- 000107-98-2 NJ3 PA1 NJ3=New Jersey Workplace Hazardous Substance (present at greater than or equal

to 1.0%). PA1=Pennsylvania Hazardous Substance (present at greater than or equal to 1.0%).

16. Other information

This information is based on our present knowledge.However, this shall not constitute a guarantee for anys pecific product features and shall not establish a legally valid contractual relationship.

DISCLAIMER OF LIABILITY :The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.