Material Safety Data Sheet

DIPROPYLENE GLYCOL METHYL ETHER (RXSOL-19-1506-210)

1. Product and Company Identifaction

Product Name	DIPROPYLENE GLYCOL METHYL ETHER
Part Number	RXSOL-19-1506-210

Company Details:

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

Branch : Kandla, Mumbai , Chennai, Vizag, Kolkata, UAE , OMAN , CANADA and KENYA

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Email	mail@rxmarine.com
Website	www.rxmarine.com

2. Composition / informationon ingredients

Chemical Name	CAS	EC .NO	Weight	Formula
Diethylene glycol methyl ether	111-77-3	203-906-6	120,15 g/mol	C5H12O3

3. Hazards Identification

Signal Word	Warning
Hazard Statements	Suspected of damaging the unborn child
P280 Wear protective gloves.P305 + P351 + P338	Wear eye protection/ face protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Precautionary statements - response	P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P308 + P313 IF exposed or concerned: Get medical advice/ attention. P405 Store locked up. P501 Dispose of contents/ container to an approved waste disposal plant
Response	IF exposed or concerned: Get medical attention.
Disposal	Dispose of contents and container in accordance with all local, regional, national and international regulations.
Storage	Store locked up.
Prevention	P273 Avoid release to the environment.
Supplemental Hazard Statements	None
Other hazards	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

4. First Aid Measures

General advice	Show this material safety data sheet to the doctor in attendance.
If inhaled	After inhalation: fresh air. Call in physician

Eye Contact	After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.
Swallowed	After swallowing: immediately make victim drink water (two glasses at most). Consult a physician
Skin Contact	In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician
Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Ingestion	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Notes to Physician	Treat symptomatically
If swallowed	Immediately make victim drink water (two glasses at most). Consult a physician.
Most important symptoms and effects, both acute and delaye	The most important known symptoms and effects are described in the labelling and/or in section 11
Indication of any immediate medical attention and special treatment needed	No data available

5. Fire-fighting Measures

Extinguishing media	Water Foam Carbon dioxide (CO2) Dry powder
Unsuitable extinguishing media	For this substance/mixture no limitations of extinguishing agents are given
Flammability	May be combustible at high temperature.
Flash Point	CLOSED CUP: Higher than 93.3°C (200°F).
Suitable extinguishing media	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	None known.
Specific hazards arising from the chemical	In a fire or if heated, a pressure increase will occur and the container may burst.
Special hazards arising from the substance or mixture	Carbon oxides Combustible. Vapors are heavier than air and may spread along floors. Forms explosive mixtures with air on intense heating. Development of hazardous combustion gases or vapours possible in the event of fire.
Further information	Remove container from danger zone and cool with water. Prevent fire extinguishing water from contaminating surface water or the ground water system.
Hazardous combustion products	Fire may cause the evolution of Sulphur oxides, nitrogen oxides.
Advice for firefighters	Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.
Protective Equipment	Use personal protective equipment.
Hazardous thermal decomposition products	No specific data
Special protective actions for fire-fighters	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures,For non-emergency personnel	Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert.

For emergency responders	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials.See also the information in "For nonemergency personnel"
Spillage	Oxidizing material. Stop leak if without risk. Avoid contact with a combustible material (wood, paper, oil, clothing...). Keep substance damp using water spray. Do not touch spilled material. Prevent entry into sewers, basements or confined areas dike if needed. Eliminate all ignition sources. Call for assistance on disposal.
Personal Protection	Advice for non-emergency personnel: Avoid inhalation of dusts. Evacuate the danger area, observe emergency procedures, consult an expert. Advice for emergency responders: Protective equipment see section 8.
Enviromental Precaution	Do not let product enter drains
Methods and materials for containment and cleaning	Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions(see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemizorb®).Dispose of properly. Clean up affected area
Reference to other sections	For disposal see section 13.

7. Handling and Storage

Advice on safe handling	Work under hood. Do not inhale substance/mixture.
Advice on protection against fire and explosion	Keep away from open flames, hot surfaces and sources of ignition.Take precautionary measures against static discharge
Hygiene measures	Change contaminated clothing. Preventive skin protection recommended. Wash hands after working with substance.
Precautions fo safe handling	Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.
Protective measures	Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container
Conditions for safe storage, including any incompatibilities	Tightly closed. Keep locked up or in an area accessible only to qualified or authorized persons.Store under inert gas hygroscopic.
Storage conditions	Tightly closed. Keep away from heat and sources of ignition. Keep locked up or in an area accessible only to qualified or authorized persons. Light sensitive. Moisture sensitive.
Storage class	Storage class (TRGS 510): 13: Non Combustible Solids
Specific end use(s)	Apart from the uses mentioned in section 1.2 no other specific uses are stipulated
Handling	Keep away from heat. Keep away from sources of ignition. Keep away from combustible material.. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as reducing agents, combustible materials, organic materials, metals
Advice on general occupational hygiene	Advice on safe handling Observe label precautions. Change contaminated clothing. Wash hands after working with substance.

8. Exposure controls and personal protection

Ingredient name	NA
Exposure limits	Personal protective equipment
Biological limit values	No data available
Exposure controls	Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the riskelimination area
Engineering Control	If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
Eye/face protection	Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses
Body Protection	protective clothing

Skin protection	This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de). Full contact Material: butyl-rubber Minimum layer thickness: 0,7 mm Break through time: 48 Material tested:Butoject® (KCL 898) This recommendation applies only to the product stated in the safety data sheet,supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell,Internet: www.kcl.de).Splash contact Material: Viton® Minimum layer thickness: 0,7 mm Break through time: 60 min Material tested:Vitoject® (KCL 890 / Aldrich Z677698, Size M)
Respiratory protection	Recommended Filter type: Filter A (acc. to DIN 3181) for vapours of organic compounds.The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.These measures have to be properly documented.
Hygiene measures	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Control of environmental exposure	Do not let product enter drains
Thermal hazards	No data available

9. Physical and chemical properties

Physical state	Clear, liquid
Colour	Light yellow
Odour	No data available
Odor Threshold	Not Applicable
pH	Not Applicable
Melting Point	Melting point/range: -70 °C - lit.
Boiling Point	194 °C - lit.
Flash Point	87 °C - closed cup
Evaporation Rate	Not Applicable
Flammability (solid, gas)	NA
Explosive limits	No Data Available
Upper/lower flammability or explosive limits	Upper explosion limit: 22,7 %(V) Lower explosion limit: 1,38 %(V)
Autoignition temperature	No data available
Decomposition temperature	No data available
Relative density	4,15 - (Air = 1.0)
Vapour pressure	0.067 kPa (0.5 mm Hg) [room temperature]
Density	1,023 g/cm3 at 25 °C - lit.
Vapour Density	No Data Available
Specific Gravity	no data available
Partition coefficient	No data available
Explosive properties	None
Solubility	at 20 °C completely miscible
Ignition temperature	No information available.
Particle characteristics	log Pow: -0,47 at 20 °C
Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: 3,9 mPa.s at 20 °C

10. Stability and reactivity

Reactivity	Forms explosive mixtures with air on intense heating. A range from approx. 15 Kelvin below the flash point is to be rated as critical.

Stability	The product is chemically stable under standard ambient conditions (room temperature.
Possibility of hazardous reactions	.Generates dangerous gases or fumes in contact with:Aluminum Light metals Exothermic reaction with:Strong oxidizing agents ,chlorosulfonic acid,fuming sulfuric acid.Risk of ignition or formation of inflammable gases or vapours with:calcium hypochlorite
Conditions to avoid	Strong heating
Incompatible materials	Aluminum, rubber, various plastics, Copper, Light metals.
Hazardous Polymerization	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hazardous decomposition products	In the event of fire: see section 5

11. Toxicological information

Acute toxicity	LD50 Oral - Rat - > 7.000 mg/kg Inhalation: No data available LD50 Dermal - Rabbit - 9.404 mg/kg
Skin corrosion/irritation	Skin - Rabbit Result: No skin irritation - 72 h
Serious eye damage/eye irritation	No data available
Respiratory or skin sensitization	No data available
Serious eye damage/eye irritation	Eyes - Rabbit Result No eye irritation - 72 h
Rout Of Entry	Inhalation. Ingestion.
Toxicity to Animal	WARNING THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE Acute oral toxicity (LD50): 689 mg/kg [Rat].
Toxic Effects on Human	May cause damage to the following organs: upper respiratory tract. Other Toxic Effects on Humans: Hazardous in case of skin contact (irritant, sensitizer), of ingestion, of inhalation (lung irritant, lung sensitizer).
Germ cell mutagenicity	No data available
Reproductive toxicity	Possible risk of congenital malformation in the fetus. Suspected human reproductive toxicant May damage the unborn child. Overexposure may cause reproductive disorder(s) based on tests with laboratory animals
Specific target organ toxicity - single exposure	No data available
Special Remarks on other Toxi Effects on Humans	Acute Potential Health Effects: Skin: Causes skin irritation. May cause skin sensitization, an allergic reation, which becomes evident upon re-exposure to this material. Eyes: Causes eye irritation. Ingestion: Causes gastrointestinal (digestive) tract irritation with nausea, vomiting, and diarrhea. May be harmful if swallowed. Inhalation: Causes respiratory tract irritation. May cause chemical pneumonitis and pulmonary edema, inflammation, edema of bronchi and larynx. Chronic Potential Health Effects: Repeated or prolonged skin exposure may cause allergic reactions in sensitive individuals. Repeated or prolonged exposure by inhalation may affect respiration and metabolism.
Additional Information	Endocrine disrupting properties
Assessment	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
Endocrine disrupting properties	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. RTECS: DK2625000 burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting, Damage to the eyes. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Stomach - Irregularities - Based on Human Evidenc

12. Ecological information

Persistence and degradability	Biodegradability Result: 100 % - Readily biodegradable.

Bioaccumulative potential	No data available
Toxicity to fish	LC50 - Lepomis macrochirus - 7.500 mg/l - 96 h LC50 - Pimephales promelas (fathead minnow) - 5.741 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - 1.192 mg/l - 48 h
Toxicity to algae	EC50 - Selenastrum capricornutum (green algae) - > 1.000 mg/l -96 h
Eco Toxicity	Not Available
COD and BOD 5	Not Available
Products Biodegradation:	The methods for determining the biological degradability are not applicable to inorganic substances.
Mobility in soil	No Information available
Results of PBT and vPvB assessment	This substance/mixture contains no components considered to be either persistent,bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) atlevels of 0.1% or higher.
Endocrine disrupting properties	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher
Assessment	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
Other adverse effects	No data available

13. Disposal considerations

Disposal methods	The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
Contaminated packaging	Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.
Waste treatment Method	NA

14. Transport information

UN number	ADR/RID: Not dangerous goods. (For reference only, please check.) IMDG: Not dangerous goods. (For reference only, please check.) IATA: Not dangerous goods. (For reference only, please check.)
UN proper shipping name	ADR/RID: Not dangerous goods. (For reference only, please check.) IMDG: Not dangerous goods. (For reference only, please check.) IATA: Not dangerous goods. (For reference only, please check.)
Transport hazard class(es)	ADR/RID: Not dangerous goods. (For reference only, please check.) IMDG: Not dangerous goods. (For reference only, please check.) IATA: Not dangerous goods. (For reference only, please check.)

Packaging group	ADR/RID: Not dangerous goods. (For reference only, please check.) IMDG: Not dangerous goods. (For reference only, please check.) IATA: Not dangerous goods. (For reference only, please check.)
Environmental hazards	ADR/RID: No IMDG: No IATA: No
Special precautions for user	Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage
Further information	Not classified as dangerous in the meaning of transport regulations.
Transport in bulk according to IMOinstruments	No data available

15. Regulatory information

U.S. Federal regulations	TSCA 8(a) CDR Exempt/Partial exemption: Not determined United States inventory (TSCA 8b) All components are listed or exempted.
Safety, health and environmental regulations/legislation specific for the substance or mixture	This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006
Safety, health and environmental regulations specific for the product in question	European Inventory of Existing Commercial Chemical Substances (EINECS) -Listed.EC Inventory Listed. United States Toxic Substances Control Act (TSCA) Inventory- Listed. China Catalog of Hazardous chemicals 2015 Not- Listed. New Zealand Inventory of Chemicals (NZIoC)Listed. PICCS -Listed. Vietnam National Chemical Inventory -Listed. IECSC Listed. Korea Existing Chemicals List (KECL) -Listed.
National legislation	Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. : ACUTE TOXIC : ENVIRONMENTAL HAZARDS
DSCL (EEC)	R8- Contact with combustible material may cause fire. R20/22- Harmful by inhalation and if swallowed. R36/37/38- Irritating to eyes, respiratory system and skin. R42/43- May cause sensitization by inhalation and skin contact. S22- Do not breathe dust. S24- Avoid contact with skin. S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S37- Wear suitable gloves.
Other regulations	TObserve work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable. Take note of Dir 94/33/EC on the protection of young people at work.
Chemical Safety Assessment	For this product a chemical safety assessment was not carried out

16. Other information

Other Information	The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and weassume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Rx Marine International has been advised of the possibility of such damages. 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.