Material Safety Data Sheet

1,2-DIMETHOXYETHANE (RXSOL-19-1164-190)

1. Product and Company Identifaction

Product Name	1,2-DIMETHOXYETHANE
Part Number	RXSOL-19-1164-190

Company Details:
RX MARINE INTERNATIONAL
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VASHI ,NEW BOMBAY 400703 INDIA

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2. Composition / informationon ingredients

Name of Substance	Cas Number	EC-No.
1,2-DIMETHOXYETHANE	110-71-4	EEC No.

3. Hazards Identification

Environmental hazards	Based on available data, the classification criteria are not met
Hazard Statements	H225 - Highly flammable liquid and vapor H332 - Harmful if inhaled H315 - Causes skin irritation H360FD - May damage fertility. May damage the unborn child EUH019 - May form explosive peroxides
Precautionary Statements	P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing P312 - Call a POISON CENTER or doctor/ physician if you feel unwell P302 + P352 - IF ON SKIN: Wash with plenty of soap and water P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection
Additional EU labelling	Restricted to professional users.

4. First Aid Measures

General Advice	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.
Inhalation:	Move to fresh air. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required. If not breathing, give artificial respiration.
Ingestion:	Do not induce vomiting. Call a physician or Poison Control Center immediately.
Self-Protection of the First Aider	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.
Most important symptoms and effects, both acute and delayed	Breathing difficulties. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting
Indication of any immediate medical attention and special treatment needed	Notes to Physician Treat symptomatically.

5. Fire-fighting Measures

Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Cool closed containers exposed to fire with water spray.
Extinguishing media which must not be used for safety reasons	No information available.
Special hazards arising from the substance or mixture	Flammable. Containers may explode when heated. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back.
Hazardous Combustion Products	Carbon monoxide (CO), Carbon dioxide (CO2).
Advice for firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	Use personal protective equipment. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas. Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges.
Environmental precautions	Should not be released into the environment. See Section 12 for additional ecological information.
Methods and materials for containment and cleaning up	Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.
Reference to other sections	Refer to protective measures listed in Sections 8 and 13

7. Handling and Storage

Precautions for safe handling	Use only under a chemical fume hood. Wear personal protective equipment. Do not get in eyes, on skin, or on clothing. Do not ingest. Do not breathe vapors or spray mist. If peroxide formation is suspected, do not open or move container. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Take precautionary measures against static discharges.
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice.
Conditions for safe storage, including any incompatibilities	Keep containers tightly closed in a dry, cool and well-ventilated place. Containers should be dated when opened and tested periodically for the presence of peroxides. Should crystals form in a peroxidizable liquid, peroxidation may have occurred and the product should be considered extremely dangerous. In this instance, the container should only be opened remotely by professionals. Keep away from heat and sources of ignition.
Specific end use(s)	Use in laboratories

8. Exposure controls and personal protection

Exposure limits	List source(s)
Biological limit values	This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.
Monitoring methods	BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents. MDHS70 General methods for sampling airborne gases and vapours MDHS 88 Volatile organic compounds in air. Laboratory method using diffusive samplers, solvent desorption and gas chromatography MDHS 96 Volatile organic compounds in air - Laboratory method using pumped solid sorbent tubes, solvent desorption and gas chromatography
Predicted No Effect Concentration (PNEC)	Fresh water 6.4 mg/l Fresh water sediment 25.7 mg/kg Marine water 0.64 mg/L Marine water sediment 2.57 mg/kg Water Intermittent 40 mg/L Microorganisms in sewage treatment 20 mg/L Soil (Agriculture) 1.39 mg/kg
Engineering Measures	Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location. Use explosion-proof electrical/ventilating/lighting/equipment. Ensure adequate ventilation, especially in confined areas. Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source
Personal protective equipment	Eye Protection Safety glasses with side-shields (European standard - EN 166) Hand Protection Protective gloves
Skin and body protection Long sleeved clothing	Inspect gloves before use. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. Remove gloves with care avoiding skin contamination.
Respiratory Protection	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly.
Small scale/Laboratory use	Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure imits are exceeded or if irritation or other symptoms are experienced. Recommended half mask:- Valve filtering: EN405; or; Half mask: EN140; plus filter, EN 141 When RPE is used a face piece Fit Test should be conducted
Environmental exposure controls	No information available.



Gloves



Suit

9. Physical and chemical properties

Appearance	Colorless
Physical State	Liquid
Odour	Petroleum distillates
Odor Threshold	No Data Available
pH	No Data Available
Melting Point/Range	69 °C / -92.2 °F
Softening Point	No Data Available
Boiling Point/Range 84 - 86 °C / 183.2	186.8 °F @ 760 mmHg
Flash Point -6 °C / 21.2 °F Method	No Information Available

Flammability (solid, gas)	Not applicable Liquid
Upper explosion limit	10.4 vol%
Lower explosion limit	1.6 vol%
Vapor Density	3.1 (Air = 1.0) (Air = 1.0)
Vapor pressure	64 hPa @ 20 °C
Specific Gravity / Density	0.867
Bulk Density	Not applicable Liquid
Water solubility	Miscible
Solubility in other solvents	No information available
Partition coefficient: octanol	log Pow
Autoignition temperature 200	200 - °C / 392 - °F
Ethylene glycol dimethyl ether	0.21
Decomposition Temperature	No data available
Viscosity	1.1 mPa.s at 20 °C
Explosive Properties	No data available Vapors may form explosive mixtures with air
Oxidizing Properties	No information available
Other information	Molecular Formula C4 H10 O2 Molecular Weight 90.12

10. Stability and reactivity

Recativity	None known, based on information available
Stability	Stable under normal conditions.
Possibility of hazardous reactions	Hazardous Polymerization Hazardous polymerization does not occur. Hazardous Reactions None under normal processing.
Conditions to avoid	Incompatible products. Excess heat. Keep away from open flames, hot surfaces and sources of ignition.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Carbon monoxide (CO). Carbon dioxide (CO2).

11. Toxicological information

Acute Toxicity	Oral Based on available data, the classification criteria are not met Dermal Based on available data, the classification criteria are not met Inhalation Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/irritation	Based on available data, the classification criteria are not met
Respiratory or skin sensitization	Respiratory Based on available data, the classification criteria are not met Skin Based on available data, the classification criteria are not met
Inhalation	Inhalation of vapours leads to irritation of respiratory tract and mucous membranes, headache, nausea, dizziness, vomiting. Sensitisation possible through inhalation
Germ cell mutagenicity	Based on available data, the classification criteria are not met
Carcinogenicity	Based on available data, the classification criteria are not met The table below indicates whether each agency has listed any ingredient as a carcinogen
Reproductive toxicity	Category 1B Reproductive Effects May impair fertility. Developmental Effects May cause harm to the unborn child.
STOT-single exposure	Based on available data, the classification criteria are not met Target Organs None known.
STOT-repeated exposure	Based on available data, the classification criteria are not met Target Organs None known.
Aspiration Hazard	Based on available data, the classification criteria are not met Other Adverse Effects.
Other Adverse Effects	The toxicological properties have not been fully investigated.
Symptoms / effects,both acute and delayed	Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

12. Ecological information

Environmental Effects	Do not empty into drains
Persistence and degradability Persistence	Not readily biodegradable Persistence is unlikely, based on information available.
Bioaccumulative potential	Bioaccumulation is unlikely
Mobility in soil	The product contains volatile organic compounds (VOC) which will evaporate easily from all surfaces Will likely be mobile in the environment due to its volatility. Disperses rapidly in air
Results of PBT and vPvB Assessment	Substance is not considered persistent, bioaccumulative and toxic (PBT) / very persistent and very bioaccumulative (vPvB).
Other adverse effects	Endocrine Disruptor Information This product does not contain any known or suspected endocrine disruptors Persistent Organic Pollutant This product does not contain any known or suspected substance Ozone Depletion Potential This product does not contain any known or suspected substance

13. Disposal considerations

Waste from Residues / Unused Products	Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.
Contaminated Packaging	Dispose of this container to hazardous or special waste collection point. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep product and empty container away from heat and sources of ignition.
European Waste Catalogue (EWC)	According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.
Other Information	Waste codes should be assigned by the user based on the application for which the product was used. Do not dispose of waste into sewer. Can be incinerated, when in compliance

14. Transport information

Land transport (DOT) / ADR/ ADNR / IATA /

UN Number	UN2252
Proper shipping name	1,2-DIMETHOXYETHANE
Class	3
Packing Group	II