Material Safety Data Sheet

Methyl Diethanolamine MDEA (RXSOL-81-8205-230)

1. Product and Company Identifaction

Product Name	Methyl Diethanolamine (MDEA)
Part Number	RXSOL-81-8205-230

Company Details:

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

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2. Composition / informationon ingredients

Chemical Name	CAS Number	Weight
Methyldiethanolamine MDEA	105-59-9	100%

3. Hazards Identification

Hazard classification	GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200) Eye irritation - Category 2A
Precautionary statements	Prevention Wash skin thoroughly after handling. Wear eye protection/ face protection.
Responce	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.If eye irritation persists: Get medical advice/ attention.
Other hazards	No data available

4. First Aid Measures

General information	Show this material safety data sheet to the doctor in attendance.
After inhalation	Supply fresh air; consult doctor in case of complaints.
After skin contact	Generally the product does not irritate the skin.
After eye contact	After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

After swallowing	If symptoms persist consult doctor.

5. Fire-fighting Measures

Suitable extinguishing media	Water Foam Carbon dioxide (CO2) Dry powder
Unsuitable extinguishing media	For this substance/mixture no limitations of extinguishing agents are given.
Special hazards arising from the substance or mixture	Hazards during fire-fighting: Nitrogen oxides, carbon oxides The substances/groups of substances mentioned can be released in case of fire. Under certain conditions in case of fire other hazardous combustion products may be generated.
Advice for firefighters	Protective equipment for fire-fighting: Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.
Further information	Dispose of fire debris and contaminated extinguishing water in accordance with official regulations. Impact Sensitivity: Remarks: Based on the chemical structure there is no shock-sensitivity.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedur	Advice for non-emergency personnel: Do not breathe vapors, aerosols. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.
Environmental precautions	Do not let product enter drains.
Methods and materials for containment and cleaning up	Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent and neutralising material (e.g. Soda Ash, KOH) Dispose of properly. Clean up affected area. Reference to other sections For disposal see section 13.

7. Handling and Storage

Precautions for safe handling	Do not get in eyes, on skin, or on clothing.
Storage	Store in original container. Keep container tightly closed. Store in a dry place. Store in a well-ventilated place.
Hygiene measures	Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work

8. Exposure controls and personal protection

Control parameters	Components with workplace control parameters
Appropriate Engineering controls	Use as general industrial hygiene practice.

Personal protective equipment	Eye/face protection Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Skin protection Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of ontaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. Body Protection impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Respiratory protection Respiratory protection not required. For nuisance exposures use type OV/AG (US) or type ABEK (EU EN 14387) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Control of environmental exposure Do not let product enter drains.

9. Physical and chemical properties

Property	Value
Physical state	Liquid
Color	Colorless
Odor	Ammonia-like
Density	1.04 g/cm @ 20°C
Melting / boiling point	-21.3 / 243.3 °C
Explosive properties	No data available
Self-ignition temperature	280 °C
Vapor pressure	0.1 hPa @ 54.8°C
Mol weight	119.16 g/mol
Water solubility	Soluble
Flash point	138°C

Molecular Formula	C5H13NO2
Molecular Weight	119.16 g/mol
Autoignition Temperature	280 °C
Critical Pressure	37 000 hPa
Critical Temperature	404 °C
Dissociation constant	25°C 8.68
Freezing Point	21.3 °C
Heat Capacity	20°C 1.72 kJ/kg·K

Heat of Formation	91 649 kJ/kmol
Heat of Vaporization	418.7 kJ/kg
Octanol-water partition coefficient, log Pow (pH 10.5; at 23°C)	1.16
Refractive Index	20°C 1.4642
Vapor Density	(air = 1) 4
Vapor Pressure	20°C 0.0031 hPa
Viscosity	20°C 99.05 mm2

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.
Chemical stability	The product is chemically stable under standard ambient conditions (room temperature) .
Possibility of hazardous reactions	No Data Availabe
Conditions to avoid	Strong heating.
Incompatible materials	Oxidizing agents, Do not store near acids.Strong oxidizing agents
Hazardous decomposition products	Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NOx) Other decomposition products - No data available

11. Toxicological information

Acute toxicity	LD50 Oral - Rat - male and female - 4.680 mg/kg (OECD Test Guideline 401)
Irritation/Corrosion	Skin - Rabbit Result: No skin irritation (OECD Test Guideline 404)
Serious eye damage/eye irritation	Eyes - Rabbit Result: Irritating to eyes. (OECD Test Guideline 405)
Sensitization	Maximization Test - Guinea pig Result: negative (OECD Test Guideline 406)
Mutagenicity	in vitro test S. typhimurium Result: negative Mutagenicity (micronucleus test) Mouse - male and female Result: negative
Carcinogenicity	No Data Available
Reproductive toxicity	No applicable toxicity data
Teratogenicity	No applicable toxicity data

12. Ecological information

Toxicity to Fish	Toxicity to fish static test LC50 - Leuciscus idus (Golden orfe) - 1.466 mg/l - 96 h

Toxicity to daphnia and other aquatic	static test EC50 - Daphnia magna (Water flea) - 233 mg/l - 48 h
Toxicity to Alge	Toxicity to algae static test EC50 - Desmodesmus subspicatus (green algae) - > 100 mg/l - 72 h
Persistence and degradability	Biodegradability aerobic - Exposure time 28 d Result: 7 % - Not biodegradable. (OECD Test Guideline 301C)
Other adverse effects	Harmful to aquatic life.
Bioaccumulative potential	No Data 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) at levels of 0.1% or higher.
Mobility in soil	No data available

13. Disposal considerations

Remarks	Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.
Waste Disposal	Dispose as normaly as per local regultion

14. Transport information

		DOT	TDG Classification	IMDG	IATA
Transport hazard class(es)	UN Number	Not dangerous goods	Not dangerous goods	Not dangerous goods	Not dangerous goods
	Proper shipping name	Not regulated for transport	Not regulated for transport	Not regulated for transport	2Not regulated for transport
	Transport hazard class(es)	Not regulated for transport	Not regulated for transport	Not regulated for transport	Not regulated for transport
	Packing Group	Not regulated for transport	Not regulated for transport	Not regulated for transport	Not regulated for transport
	Environmental hazards	NO	NO	NO	NO
Marine pollutant	No				

15. Regulatory information

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. REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII)
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 we assume 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.