1. Product and Company Identifaction

Porduct Name	Activated Methyl Diethanolamine MDEA
Part Number	RXSOL-81-8205-240

Company Details:

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

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2. Composition / Information on ingredients

Chemical Name	CAS No.	Weight
Methyldiethanolamine	105-59-9	70 - 80%
Piperazine	110-85-0	18 - 20%

3. Hazards Identification

Classification according:	Eye Irritation - Category 2A.
Signal Word:	Warning.
Hazard Statements:	Causes serious eye irritation.
Precautionary statements General:	If medical advice is needed, have product container or label at hand. Keep out of reach of children. Read label before use.
Precautionary Statements - Response:	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.
Eyes:	Eye Irritation.
Hazards not otherwise classified (HNOC):	N/A
Formula:	C5H13NO2.
Synonym(s):	N-Methyldiethanolamine; 2,2?-Methyliminodiethanol; MDEA; N-Bis(2-hydroxyethyl)methylamine.

4. First Aid Measures

Inhalation:	Remove source of exposure or move person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a doctor
Eye Contact:	Direct contact with liquid or vapor will cause serious eye irritation. Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for several minutes, while holding the eyelid(s) open.

	Neutral saline solution may be used as soon as it is available. Take care not to rinse contaminated water into the unaffected eye or onto face. If irritation persists, obtain medical attention
Skin Contact:	Take off contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Rinse/wash with lukewarm, gently flowing water and mild soap for 5 minutes or until product is removed. If skin irritation occurs or you feel unwell: Get medical advice/attention. Wash contaminated clothing before re-use or discard.
Ingestion:	Swallowing can cause irritation of the digestive tract with abdominal and chest pain, nausea, vomiting and diarrhea. Never give anything by mouth if victim is rapidly losing consciousness, or is unconscious or convulsing. Have victim rinse mouth thoroughly with water. DO NOT INDUCE VOMITING. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Have victim rinse mouth with water again. Immediately obtain medical advice.
Most important symptoms and effects:	N/A
Notes to Physician:	N/A

5. Fire-fighting Measures

Suitable extinguishing media:	Small Fire : Dry chemical, foam, carbon dioxide, water-spray or alcohol-resistant foam. Carbon dioxide can displace oxygen. Use cautionwhen applying carbon dioxide in confined spaces. Large Fire: Water spray, fog or alcohol-resistant foam.
Unsuitable extinguishing media:	Do not use straight stream of water. High pressure water streams may scatter hot liquid.
Flash Point:	N/A.
Method:	No information available.
Autoignition Temperature:	N/A.
Fire-fighting Procedures:	Isolate immediate hazard area and keep unauthorized personnel out. Move undamaged containers from immediate hazard area if it can be done safely.
Special protective equipment:	N/A.
Sensitivity to Static Discharge:	No information available.
Specific Hazards in Case of Fire:	During a fire, the chemical components may vaporize; these components can be severely irritating to eyes and respiratory tract. Hazardous combustion products may include and are not limited to: nitrogen oxides, hydrogen cyanide, carbon monoxide, and carbon dioxide.
Hazardous Combustion Products:	N/A
Protective Equipment and Precautions for Firefighters:	N/A

6. Accidental Release Measures

Personal precautions:	Avoid breathing vapor or mist. Avoid contact with skin, eye or clothing.
Enviromental Precaution:	Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainagesystems and natural waterways by using sand, earth, or other appropriate barriers. Dike far ahead of liquid spill for later disposal.
Methods for cleaning up or taking up:	Absorb Liquids in vermiculite, dry sand, earth, or similar inert material

	and deposit in sealed containers for disposal.
Emergency Procedure:	Isolate hazard area and keep unauthorized personnel away. Stay uphill and/or upstream. Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing. Ventilate closed spaces before entering.
Recommended Equipment:	Wear chemical protective clothing.

7. Handling and Storage

General Advice:	Avoid contact with eyes, skin and clothing. Avoid generating mists and vapors. Avoid breathing vapors. Ensure that engineering controls are operating and that protective equipment requirements are being followed.
Handling:	Inspect containers for leaks before handling.Prevent damage to containers. Keep containers closed when not in use. Assume that empty containers contain residues which are hazardous.
Storage:	Discard all contaminated leather items such as watchbands, shoes and belts. Never perform any welding, cutting, soldering, drilling or other hot work on an empty vessel, container or piping until all liquid and vapors have been cleared.
Ventilation Requirements:	Use only with adequate ventilation to control air contaminants to their exposure limits.
Storage Room Requirements:	Store in dry, cool areas, out of direct sunlight and away from other sources of heat. Empty container retain residue and may be dangerous. Keep containers tightly closed.

8. Exposure controls and personal protection

Exposure Guidelines:	N/A.
Appropriate Engineering Controls:	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.
Engineering Measures:	N/A.
Personal Protective Equipment:	N/A.
Eye Protection:	Wear indirect-vent, impact and splash resistant goggles when working with liquids.
Skin and Body Protection:	Use of gloves approved to relevant standards made from the following materials may provide suitable chemical protection: PVC,neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact,chemical resistance of glove material, glove thickness, dexterity. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Respiratory protection:	If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker, a respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 should be followed. Check with respiratory protective equipment suppliers.
Hygiene measures:	N/A

9. Physical and chemical properties

Physical state:	Pale yellow viscous liquid
Colour:	Amber
Odour:	Amine odor

Odor Threshold:	No information available
pH:	10 to 11
Melting Point:	-
Boiling Point:	187°C (368.6°F)
Flash Point:	Open cup: >200°C (>392°F)
Evaporation Rate:	No information available
Flammability (solid, gas):	Not applicable
Lower Explosive limits:	Not applicable
Upper explosive limits	Not applicable
Decomposition temperature :	No information available
Vapour Density:	>1 [Air = 1]
Relative density:	1.043
Vapor Pressure:	0.6 kPa (4.5 mm Hg) [room temperature]
Specific Gravity;	1.04
Solubility:	completely soluble
Partitioning coefficient n-octanol/water:	No data available
Autoignition Temperature;	N/A
Viscosity:	N/A
Molecular Formula:	N/A
Molecular Weight:	Kinematic (room temperature): 0.69 cm2 : /s (69 cSt)

10. Stability and reactivity

Reactive Hazard:	N/A.
Stability:	Stable under normal storage and handling conditions.
Conditions to avoid:	Avoid high temperatures and contact with sources of ignition. Avoid direct sunlight.
Incompatible Materials:	Avoid contact with strong acids, strong oxidizing agents, halogenated hydrocarbons and nitrating agents.
Hazardous Decomposition Products:	Decomposition products may include nitrogen oxides, ammonia, irritating aldehydes and ketones. Hazardous decomposition products depend upon temperature, air supply and the presence of other materials.
Hazardous reactions:	Contact with nitrosating agents, under acidic conditions such as nitrous acid, nitrite or nitrogen oxides, can form nitrosamines some of which are potent carcinogens.
Hazardous Polymerization:	Alkanolamine substances are oxidized by air slowly with evolution of heat. This reaction may lead to spontaneous combustion if the substance is on an adsorbent or on a high surface area material (e.g. absorbent material or thermal insulation).

11. Toxicological information

Toxicologically Synergistic:	No information available.
Irritation :	Causes serious eye irritation.
Sensitization:	No information available.
Mutagenic Effects:	Not mutagenic in AMES Test.
Reproductive Effects:	No information available.
Developmental Effects:	No information available.
Teratogenicity:	No information available.
STOT - single exposure:	Inhalation, ingestion, skin absorption
Exposure:	None known.
Aspiration hazard:	No information available.
Symptoms / effects,both acute and delayed:	No information available.

Endocrine Disruptor Information:	No information available.
Other Adverse Effects:	No information available.

Acute Toxicity:

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Methyldiethanolamine	1945 mg/kg (Rat)	6230 mg/kg (Rabbit)	N/A

Carcinogenicity:

Component	CAS No	IARC	NTP	ACGIH	OSHA	Mexico
Methyldiethanolamine	105-59-9	Not listed	Not listed	Not listed	Not listed	Not listed

12. Ecological information

Persistence and Degradability:	Product is expected to biodegrade readily under aerobic conditions.
Bioaccumulation/ Accumulation:	