Material Safety Data Sheet

TRI ETHYL AMINE (RXSOL-19-1462-210)

1. Product and Company Identifaction

Product Name	Tri Ethyl Amine
Part Number	RXSOL-19-1462-210

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

Phone	+91 22 65113333 / 5555 / 9999
Fax	+91 22 2781 1318 :::AOH :0091 9821214367
Email	123@rxmarine.com
Website	www.rxmarine.com

2. Composition / informationon ingredients

Name of Substance	Cas Number	EC Number	Weight %
Tri Ethyl Amine	121-44-8	204-469-4	99 - 100%

3. Hazards Identification

Signal Word	Danger
Hazard Statements	H225 Highly flammable liquid and vapour. H302 Harmful if swallowed. H311 + H331 Toxic in contact with skin or if inhaled. H314 Causes severe skin burns and eye damage. H335 May cause respiratory irritation.
Precautionary statements - prevention	P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308 + P310 IF exposed or concerned: immediately call a POISON CENTER or doctor/ physician.
Precautionary statements - response	Immediately call a POISON CENTER or doctor/physician

4. First Aid Measures

Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.
Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. In the case of contact with eyes, rinse imme diately with plenty of water and seek medical advice.
Inhalation:	If not breathing, give artificial respiration. 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. Move to fresh air. Immediate medical attention is required.
Ingestion:	Do not induce vomiting. Call a physician or Poison Control Center immediately

Most important symptoms/effects	Causes burns by all exposure routes. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation: Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting: Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated.
Notes to Physician	Treat symptomatically

5. Fire-fighting Measures

Flammability of the Product	Flammable.
Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Cool closed containers exposed to fire with water spray.
Unsuitable extinguishing media	No information available
Flash Point	-11 °C / 12.2 °F
AutoignitionTemperature	215 °C / 419 °F
Explosion Limits Uper	8.0%
Explosion Limits Lower	1.2%
Sensitivity to Mechanical Impact	No information available
Sensitivity to Static Discharge	No information available
Specific Hazards Arising from the Chemical	Thermal decomposition can lead to release of irritating gases and vapors. The product causes burns of eyes, skin and mucous membranes. Flammable. Containers may explode when heated. Vapors may form explosive mixtures with air. Vapors may travel tosource of ignition and flash back.
Hazardous Combustion Products	Carbon monoxide (CO) Carbon dioxide (CO2) Nitrogen oxides (NOx)
Protective Equipment and Precautions for Firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.
Further Information	Remove container from danger zone and cool with water. Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

6. Accidental Release Measures

Small	Spillage	Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. If necessary: Neutralize the residue with a dilute solution of acetic acid. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.
Personal Protection		Use personal protective equipment. Ensure adequate ventilation. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Remove all sources of ignition. Take precautionary measures against static discharges.
Enviromental Precaution		Environmental Precautions Should not be released into the environment. Do not flush into surface water or sanitary sewer system.
Methods and materials for containment and cleaning		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

7. Handling and Storage

Handling	Wear personal protective equipment. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not breathe vapors or spray mist. Do not ingest. 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.
Storage	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition. Flammables area. Corrosives area.
Hygiene measures	Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

8. Exposure controls and personal protection

Engineering Control	Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location. Use explosion-proof electrical/ventilating/lighting/equipment
Personal Protection	Eye/face Protection : Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. Skin and body protection : Wear appropriate protective gloves and clothing to prevent skin exposure. Long sleeved clothing.Flame retardant antistatic protective clothing. Respiratory Protection : Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice.
Exposure Limits	TWA: 10 STEL: 15 (ppm) from ACGIH (TLV) [1995] TWA: 41 STEL: 62 (mg/m3) from ACGIH [1995] Consult local authorities for acceptable exposure limits.



Gloves



Suit

9. Physical and chemical properties

Form	Liquid
Colour	Colourless
Odour	Fisty
Odor Threshold	No Information Available
pH	12 -12.5 - 10% Solution
Melting Point	-115 °C
Boiling Point	90 °C @ 760 mmHg
Flash Point	11 °C
Evaporation Rate	5.6
Flammability (solid, gas)	Not Applicable
Explosive limits	Upper 8.0% Lower 1.2%
Vapour pressure	69 mbar @ 20 °C
Vapour Density	3.5
Secific Gravity	0.728
Decomposition Temperature	80025 °C
Partition coefficient	No data available
Autoignition Temperature	215 °C / 419 °F
Solubility	Soluble
Viscosity	0.36 mPa.s @ 20 °C
Molecular Formula	C6 H15 N
Molecular Weight	101.19

10. Stability and reactivity

Recativity Hazard	None known, based on information available
Stability	Product is stable.

Possibility of hazardous reactions	No known hazardous reactions.
Conditions to avoid	Incompatible products. Excess heat. Keep away from open flames, hot surfaces and sources of ignition.
Incompatible materials	Strong oxidizing agents, Strong acids, Strong reducing agents
Hazardous Decomposition Products	Carbon monoxide (CO), Carbon dioxide (CO2), Nitrogen oxides (NOx)
Hazardous Polymerization	Hazardous polymerization does not occur. Hazardous Reactions None under normal processing

11. Toxicological information

Acute toxicity	LD50 Rat: 730 mg/kg OECD Test Guideline 401
Acute dermal toxicity	LD50 Rabbit: 580 mg/kg OECD Test Guideline 402
Skin corrosion	Skin irritation Causes severe burns.
Toxic Effects on Humans	Hazardous in case of skin contact (irritant), of inhalation. Slightly hazardous in case of ingestion.
Special Remarks on Chronic Effects on Humans	Material is destructive to tissue of the mucous membranes and upper respiratory tract.
Further information After absorption:	Convulsions, strong pain (risk of perforation!), shock, Causes poorly healing wounds. Under given conditions, contact with nitrites or nitric acid can lead to the formation of nitrosamines, which have shown themselves to be carcinogenic in animal experiments. Other dangerous properties can not be excluded. This substance should be handled with particular care.

12. Ecological information

Toxicity to Fish	LC50 Oryzias latipes (Orange-red killifish): 24 mg/l; 96 h OECD Test Guideline 203
COD and BOD 5	Not Available
Products of Biodegradation:	Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
Mobility in soil	Will likely be mobile in the environment due to its water solubility.
Results of PBT and vPvB assessment	Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.
Other adverse effects	Additional ecological information Forms corrosive mixtures with water even if diluted. Harmful effect due to pH shift. Discharge into the environment must be avoided.

13. Disposal considerations

Waste treatment Method	Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself

14. Transport information

DOT

UN Number	UN1296
Proper shipping name	TRIETHYLAMINE
Hazard Class	3
Subsidiary Hazard Class	8
Packing group	II

TDG

UN Number	UN1296
Proper shipping name	TRIETHYLAMINE
Hazard Class	3

Subsidiary Hazard Class	8
Packing group	II

IATA

UN Number	UN1296
Proper shipping name	TRIETHYLAMINE
Hazard Class	3
Subsidiary Hazard Class	8
Packing group	II

IMDG/IMO

UN Number	UN1296
Proper shipping name	TRIETHYLAMINE
Hazard Class	3
Subsidiary Hazard Class	8
Packing group	II

15. Regulatory information

Fedral and State Regulation	Massachusetts RTK: Triethylamine TSCA 8(b) inventory: Triethylamine SARA 313 toxic chemical notification and release reporting: Triethylamine CERCLA: Hazardous substances.: Triethylamine
Other Regulation	OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).
WHMIS (Canada)	CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F). CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC). CLASS D-2B: Material causing other toxic effects (TOXIC).
DSCL (EEC)	R11- Highly flammable. R38- Irritating to skin. R41- Risk of serious damage to eyes.

HMIS

Health Hazard	: 3
Fire Hazard	: 3
Reactivity	: 0
Personal Protection	: H

Fire :

Health Hazard	: 3
Fire Hazard	: 3
Reactivity	: 0
Specific Hazard	: ..

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. 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.