1. Product and Company Identifaction

Product Name	RXSOL-19-1267
Product Type	Acetic Acid

Company Details:

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

Stock Point : Mumbai, Gandhidham, Kolkata, Chennai, Viskhapatnam, Fujairah, Muscat

Phone	+91 22 27815540 / 41 / 42
Fax	+91 22 2781 1318 :::AOH :0091 9821214367
Email	mail@rxmarine.com

2. Composition / Information on ingredients

Name	CAS #	% by Weight
Acetic acid	64-19-7	100

Toxicological Data on Ingredients: Acetic acid: ORAL (LD50): Acute: 3310 mg/kg [Rat]. 4960 mg/kg [Mouse]. 3530 mg/kg [Rat]. DERMAL (LD50): Acute: 1060 mg/kg [Rabbit]. VAPOR (LC50): Acute: 5620 ppm 1 hours [Mouse].

3. Hazards Identification

Potential Acute Health Effects:

Very hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Hazardous in case of skin contact (corrosive, permeator), of eye contact (corrosive). Liquid or spray mist may produce tissue damage particularly on mucous membranes of eyes, mouth and respiratory tract. Skin contact may produce burns. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Potential Chronic Health Effects:

Hazardous in case of skin contact (irritant), of ingestion, of inhalation. CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to kidneys, mucous membranes, skin, teeth. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated p. 2 or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection.

4. First Aid Measures

Eye Contact:	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least water may be used. Get medical attention immediately.
Skin Contact:	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated c Cover the irritated skin with an emollient. Cold water may be used.Wash clothing before reuse. Thoroughly clean shoes medical attention immediately.
Serious Skin Contact:	Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical att
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediately.

Serious Inhalation:	Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If bre administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be hazard providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek i attention.
Ingestion:	Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscio tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

Serious Ingestion: Not available.

5. Fire-fighting Measures

Flammability of the Product: Flammable.

Auto-Ignition Temperature: 463°C (865.4°F)

Flash Points: CLOSED CUP: 39°C (102.2°F). OPEN CUP: 43°C (109.4°F).

Flammable Limits: LOWER: 4% UPPER: 19.9%

Products of Combustion: These products are carbon oxides (CO, CO2).

Fire Hazards in Presence of Various Substances: Flammable in presence of open flames and sparks, of heat. Slightly flammable to flammable in presence of oxidizing materials, of metals.

Explosion Hazards in Presence of Various Substances: Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available. Slightly explosive in presence of oxidizing materials.

Fire Fighting Media and Instructions: Flammable liquid, soluble or dispersed in water. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use alcohol foam,

water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.

Special Remarks on Fire Hazards: Reacts with metals to produces flammable hydrogen gas. It will ignite on contact with potassium-tert-butoxide. A mixture of

ammonium nitrate and acetic acid ignites when warmed, especially if warmed.

Special Remarks on Explosion Hazards: Acetic acid vapors may form explosive mixtures with air. Reactions between acetic acid and the following materials are potentially explosive: 5-azidotetrazole, bromine pentafluoride, chromium trioxide, hydrogen peroxide, potassium permanganate, sodium peroxide, and phorphorus trichloride. Dilute acetic acid and dilute hydrogen can undergo an exothermic reaction if heated, forming peracetic acid which is explosive at 110 degrees C. Reaction between chlorine trifluoride and acetic acid is very violent, sometimes explosive.

6. Accidental Release Measures

Small Spill:	Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal conta Neutralize the residue with a dilute solution of sodium carbonate.
Large Spill:	Flammable liquid. Corrosive liquid. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk in its solid form: Use a shovel to put the material into a convenient waste disposal container. If the product is in its liq with DRY earth, sand or other non-combustible material. Do not get water inside container. Absorb with an inert ma spilled material in an appropriate waste disposal. Do not touch spilled material. Use water spray curtain to divert vapor d into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Neutralize the residue with a sodium carbonate. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MS authorities.

7. Handling and Storage

Precautions:	\Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not inges

gas/fumes/ vapor/spray. Never add water to this product. In case of insufficient ventilation, wear suitable respirat ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. incompatibles such as oxidizing agents, reducing agents, metals, acids, alkalis.

Storage: Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and for use. Avoid all possible sources of ignition (spark or flame).

8. Exposure controls and personal protection

Engineering Controls: Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their re limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection: Splash goggles. Synthetic apron. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves (i

Personal Protection in Case of a Large Spill: Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoi product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: TWA: 10 STEL: 15 (ppm) [Australia] TWA: 25 STEL: 27 (mg/m3) [Australia] TWA: 10 STEL: 15 (ppm) from NIOSH 37 (mg/m3) from NIOSH TWA: 10 STEL: 15 (ppm) [Canada] TWA: 26 STEL: 39 (mg/m3) [Canada] TWA: 25 STEL: TWA: 10 STEL: 15 (ppm) from ACGIH (TLV) [United States] [1999] TWA: 10 (ppm) from OSHA (PEL) [United Stat (mg/m3) from OSHA (PEL) [United States]Consult local authorities for acceptable exposure limits.

9. Physical and chemical properties

Physical state and appearance:	Liquid.
Odor:	Pungent, vinegar-like, sour (Strong.)
Taste:	Vinegar, sour (Strong.)
Molecular Weight:	60.05 g/mole
Color:	Colorless. Clear (Light.)
pH (1% soln/water):	2 [Acidic.]
Boiling Point:	118.1°C (244.6°F)
Melting Point:	16.6°C (61.9°F)
Critical Temperature:	321.67°C (611°F)
Specific Gravity:	1.049 (Water = 1)
Vapor Pressure:	1.5 kPa (@ 20°C)
Vapor Density:	2.07 (Air = 1)
Volatility:	Not available.
Odor Threshold:	0.48 ppm
Water/Oil Dist. Coeff.:	The product is more soluble in water; log(oil/water) = -0.2
Ionicity (in Water):	Not available.
Dispersion Properties:	See solubility in water, diethyl ether, acetone.
Solubility:	Easily soluble in cold water, hot water. Soluble in diethyl ether, acetone. Miscible with Glycerol, alcohol, Benzene, Carbo Practically insoluble in Carbon Disulfide.

10. Stability and reactivity

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Heat, ignition sources, incompatible materials

Incompatibility with various substances: Reactive with oxidizing agents, reducing agents, metals, acids, alkalis.

Corrosivity: Highly corrosive in presence of stainless steel(304). Slightly corrosive in presence of aluminum, of copper. Non-corrosive in presence of stainless steel(316).

Special Remarks on Reactivity: Reacts violently with strong oxidizing agents, acetaldehyde, and acetic anhydride. Material can react with metals, strong bases, amines, carbonates, hydroxides, phosphates, many oxides,cyanides, sulfides, chromic acid, nitric acid, hydrogen peroxide, carbonates.

ammonium nitrate, ammonium thiosulfate, chlorine trifluoride, chlorosulfonic acid, perchloric acid, permanganates, xylene, oleum, potassium hydroxide, sodium hydroxide, phosphorus isocyanate, ethylenediamine, ethylene imine.

Special Remarks on Corrosivity: Moderate corrosive effect on bronze. No corrosion data on brass

Polymerization: Will not occur.

11. Toxicological information

Routes of Entry:	Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion.
Toxicity to Animals:	WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE. A (LD50): 3310 mg/kg [Rat]. Acute dermal toxicity (LD50): 1060 mg/kg [Rabbit]. Acute toxicity of the vapor (LC50): 562 [Mouse].
Chronic Effects on Humans:	MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast. May cause dam following organs: kidneys, mucous membranes, skin, teeth.
Other Toxic Effects on Humans:	Extremely hazardous in case of inhalation (lung corrosive). Very hazardous in case of skin contact (irritant), of ingestion, case of skin contact (corrosive, permeator), of eye contact (corrosive).
Special Remarks on Toxicity to Animals:	Not available..
Special Remarks on Chronic Effects on Humans:	May affect genetic material and may cause reproductive effects based on animal data. No human data found.
Special Remarks on other Toxic Effects on Humans:	Acute Potential Health Effects: Skin: Extremely irritating and corrosive. Causes skin irritation (reddening and itching, in cause blistering , tissue damage and burns. Eyes: Extremely irritating and corrosive. Causes eye irritation, lacrimation, May cause burns, blurred vision, conjunctivitis, conjunctival and corneal destruction and permanent injury. Inhalati respiratory tract irritation. Affects the sense organs (nose, ear, eye, taste), and blood. May cause chemical pneumonit pulmonary edema. Severe exposure may result in lung tissue damage and corrosion (ulceration) of the mucous membran also cause rhinitis, sneezing, coughing, oppressive feeling in the chest or chest pain, dyspnea, wheezing, tachypnea, cy nausea, giddiness, muscular weakness. Ingestion: Moderately toxic. Corrosive. Causes gastrointestinal tract irritation (bu the mouth, throat, and abdomen, coughing, ulceration, bleeding, nausea, abdomial spasms, vomiting, hematemesis, di affect the liver (impaired liver function), behavior (convulsions, giddines, muscular weakness), and the urinary (Hematuria, Albuminuria, Nephrosis, acute renal failure, acute tubular necrosis). May also cause dyspnea or asphyxia. shock, coma and death. Chronic Potential Health Effects: Chronic exposure via ingestion may cause blackening or erosio jaw necrosis, pharyngitis, and gastritis. It may also behavior (similar to acute ingestion), and metabolism (weight loss). via inhalation may cause asthma and/or bronchitis with cough, phlegm, and/or shortness of breath . It may also affect the leukocyte count), and urinary system (kidneys). Repeated or prolonged skin contact may cause thickening, blackening, a skin.

12. Ecological information

Ecotoxicity:	Ecotoxicity in water (LC50): 423 mg/l 24 hours [Fish (Goldfish)]. 88 ppm 96 hours [Fish (fathead minnow)]. 75 pp (bluegill sunfish)]. >100 ppm 96 hours [Daphnia].
BOD5 and COD:	BOD-5: 0.34-0.88 g oxygen/g
Products of Biodegradation:	Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
Toxicity of the Products of Biodegradation:	The products of degradation are less toxic than the product itself.
Special Remarks on the Products of Biodegradation:	Not available.

13. Disposal considerations

Waste Disposal:	Waste must be disposed of in accordance with federal, state and local environmental control regulations.

14. Transport information

DOT Classification:	CLASS 3: Flammable liquid. Class 8: Corrosive material

Identification:	Acetic Acid, Glacial UNNA: 2789 PG: II
Special Provisions for Transport:	Not available.

15. Regulatory information

Federal and State Regulations:	New York release reporting list: Acetic acid Rhode Island RTK hazardous substances: Acetic acid Pennsylvania RTK: Ac Acetic acid Minnesota: Acetic acid Massachusetts RTK: Acetic acid New Jersey: Acetic acid California Director's List o Subtances (8 CCR 339): Acetic acid TSCA 8(b) inventory: Acetic acid CERCLA: Hazardous substances.: Acetic acid: 50
Other Regulations:	OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is Inventory of Existing Commercial Chemical Substances.
Other Classifications:	
WHMIS (Canada):	CLASS B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F). CLASS E: Corrosive lic
DSCL (EEC):	R10- Flammable. R35- Causes severe burns. S23- Do not breathe gas/ fumes/ vapour/ spray [***] S26- In case of conta immediately with plenty of water and seek medical advice. S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).R10- Flammable. R35- Causes severe burns. S23- Do not br gas/fumes/vapour/spray [***] S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
HMIS (U.S.A.):	Health Hazard: 3 Fire Hazard: 2 Reactivity: 0 Personal Protection: H
National Fire Protection Association (U.S.A.):	Health: 3 Flammability: 2 Reactivity: 0 Specific hazard:
Protective Equipment:	Gloves (impervious). Synthetic apron. Vapor respirator. Be sure to use an approved/ certified respirator or equivalent. W respirator when ventilation is inadequate. Splash goggles.

16. Other information

References: Not available.

Other Special Considerations: Not available.

Created: 10/09/2005 03:35 PM

Last Updated: 11/01/2010 12:00 PM

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