# Material Safety Data Sheet

**Isopropyl Alcohol** (RXSOL-14-1340-025)

## 1. Product and Company Identifaction

| | |
|---|---|
| Product Name | RXSOL-14-1340-005 |
| Product Type | Isopropyl Alcohol 70 |

**Company Details:**

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

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

| | |
|---|---|
| Phone | +91 22 27815541 / 42 |
| Fax | +91 22 2781 1318 :::AOH :0091 9821214367 |
| Email | mail@rxmarine.com |


## 2. Composition / informationon ingredients

| Ingredient | CAS No | Percent | Hazardous |
|---|---|---|---|
| Isopropyl alcohol | 67-63-0 | 70 | Yes |
| Water | 7732-18-5 | 30 | - |

## 3. Hazards Identification

| | |
|---|---|
| Potential Acute Health Effects: | Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, . Slightly hazardous in case of skin contact (sensitizer, permeator). Non-corrosive for skin. Non-corrosive to the eyes. Non-corrosive for lungs. |
| Potential Chronic Health Effects: | CARCINOGENIC EFFECTS: Classified A4 (Not classifiable for human or animal.) by ACGIH, 3 (Not classifiable for human.) by IARC [Isopropyl alcohol]. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Classified Reproductive system/toxin/female, Development toxin [POSSIBLE] [Isopropyl alcohol]. The substance may be toxic to kidneys, liver, skin, central nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage. |

## 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 15 minutes. Cold water may be used. Get medical attention. |
| Skin Contact: | In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used.Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention. |

| | |
|---|---|
| Serious Skin Contact: | Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention. |
| Inhalation: | If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms appear. |
| 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 breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention. |
| Ingestion: | Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear. |

## 5. Fire-fighting Measures

Flammability of the Product: Flammable.

Auto-Ignition Temperature: The lowest known value is 399°C (750.2°F) (Isopropyl alcohol).

Flash Points: CLOSED CUP: 18.3°C (64.9°F) - 24 deg. C (75 deg. F)

Flammable Limits: The greatest known range is LOWER: 2% UPPER: 12.7% (Isopropyl alcohol) Products of Combustion: These products are carbon oxides (CO, CO2).

Fire Hazards in Presence of Various Substances: Highly flammable in presence of open flames and sparks, of heat. Flammable in presence of oxidizing materials. Nonflammable in presence of shocks

Explosion Hazards in Presence of Various Substances: Slightly explosive in presence of open flames and sparks, of heat. Non-explosive in presence of shocks.

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.

Special Remarks on Fire Hazards: Vapor may travel considerable distance to source of ignition and flash back.

CAUTION: MAY BURN WITH NEAR INVISIBLE FLAME. Hydrogen peroxide sharply reduces the autoignition temperature of Isopropyl alcohol. After a delay, Isopropyl alcohol ignites on contact with dioxgenyl tetrafluorborate, chromium trioxide, and potassium tert-butoxide. When heated to decomposition it emits acrid smoke and fumes. (Isopropyl alcohol)

Special Remarks on Explosion Hazards: Secondary alcohols are readily autooxidized in contact with oxygen or air, forming ketones and hydrogen peroxide. It can become potentially explosive. It reacts with oxygen to form dangerously unstable peroxides which can concentrate and explode during distillation or evaporation. The presence of 2-butanone increases the reaction rate for peroxide formation. Explosive in the form of vapor when exposed to heat or flame. May form explosive mixtures with air. Isopropyl alcohol + p. 3 phosgene forms isopropyl chloroformate and hydrogen chloride. In the presence of iron salts, thermal decompositon can occur, whicn in some cases can become explosive. A homogeneous mixture of concentrated peroxides + isopropyl alcohol are capable of detonation by shock or heat. Barium perchlorate + isopropyl alcohol gives the highly explosive alkyl perchlorates. It forms explosive mixtures with trinitormethane and hydrogen peroxide. It produces a violent explosive reaction when heated with aluminum isopropoxide + crotonaldehyde. Mixtures of isopropyl alcohol + nitroform are explosive. (Isopropyl alcohol)

## 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 container. |
| Large Spill: | Flammable liquid. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities. |

## 7. Handling and Storage

| | |
|---|---|
| Precautions: | Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, acids. |
| Storage: | Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready 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 respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location. |
| Personal Protection: | Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves (impervious). |
| Personal Protection in Case of a Large Spill | Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product. |
| Exposure Limits: | Isopropyl alcohol TWA: 983 STEL: 1230 (mg/m3) [Australia] TWA: 200 STEL: 400 (ppm) from ACGIH (TLV) [United States] [1999] TWA: 980 STEL: 1225 (mg/m3) from NIOSH TWA: 400 STEL: 500 (ppm) from NIOSH TWA: 400 STEL: 500 (ppm) [United Kingdom (UK)] TWA: 999 STEL: 1259 (mg/m3) [United Kingdom (UK)] TWA: 400 STEL: 500 (ppm) from OSHA (PEL) [United States] TWA: 980 STEL: 1225 (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: Alcohol like. p. 4

Taste: Not available.

Molecular Weight: Not applicable.

Color: Clear Colorless.

pH (1% soln/water): Neutral.

Boiling Point: The lowest known value is 82.5°C (180.5°F) (Isopropyl alcohol). Weighted average: 87.75°C (189.9°F)

Melting Point: May start to solidify at -88.5°C (-127.3°F) based on data for: Isopropyl alcohol.

Critical Temperature: The lowest known value is 235°C (455°F) (Isopropyl alcohol).

Specific Gravity: Weighted average: 0.84 (Water = 1) Vapor Pressure: The highest known value is 4.4 kPa (@ 20°C) (Isopropyl alcohol).

Weighted average: 3.77 kPa (@ 20°C) Vapor Density: The highest known value is 2.07 (Air = 1) (Isopropyl alcohol).

Weighted average: 1.63 (Air = 1) Volatility: Not available.

Odor Threshold: The highest known value is 22 ppm (Isopropyl alcohol) Water/Oil Dist.

Coeff.: The product is equally soluble in oil and water.

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water, methanol, diethyl ether, n-octanol, acetone.

Solubility: Easily soluble in cold water, hot water, methanol, diethyl ether, n-octanol, acetone.

## 10. Stability and reactivity

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Heat, flame, ignition sources, incompatible materials

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

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity: Reacts violently with hydrogen + palladium combination, nitroform, oleum, $COCl_2$, aluminum triisopropoxide, oxidants Incompatible with acetaldehyde, chlorine, ethylene oxide, isocyanates, acids, alkaline earth, alkali metals, caustics, amines, crotonaldehyde, phosgene, ammonia. Isopropyl alcohol reacts with metallic aluminum at high temperatures. Isopropyl alcohol attacks some plastics, rubber, and coatings. Vigorous reaction with sodium dichromate + sulfuric acid. (Isopropyl alcohol) Special Remarks on Corrosivity: Not available. Polymerization: Will not occur.

## 11. Toxicological information

Routes of Entry: Absorbed through skin. Eye contact. Inhalation.

Toxicity to Animals: Acute oral toxicity (LD50): 5143 mg/kg (Mouse) (Calculated value for the mixture).

Acute dermal toxicity (LD50): 18286 mg/kg (Rabbit) (Calculated value for the mixture).

Chronic Effects on Humans: CARCINOGENIC EFFECTS: Classified A4 (Not classifiable for human or animal.) by ACGIH, 3 (Not classifiable for human.) by IARC [Isopropyl alcohol]. DEVELOPMENTAL TOXICITY: Classified Reproductive system/toxin/female, Development toxin [POSSIBLE] [Isopropyl alcohol].

Contains material which may cause damage to the following organs: kidneys, liver, skin, central nervous system (CNS). p. 5

Other Toxic Effects on Humans: Hazardous in case of skin contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (sensitizer, permeator).

Special Remarks on Toxicity to Animals: Not available. Special Remarks on Chronic Effects on Humans: M a y c a u s e a d v e r s e r e p r o d u c t i v e / t e r a t o g e n i c e f f e c t s ( f e r t i l i t y , f e t o x i c i t y , d e v e l o p m e n t a l abnormalities(developmental toxin)) based on animal studies. Detected in maternal milk in human. (Isopropyl alcohol)

Special Remarks on other Toxic Effects on Humans: Acute Potential Health Effects:

Skin: May cause mild skin irritation, and sensitization.

Eyes: Can cause eye irritation.

Inhalation: Breathing in small amounts of this material during normal handling is not likely to cause harmful effects. However, breathing large amounts may be harmful and may affect the respiratory system and mucous membranes (irritation), behavior and brain (Central nervous system depression - headache, dizziness, drowsiness, stupor, incoordination, unconciousness, coma and possible death), peripheral nerve and senstation, blood, urinary system, and liver. Ingestion: Swallowing small amouts during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful. Swallowing large amounts may cause gastrointestinal tract irritation with nausea, vomiting and diarrhea, abdominal pain. It also may affect the urinary system, cardiovascular system, sense

## 12. Ecological information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

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 product itself and its products of degradation are not toxic.

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.

Identification: : Isopropanol, solution (Isopropyl alcohol)

UNNA: 1219 PG: II

Special Provisions for Transport: Not available.

## 15. Regulatory information

Federal and State Regulations: Connecticuthazardous material survey.: Isopropyl alcohol Illinois toxic substances disclosure to employee act: Isopropyl alcohol Rhode Island RTK hazardous substances: Isopropyl alcohol Pennsylvania RTK: Isopropyl alcohol Florida: Isopropyl alcohol Minnesota: Isopropyl alcohol Massachusetts RTK: Isopropyl alcohol New Jersey: Isopropyl alcohol New Jersey spill list: Isopropyl alcohol TSCA 8(b) inventory: Isopropyl alcohol; Water TSCA 4(a) final testing order: Isopropyl alcohol TSCA 8(a) IUR: Isopropyl alcohol TSCA 8(d) H and S data reporting: Isopropyl alcohol: Effective date: 12/15/86 Sunset Date: 12/15/96 TSCA 12(b) one time export: Isopropyl alcohol SARA 313 toxic chemical notification and release reporting: Isopropyl alcohol 70% p. 6

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada): CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F).

CLASS D-2B: Material causing other toxic effects (TOXIC).

DSCL (EEC): R11- Highly flammable. R36- Irritating to eyes. S2- Keep out of the reach of children. S46- If swallowed, seek medical advice immediately and show this container or label.

HMIS (U.S.A.): Health Hazard: 2 Fire Hazard: 3 Reactivity: 0 Personal Protection: E National Fire Protection Association (U.S.A.): Health: 1 Flammability: 3 Reactivity: 0 Specific hazard: Protective Equipment: Gloves (impervious). Lab coat. Dust respirator.

Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Safety glasses.

## 16. Other information

The information provided about the product on this Safety Data Sheet has been compiled from knowledge of the individual constituents.The data given here is based on current knowledge and experience. This Safety Data Sheet describes the product .in terms of safety requirements and does not signify any warranty with regard to the product's properties The data given here only applies when product used for proper application(s). The product is not sold as suitable for other applications - usage in such may cause risks not mentioned in this sheet. Do not use for other.