

MATERIAL SAFETY DATA SHEET

PRODUCT: RF ISOPROPYL ALCOHOL

1. PRODUCT IDENTIFICATION

Trade Name: Isopropanol
Other Name: Propan-2-01

UN No: 1219
Dangerous Goods Class: 3
Subsidiary Risk: None Allocated
Hazchem Code: 2[Y]E
Poisons Schedule: N/A
Packaging Group: II
EPG: 16

Manufacturers Code: Various

Use

A clear colourless liquid used for cleaning electronic circuit boards, computer equipment and other electronic equipment.

2. HAZARD IDENTIFICATION

HAZARDOUS SUBSTANCE. DANGEROUS GOODS.

Classified as hazardous according to the criteria of NOHSC, and as Dangerous Goods according to the Australian Dangerous Goods Code.

Symbol(s): F Highly flammable.
Xi Irritant.

R-phrases(s): R11 Highly flammable.
R36 Irritating to eyes.
R67 Vapours may cause drowsiness and dizziness.

S-phrases(s): S7 Keep container tightly closed.
S16 Keep away from sources of ignition - No smoking.
S24/25 Avoid contact with skin and eyes.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S 2 Keep out of the reach of children.

Health Hazards: Vapours may cause drowsiness and dizziness. Repeated exposure may cause skin dryness or cracking. Irritating to eyes.

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|-------------------------------------|---|
| Signs and Symptoms: | Eye irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blurred vision. Defatting dermatitis signs and symptoms may include a burning sensation and/or a dried/cracked appearance. Other signs and symptoms of central nervous system (CNS) depression may include headache, nausea, and lack of coordination. |
| Aggravated Medical Condition | Pre-existing medical conditions of the following organ(s) or organ system(s) may be aggravated by exposure to this material: Eyes. Skin. |
| Safety Hazards | Highly flammable. |
| SUSDP Schedule: | Not scheduled. |

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Entity | CAS NO. | PROPORTION % |
|------------------------|----------------|---------------------|
| Isopropyl Alcohol | [67-63-0] | High 100% |

4. FIRST AID MEASURES

| | |
|------------|---|
| Swallowed: | Do not induce vomiting. Keep at rest. If the victim is not breathing, perform artificial respiration. Seek immediate medical attention. |
| Eye: | Irrigate eyes with running water for at least 15 minutes, keep eyelids open. Do not use any eye ointment. Seek medical attention. |
| Skin: | After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. If irritation persists, seek medical attention. Wash contaminated clothing before reusing. |
| Inhaled: | Move victim to fresh air, loosen tight clothing. If breathing stops give artificial respiration, get prompt medical attention. |

Advice to Doctor: Treat symptomatically.

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5. FIRE FIGHTING MEASURES

Extinguishing Media

Alcohol resistant foam, water spray or fog, dry chemical power, carbon dioxide. Do not use water jet. Keep containers cool with water spray.

Hazards

Vapor may travel considerable distance to source of ignition flash back. When heated to decomposition it emits acrid smoke and fumes.

Protective Equipment for Firefighters

Fire fighters should wear full protective clothing and self-contained breathing apparatus.

Flammability Conditions

Highly flammable in presence of open flames and sparks, of heat of oxidizing materials. Flammable in presence of combustible material.

Hazchem Code 2YE

6. ACCIDENTAL RELEASE MEASURES

Protective Measures

Clean up personnel should wear splash goggles, full suit, vapor 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. Keep away from heat. Keep away from sources of ignition, Ground all equipment containing material. Do not touch spilled material. Prevent entry into sewers or confined areas. Eliminate all sources of ignition. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Clean Up

Soak up spilled product with an inert dry material and place in an appropriate waste disposal container. Waste must be disposed of in accordance with federal, state and local environmental control regulations.

7. HANDLING AND STORAGE

Handling

Do not ingest. Do not breathe gas, fumes, vapors or spray. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact skin and eyes. Keep away from incompatibles such as oxidizing agents, acids.

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Storage

Store in a cool well-ventilated area away from sunlight, not more than 50 Deg C. Keep containers closed when not in use. Avoid all possible sources of ignition (sparks or flame).

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Standards

Isopropyl Alcohol: Exposure standards established by the Worksafe Australia. TWA: 400ppm 983 mg/m³
STEL: 500ppm 1.230 mg/m³.

Engineering Controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapours below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection

Personal Protection: Respiratory protection: Vapor respirator. Be sure to use approved respirator or equivalent. Wear appropriate respirator when ventilation inadequate. Eyes protection: Wear splash goggles. Body protection: Wear chemical resistant protective suit. Hands protection: Wear butyl rubber gloves. Feet protection: Wear chemical resistant safety boots.

9. PHYSICAL AND CHEMICAL PROPERTIES

Colourless clear and volatile liquid

Boiling Point: 82.22 deg C

Melting Point: -88.5 deg C

Flash Point: 12 Deg C

Auto Ignition Temp: > 350 Deg C

Flammable Limits in Air: vol%: Lower 2 Upper 12

Vapour Pressure: 4,100 Pa at 20 deg C

Specific Gravity: 0.79 at 20 deg C

pH: 7 ()

Water solubility: Completely miscible

Flammability Limits in air: 2-12 % (V)

Vapour density (air=1): 2 at 20 Deg C

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10. STABILITY AND REACTIVITY

Stability

Stable under normal conditions of use. Flammable Liquid

Conditions to Avoid

Avoid heat, sparks, open flames and other ignition sources.

Materials to Avoid

Reacts with strong oxidizing agents.

Hazardous Decomposition Products

Vapours may form explosive mixtures with air.

Hazardous Reactions

Data not available.

11. TOXICOLOGICAL INFORMATION

Oral Toxicity

Low toxicity LD50 >2000mg/kg Rat

Dermal Toxicity

Low toxicity LD50.2000mg/kg Rabbit

Inhalation Toxicity

Low toxicity LC50>20mg/l/8 hours Rat

Eye

Irritating to eyes

Skin

Not irritating

Swallowed

No information available on systems of ingestion.

Inhaled

Vapour concentrations above recommended exposure levels may be irritating to the respiratory tract, may cause headaches and dizziness, could be anesthetic and may have other central nervous system effects.

12. ECOLOGICAL INFORMATION

Acute Toxicity

Fish

Practically non toxic LL/EL/IL50>100mg/l

Aquatic Invertebrates

Practically non toxic LL/EL/IL50>100mg/l

Algae

Practically non toxic LL/EL/IL50>100mg/l

Microorganisms

Practically non toxic LL/EL/IL50>100mg/l

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Persistence/degradability

Oxidises rapidly by photo chemical reactions in air.

Mobility

If product reaches soil, one or more constituents will be mobile and may contaminate groundwater. Partly soluble in water.

Bioaccumulation

Not expected to bioaccumulate significantly.

13. DISPOSAL CONSIDERATIONS

Disposal

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

Container Disposal

Empty packaging should be disposed in accordance with federal, state and local environmental regulations.

14. TRANSPORT INFORMATION

ADG Code

UN Number 1219

Shipping Name Isopropanol

Class 3

Packaging Group II

Hazchem Code 2YE

Subsidiary Risk Not Applicable

15. REGULATORY INFORMATION

SUSDP Schedule: None

16. OTHER INFORMATION

CONTACT: TECHNICAL MANAGER (02) 9979 8311

EMERGENCIES: (Mobile 0411 834 321)

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