

Effective Date: May 2019
REF NO.:AK19/1059/ISO PROPYL ALCOHOL 70%

ISO PROPYL ALCOHOL 70%

1. Chemical Product and Company Identification

Product Identification:

ISOPROPYL ALCOHOL 70%

Chemicals Name:

propan-2-ol 70%

Other Trade Name:

Aiksolv IPA 70%, IPA 70%

Manufacturer/Supplier:

Aik Moh Paints & Chemicals Pte Ltd
20 TUAS STREET, SINGAPORE 638457
Tel : 6863 1993 Fax : 6863 8033
Website : www.aikmoh.com.sg

2. Hazards Identification

GHS Classification

Flammable liquids	2
Eye Irritation	2
Specific target organ toxicity - (Single Exposure)	3 (Narcotic effects)

GHS Label Elements



Signal words: Danger

Physical hazards:

Hazard classification:
H225 - Highly flammable liquid and vapour

Health hazards:

Hazard classification:
H319 - Causes serious eye irritation
H336 - May cause drowsiness or dizziness

Precautionary Statement(s):

Prevention

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P243 - Take precautionary measures against static discharge.
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.

Response

P312 - Call a POISON CENTER or doctor/physician if you feel unwell.
P303 + P361 + P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

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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.
 P337 + P313 - If eye irritation persists: Get medical advice/attention.

Storage

P403 + P235 - Store in a well-ventilated place. Keep cool.

Disposal

P501 - Dispose of contents/container to an approved waste disposal plant.

3. Composition Information on Ingredients

Material Name	CAS No.	EINECS No.	Symbol(s)	R-pharse(s)	Concentration(%)
Propan-2-ol	67-63-0	200-661-7	F, Xi	R11; R36; R67	70.00
Deionised Water	7732-18-5	231-791-2	--	--	30.00

4. First-Aid Measures

Description of first aid measures

General advice: First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: : Using proper respiratory protection, immediately remove person to fresh air. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc.). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

Skin Contact: Flush skin with large amounts of water. Use soap if available. Remove contaminated clothing, including shoes and continue rinsing for at least 15 minutes. Get medical advice immediately. Wash contaminated clothing and shoes before reuse.

Eye Contact: Flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do so, and continue rinsing. Get medical advice immediately.

Ingestion: DO NOT induce vomiting. Call a physician and/or transport to emergency facility immediately.

5. Fire Fighting Measures

Fire Fighting Procedures: Use water spray to cool fire exposed surfaces and to protect personnel. Shut off "fuel" to fire. If a leak or spill has not ignited, use water spray to disperse the vapours and to protect men attempting to stop a leak. Either allow fire to burn under controlled conditions or extinguish with alcohol type foam or dry chemical. Try to cover liquid spills with foam. Spill fires may be extinguished by flooding with large amounts of water

Special Fire Precautions: See Section 4 and Section 10

Hazardous Combustion Products: No unusual products produced

Advice for firefighters

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Stay upwind. Keep out of low areas where gases (fumes) can accumulate. Water may not be effective in extinguishing fire. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of re-ignition has passed. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Do not use direct water stream. May spread fire. Hand held ABC type dry chemical, carbon dioxide or water extinguishers may be used for small fires. Eliminate ignition sources. Move container from fire area if this is possible without hazard.

Special Protective Equipment for Fire-fighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

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6. Accidental Release Measures

Personal Precautions, Protective equipment and emergency procedures: Isolate area. Keep unnecessary and unprotected personnel from entering the area. Refer to Section 7, Handling, for additional precautionary measures. Keep personnel out of low areas. Keep upwind of spill. Ventilate area of leak or spill. Eliminate all sources of ignition in vicinity of spill or released vapour to avoid fire explosion. Vapour explosion hazard. Keep out of sewers. or large spills, warn public of downwind explosion hazard. Check area with combustible gas detector before re-entering area. Ground and bond all containers and handling equipment. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection

Land Spill: Eliminate sources of ignition. Warn occupants of downwind areas of fire and explosion hazard. Prevent liquid from entering sewers, watercourses or low areas. Keep public away. Shut off source if possible to do so without hazard. Advise authorities if substance has entered a watercourse or sewer or has contaminated soil or vegetation. Take measures to minimize the effect on the ground water. Contain spilled liquid with sand or earth. Dilute contained spill with water. Recover by pumping (use an explosion proof or hand pump) or with a suitable absorbent. If liquid is too viscous for pumping, scrape up with shovels or pails and place in a suitable container for recycle or disposal. Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.

Water Spill: Eliminate sources of ignition. Warn occupants and shipping in downwind areas of fire and explosion hazard and request them to stay clear. Hose over spill area to effect dilution of water soluble material. Consult an expert on disposal of any recovered material and ensure conformity to local disposal regulations. See also Section 4 and Section 10.

7. Handling and Storage

Handling

General Handling: No smoking, open flames or sources of ignition in handling and storage area. Electrically bond and ground all containers and equipment before transfer or use of material. Use of non-sparking or explosion-proof equipment may be necessary, depending upon the type of operation. Containers, even those that have been emptied, can contain vapours. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers. Vapours are heavier than air and may travel a long distance and accumulate in low lying areas. Ignition and/or flash back may occur. Never use air pressure for transferring product. Avoid contact with eyes, skin, and clothing. Do not swallow. Avoid breathing vapour. Wash thoroughly after handling. Keep container closed. Use with adequate ventilation. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Storage: Minimize sources of ignition, such as static build-up, heat, spark or flame. Keep container closed. Store in a cool, wellventilated place away from incompatible materials. Protect material from direct sunlight.

Storage Temperature (°C): Ambient

Transport Temperature (°C): Ambient

Viscosity (cSt) : 2.65 at 25 °C

Electrostatic Accumulation Hazard: None, but use proper grounding procedure

Usual Shipping Containers: Rail wagons, barges or drums

Suitable Materials and Coatings: Carbon steel, Stainless steel, Polyethylene, Polypropylene, Polyester, Teflon. Compatibility with Plastic materials can vary; recommended that compatibility test be done prior to use.

Unsuitable Materials and Coatings: Natural rubber, Butyl rubber, EPDM, Polystyrene

8. Exposure Controls/Personal Protection

Occupational Exposure Limits

Components	Time Weighted Averages (TWA)	Threshold Limit Values (TLV)	ACGIH
Isopropyl alcohol 70%	400 ppm (983 mg/m ³)	500 ppm (1230 mg/m ³)	2000

Personal Protection

General Advice: The use and choice of Personal Protection Equipment is related to the hazard of the product, the workplace and the way the product is handled. In general, it is

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recommended that as a minimum safety precaution, safety glasses with side shields and work clothes protecting arms legs and body should be used. In addition, any person visiting an area where this product is handled or processed should at least wear safety glasses with side shields.

Eye/Face Protection: Use safety glasses (with side shields) or splash resistant goggles. If exposure causes eye discomfort, use a full-face respirator.

Skin Protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

Hand protection: Use gloves chemically resistant to this material. The choice of suitable glove depends on the work conditions and type of chemicals handled. Gloves should be replaced immediately if signs of degradation are observed.

Respiratory Protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use an approved respirator. Selection of air-purifying or positive-pressure supplied-air will depend on the specific operation and the potential airborne concentration of the material. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus. In confined or poorly ventilated areas, use an approved self-contained breathing apparatus or positive pressure air line with auxiliary self-contained air supply.

Ingestion: Use good personal hygiene. Do not consume or store food in the work area. Wash hands before smoking or eating.

9. Physical and Chemical Properties

Physical State: Liquid.

Colour: Clear colourless liquid

Odour: Alcohol.

pH: No data available.

Boiling Point Range (°C): 85-89 °C (ASTM D1078)

Melting Point/Freezing Point (°C): -85 °C (ASTM D97)

Vapour Pressure: 4.3 kPa at 20 °C
12.8 kPa at 38 °C
23.9 kPa at 50 °C

Density: 0.871 g/cc at 20 °C

Specific Gravity (20.0/20.0 °C): 0.871 (ASTM D891)

Vapour Density (101.3 kPa/air=1): >1.00

Solubility in Water: Miscible in water (20 °C)

Flash Point (°C): >15 °C (TCC ASTM D56)

Auto Ignition Temperature: >350 °C

Explosive Limits (in air): 1.8-12 Vol %

Viscosity: 2.65 mm²/s at 25 °C (ASTM D445)

Evaporation Rate (n-Butyl Acetate=1): 2.200

Coefficient of Thermal Expansion (Liquid): 0.00107 °C (vol/vol/°C)

10. Stability and Reactivity

Stability: Stable under normal conditions of use

Conditions to Avoid: Not applicable

Materials to Avoid: Strong oxidizing agents

Conditions to avoid polymerization: Not applicable

Hazardous polymerization: Will not occur

Hazardous Decomposition Products: None

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11. Toxicological Information

Acute Toxicity

Eye Contact: Irritating and will injure eye tissue if not removed promptly.

Skin Contact: Lower order of toxicity. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.

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

Ingestion: Small amounts of liquid aspirated into the respiratory systems during ingestion or from vomiting may cause bronchopneumonia or pulmonary edema. Minimal toxicity.

12. Ecological Information

Environmental Mobility: This substance is water soluble and is expected to remain primarily in water.

Environmental Degradability: This substance biodegrades rapidly and is "readily" biodegradable according to OECD guidelines. This substance is expected to be removed in a wastewater treatment facility.

Ecotoxicity and Bioaccumulation: Low acute toxicity to aquatic organisms is expected. Long term adverse effects to aquatic organisms are not expected.

13. Disposal Considerations

Disposal of waste method: The following advice only applies to the product as supplied. Combination with other materials may well indicate another route of disposal. If in doubt, contact local supplier or local authorities. Empty drums should be taken for recycling, recovery or disposal through a suitable qualified or licensed contractor. Care should be taken in any case to ensure compliance with national and local regulations. This product is NOT suitable for disposal by either landfill or via municipal sewers, drains, natural streams or rivers. This product is ash-less and can be burned directly in appropriate equipment.

14. Transport Information

Land Transportation

Class : 3
Packing group : II
UN Number : 1219
Hazchem code : 2YE
Transport document name : Isopropyl Alcohol 70%, Class 3, UN 1219, PG II (>15 °C c.c)

Air Transportation (ICAO/IATA)

Class : 3
Packing group : II
UN Number : 1219
Proper shipping name : Isopropyl Alcohol 70%

Sea Transportation (IMDG) (Packaged Goods and BLCs)

Class : 3
Packing group : II
UN Number : 1219
Marine Pollutant : No
EMS Number : 3-06 Risk Label : 3
Transport Document Name : Isopropyl Alcohol 70%, Class 3, UN 1219, PG II (>15°C c.c)

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This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. Regulatory Information

Classification and Labeling according to European Directives

Component	Classification/Symbol	Governing Directive
Isopropyl Alcohol 70%	Flammable/F; Irritant/Xi	Dangerous Substances Directive 67/548/EC, as modified

Nature of Special Risk

R11 Flammable
R36 Irritating to eyes
R67 Vapours may cause drowsiness and dizziness

Safety Advice

S07/09 Keep container tightly closed and in a well-ventilated place
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
S33 Take precautionary measures against static discharges
S43B In case of fire, use sand, earth, chemical powder or alcohol type foam

16. Other Information

Legend

N/A : Not available
W/W : Weight/Weight
OEL : Occupational Exposure Limit
STEL : Short Term Exposure Limit
TWA : Time Weighted Average
ACGIH : American Conference of Governmental Industrial Hygienists, Inc.
WEEL : Workplace Environmental Exposure Level
HAZ_DES : Hazard Designation

MSDS Distribution

The information in this document should be made available to all who may handle the product

Disclaimer

This information is based on our current knowledge and is intended to describe the product for the only. It should not therefore be construed as guaranteeing any specific property of the product.