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## Safety Data Sheet

Version 3.2

### SECTION 1: Identification of the substance / mixture and of the company / undertaking

#### 1.1 Product Identifier:

Trade name: Isopropyl Alcohol (Isoclean)

#### Other names:

ISOCLEAN, PROPAN-2-OL (ISOPROPANOL)

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Industrial application, solvent, cleaning agent, coating, lubricant, water treatment, laboratory chemicals

**Application of the substance/the preparation:** Isopropyl Alcohol

#### 1.3 Details of the supplier for the safety data sheet

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#### 1.4 Emergency Telephone: Poisons Information Centre (National) 13 11 26

Please ensure you refer to the limitations of this Safety Data Sheet as set out in the "Other Information" section at the end of this Data Sheet.

## SECTION 2: Hazards Identification

### 2.1 Classification of the substance or mixture:

#### Hazard Classification

Classified as Hazardous according to the Globally Harmonised System of classification and labelling of chemicals (GHS) including Work, Health and Safety regulations, Australia.

Classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. (7<sup>th</sup> edition)

Flammable Liquids: Category 2

Eye damage/Irritation: Category 2A

STOT Single Exposure: Category 3 (narcotic)

#### Signal Word (s)

DANGER

#### Hazard Statement (s)

H225 Highly flammable liquid and vapour

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness

#### Pictogram (s):

Flame, Exclamation mark



#### Precautionary statemen – Prevention

P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

P233 Keep container tightly closed.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting/equipment

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P264 Wash contaminated skin thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

#### Precautionary statement – Response

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

**2.1 continued**

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P312 Call a POISON CENTER or doctor/physician if you feel unwell.

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

P370+P378 In case of fire: Use carbon dioxide, dry chemical or foam for extinction.

**Precautionary statement – Storage**

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

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

P405 Store locked up.

**Precautionary statement – Disposal**

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

**SECTION 3: Composition/information on ingredients****Ingredients**

<b>Name</b>	<b>CAS</b>	<b>Proportion</b>
Propan-2-ol	67-63-0	100%

**SECTION 4: First aid measures****Inhalation**

If inhaled, remove affected person from contaminated area. Apply artificial respiration if not breathing. Seek medical attention.

**Ingestion**

Do not induce vomiting. Wash out mouth thoroughly with water. Seek immediate medical attention.

**Skin**

Remove all contaminated clothing immediately. Wash affected area thoroughly with soap and water. Wash contaminated clothing before reuse or discard. Seek medical attention.

**Eye**

If in eyes, hold eyelids apart and flush the eyes continuously with running water. Remove contact lenses. Continue flushing for several minutes until all contaminants are washed out completely. Seek medical attention.

**First Aid Facilities**

Eyewash, safety shower and normal washroom facilities.

**Advice to Doctor**

Treat symptomatically.

**Other Information**

For advice in an emergency, contact a Poisons Information Centre or a doctor at once. (131 126)

**SECTION 5: Firefighting measures****Suitable Extinguishing Media**

Carbon dioxide, dry chemical or foam.

**Hazards from Combustion Products**

Under fire conditions this product may emit toxic and/or irritating fumes and gases including carbon monoxide and carbon dioxide.

**Specific Hazards**

Highly flammable liquid and vapour. Vapour/air mixtures may ignite explosively. Flashback along the vapour trail may occur. Runoff to sewer may create fire or explosion hazard. Vapours are heavier than air and spread at floor level.

**Hazchem Code**

•2YE

**Decomposition Temperature**

Not available

**Precautions in connection with Fire**

Fire fighters should wear full protective clothing and self-contained breathing apparatus (SCBA) operated in positive pressure mode. In case of fire the product may be violently or explosively reactive. Use water spray to disperse vapours. This product should be prevented from entering drains and watercourses.

**SECTION 6: Accidental release measures****Emergency Procedures**

Wear appropriate personal protective equipment and clothing to prevent exposure. Extinguish or remove all sources of ignition and stop leak if safe to do so. Increase ventilation. Evacuate all unprotected personnel. If possible contain the spill. Place inert absorbent, non-combustible material onto spillage. Use clean non-sparking tools to collect the material and place into suitable labelled containers for subsequent recycling or disposal. Dispose of waste according to the applicable local and national regulations. If contamination of sewers or waterways occurs inform the local water and waste management authorities in accordance with local regulations.

**SECTION 7: Handling and storage****Precautions for Safe Handling**

Wear appropriate personal protective equipment and clothing to prevent exposure. Handle and use the material in a well-ventilated area, away from sparks, flames and other ignition sources. Have emergency equipment (for fires, spills, leaks, etc.) readily available. Work from suitable, labelled, fire-resistant containers. Open containers carefully as they may be under pressure. Keep containers tightly closed. Flameproof equipment is necessary in areas where the product is being used. Take precautionary measures against static discharges. Earth or bond all equipment. Do not empty into drains. Ensure a high level of personal hygiene is maintained when using this product, that is, always wash hands before eating, drinking, smoking or using the toilet facilities.

**Conditions for Safe Storage**

Store in a cool, dry, well-ventilated area away from sources of ignition, oxidising agents, strong acids, foodstuffs, and clothing. Keep containers closed when not in use, securely sealed and protected against physical damage. Inspect regularly for deficiencies such as damage or leaks. Have appropriate fire extinguishers available in and near the storage area. Take precautions against static electricity discharges. Use proper grounding procedures. Ensure that storage conditions comply with applicable local and national regulations. For information on the design of the storeroom, reference should be made to Australian Standard AS1940- The storage and handling of flammable and combustible liquids. Reference should also be made to all applicable local and national regulations.

**Storage Temperatures**

5-25°C

**SECTION 8: Exposure and controls/personal protection****National Exposure Standards**

<i>Substance</i>	<i>Regulations</i>	<i>Exposure Duration</i>	<i>Exposure Limit</i>	<i>Units</i>	<i>Notes</i>
Propan-2-ol	Safe Work Australia	TWA	400	ppm	
Propan-2-ol	Safe Work Australia	TWA	983	mg/m <sup>3</sup>	
Propan-2-ol	Safe Work Australia	STEL	500	ppm	
Propan-2-ol	Safe Work Australia	STEL	1230	mg/m <sup>3</sup>	

**Biological Limit Values**

Name: 2-Propanol [CAS 67-63-0]

Determinant: Acetone in urine

BEI@: 40mg/l

Sampling time: end of shift at end of work week.

Source: American Conference of Industrial Hygienists (ACGIH)

**Engineering Controls**

This substance is hazardous and should be used with a local exhaust ventilation system, drawing vapours away from workers' breathing zone. A flame-proof exhaust ventilation system is required. If the engineering controls are not sufficient to maintain concentrations of vapours/mists below the exposure standards, suitable respiratory protection must be worn. Refer to relevant regulations for further information concerning ventilation requirements.

Refer to AS 1940 - The storage and handling of flammable and combustible liquids and AS/ NZS 60079. 10. 1: 2009 Explosive atmospheres - Classification of areas - Explosive gas atmospheres, for further information concerning ventilation requirements.

**Respiratory Protection**

If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable vapor/ mist filter should be used. Refer to relevant regulations for further information concerning respiratory protective requirements.

Reference should be made to Australian Standards AS/ NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices, in order to make any necessary changes for individual circumstances.

**Eye Protection**

Safety glasses with side shields, chemical goggles or full-face shield as appropriate should be used. Final choice of appropriate eye / face protection will vary according to individual circumstances. Eye protection devices should conform to relevant regulations. Eye protection should conform with Australian/New Zealand Standard AS/NZS 1337 - Eye Protectors for Industrial Applications.

**Hand Protection**

Wear gloves of impervious material such as nitrile rubber, nitrile butadiene rubber, neoprene, PVC, natural rubber. Breakthrough time: >=480 Minutes. Final choice of appropriate gloves will vary according to individual circumstances i.e. methods of handling or according to risk assessments undertaken.

Occupational protective gloves should conform to relevant regulations. Reference should be made to AS/NZS 2161.1: Occupational protective gloves - Selection, use and maintenance.

**Body Protection**

Suitable protective workwear, e. g. cotton overalls buttoned at neck and wrist is recommended. Chemical resistant apron is recommended where large quantities are handled.



Respiratory Protection



Goggles



Gloves



Overalls Impervious

**SECTION 9: Physical and chemical properties****Information on basic physical and chemical properties**

<b>Form:</b>	Liquid
<b>Appearance:</b>	Clear liquid
<b>Odour:</b>	Slight alcoholic odour
<b>Decomposition Temperature:</b>	Not available
<b>Melting Point:</b>	-90°C
<b>Boiling Point:</b>	82°C
<b>Solubility in Water:</b>	100g/100ml fully miscible
<b>pH Value:</b>	not available
<b>Vapour Pressure:</b>	60.2hPa(25°C), 43kPa (20°C)
<b>Vapour Density (Air=1):</b>	2 (20°C)
<b>Evaporation Rate:</b>	2.50 (n-Butyl acetate=1)
<b>Odour Threshold:</b>	not available
<b>Viscosity:</b>	Refer to section 9: Kinematic Viscosity and Dynamic Viscosity
<b>Volatile Component:</b>	100%
<b>Density:</b>	0.7855 g/cm <sup>3</sup> (20°C), 791 kg/m <sup>3</sup> (bulk density)
<b>Flash Point:</b>	12°C (closed cup)
<b>Flammability:</b>	Flammable
<b>Auto-Ignition Temperature:</b>	399-425°C
<b>Flammable Limits – Lower:</b>	2% by volume
<b>Flammable Limits – Upper:</b>	12% by volume
<b>Explosion Properties:</b>	Product is not explosive. Explosive gas-air vapour mixtures may form
<b>Kinematic Viscosity:</b>	not available
<b>Oxidising Properties:</b>	not available
<b>Dynamic Viscosity:</b>	2.5 mPas (20°C)
<b>Reactivity:</b>	Refer to section 10: Possibility of hazardous reactions
<b>Chemical Stability:</b>	Stable under normal conditions of storage and handling
<b>Conditions to avoid:</b>	Heat, open flames and other sources of ignition
<b>Incompatible material:</b>	Strong oxidising agents. Strong acids and bases. Aluminium. Amines
<b>Hazardous Decomposition Products:</b>	Thermal decomposition may result in the release of toxic and/or irritating fumes including carbon dioxide and carbon monoxide
<b>Possibility of hazardous reactions:</b>	Reacts with strong acids, strong oxidising agents
<b>Hazardous Polymerization:</b>	Will not occur

**SECTION 10: Stability and reactivity**

**Reactivity:** Refer to section 10: Hazardous reactions

**Chemical stability:** Stable under normal conditions of storage and handling

**Conditions to avoid:** Heat, open flames and other sources of ignition

**Incompatible materials:** Strong oxidising agents. Strong acids and bases, Aluminium, Amines.

**Hazardous decomposition products:** Thermal decomposition may result in the release of toxic and/or irritating fumes including carbon dioxide and carbon monoxide.

**Hazardous reactions:** Reacts with strong acids, strong oxidising agents

**Hazardous Polymerization:** Will not occur

**SECTION 11: Toxicology information**

**Toxicology Information:** Toxicity data for material given below.

**Acute Toxicity – Oral:**

LD50 (rat): 5045 – 5840 mg/kg

**Acute Toxicity – Inhalation:**

LC50 (rat): 16000 ppm/8h

LC50 (rat): >10000 ppm/6h

**Acute Toxicity – Dermal:**

LD50 (rabbit): 12800 mg/kg

**Ingestion:** Ingestion of this product may cause irritation to the mouth, throat, oesophagus and stomach with symptoms of nausea, abdominal discomfort, vomiting and diarrhoea.

**Inhalation:** May cause irritation to the mucous membrane and upper airways, especially where vapours or mists are generated. Symptoms include sneezing, coughing, wheezing, shortness of breath, headache, dizziness, drowsiness, nausea and vomiting.

**Skin contact:** May be irritating to skin. The symptoms may include redness, itching and swelling. Repeated exposure may cause skin dryness and cracking and may lead to dermatitis.

**Eye:** Causes serious eye irritation. On eye contact this product will cause tearing, stinging, blurred vision, and redness.

**11 continued**

**Respiratory sensitisation:** Not expected to be a respiratory sensitiser.

**Skin sensitisation:** Not expected to be a skin sensitiser.

**Germ cell mutagenicity:** Not considered to be a mutagenic hazard.

**Carcinogenicity:** Not considered to be a carcinogenic hazard.

Propan-2-ol is listed as a Group 3: Not classifiable as to carcinogenicity to humans according to International Agency for Research on Cancer (IARC).

**Reproductive Toxicity:** Not considered to be toxic to reproduction.

**STOT-single exposure:** May cause drowsiness or dizziness.

**Aspiration Hazard:** Not expected to be an aspiration hazard.

**SECTION 12: Ecological information**

**Ecotoxicity:** The available ecological data is given below.

**Persistence/degradability:** Readily biodegradable 95% (21 days) OECD test guideline 301E.

**Mobility:** Not available

**Bioaccumulative potential:** Not expected to be bioaccumulative, Bioconcentration Factor (BCF): >70%

**Other Adverse Effects:** Not available

**Environmental Protection:** Do not discharge this material into waterways, drains and sewers.

**Aquatic toxicity - Fish:** LC50 (Pimephales promelas): 9640mg/l/96h

**Acute toxicity Daphnia:** EC50 (Daphnia magna): >100 mg/l/24h

**Acute toxicity Algae:** (Scenedesmus subspicatus): >1000 mg/l/72h

**Acute toxicity Other Organisms:** (Activated sludge): >1000 mg/l

**SECTION 13: Disposal considerations****Disposal considerations**

Dispose of waste according to applicable local and national regulations. Labels should not be removed from containers until they have been cleaned. Do not cut, puncture or weld on or near containers. Empty containers may contain flammable residues. Contaminated containers must not be treated as household waste. Containers should be cleaned by appropriate methods and then re-used or disposed of by landfill or incineration as appropriate. Do not incinerate closed containers. Advise flammable nature. Do not allow into drains or watercourses or dispose of where ground or surface waters may be affected. Controlled incineration is recommended.



**SECTION 14: Transport information****Transport Information**

This material is a Class 3 – Flammable Liquid according to the Australian Code for the Transport of Dangerous Goods by Road and Rail (7<sup>th</sup> edition)

Class 3 – Flammable Liquids are incompatible in a placard load with any of the following:

Class 1 Explosives

Division 2.1 Flammable gases (Division 2.1 and Class 3 are incompatible in transport if both are in tanks or other receptacles with a capacity individually exceeding 500L)

Division 2.3: Toxic Gases

Division 4.2: Spontaneously combustible substances

Division 5.1: Oxidising substances Division 5.2: Organic peroxides

Class 6: Toxic or Infectious Substances (where the flammable liquid is nitromethane)

Class 7: Radioactive materials unless specifically exempted

<b>UN Number:</b>	1219
<b>Transport Hazard Class:</b>	3 Flammable Liquid
<b>Packing Group:</b>	II
<b>Proper Shipping Name</b>	ISOPROPANOL (ISOPROPYL ALCOHOL)
<b>Hazchem code:</b>	• 2YE
<b>IERG number:</b>	16
<b>UN Number (Air transport, ICAO):</b>	1219
<b>IATA/ICAO Proper shipping name:</b>	ISOPROPANOL
<b>IATA/ICAO Hazard Class:</b>	3
<b>IATA/ICAO Packing Group:</b>	II
<b>IATA/ICAO Symbol:</b>	Flammable liquid
<b>IMDG UN No:</b>	1219
<b>IMDG Proper Shipping Name:</b>	ISOPROPANOL
<b>IMDG Hazard Class:</b>	3
<b>IMDG Pack. Group:</b>	II
<b>IMDG Marine pollutant:</b>	No
<b>IMDG EMS:</b>	F-E, S-D
<b>Transport in Bulk:</b>	Not available
<b>Special Precautions for User:</b>	Not available

**SECTION 15: Regulatory information****Regulatory Information:**

Classified as Hazardous according to criteria of National Occupational Health and Safety Commission (NOHSC), Australia. Not classified as a Scheduled Poison according to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

**Poisons Schedule:**

Not Scheduled.

**SECTION 16: Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

The data and information given in this Safety Data Sheet are accurate on the date of preparation. It does not indicate any warranty or representation. We disclaim all liability relating to use of this material since this is beyond our control.

END OF SDS