

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

**1.1 Product identifier**

Product name	PROPAN-2-OL
CAS-No.	67-63-0
Product code	AR1162, BP1162, CG1162, CG1162H, EP1162, GP1162, IR1162, LC1162, LC1163, LM1162, PC1162, PS1162, RP1162, SM1162, SM1163, XP1162, XP1162S, XP1163, XP1277, XP1292, VL1162

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

Identified uses	Chemical for analysis and production
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**1.3 Details of the supplier of the safety data sheet**

Company	RCI LABSCAN LIMITED. 24 Rama 1 Road, Pathumwan, Bangkok 10330 Thailand
Telephone number	(662) 613-7911-4
Fax number	(662) 613-7915

**1.4 Emergency Telephone Number**

Emergency phone	(662) 613-7911-4
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**SECTION 2: Hazards identification**

**2.1 Classification of the substance or mixture**

**Classification according to Regulation (EC) No 1272/2008**

Flammable liquids (Category 2), H225

Eye irritation (Category 2), H319

Specific target organ toxicity - single exposure (Category 3), Central nervous system, H336

For the full text of the H-Statements mentioned in this Section, see Section 16.

**2.2 Label elements**

**Labelling according Regulation (EC) No 1272/2008**

Pictogram



Signal word	Danger
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Hazard statement(s)

H225	Highly flammable liquid and vapour.
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H319	Causes serious eye irritation.
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H336	May cause drowsiness or dizziness.
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Precautionary statement(s)

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
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P233	Keep container tightly closed.
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P240	Ground and bond container and receiving equipment.
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P241	Use explosion-proof [electrical/ventilating/lighting] equipment.
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P242	Use non-sparking tools.
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P243	Take action to prevent static discharges.
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P261	Avoid breathing vapours.
P264	Wash hand thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P304 + P340	IF INHALED: Remove person to fresh air and keep 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.
P312	Call a POISON CENTER/doctor/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 to extinguish.
P403 + P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.

**2.3 Other hazards** None

### SECTION 3: Composition/information on ingredients

#### 3.1 Substances

Synonyms iso-Propanol, Isopropyl alcohol, Dimethyl carbinol, 2-Propanol.

CAS-No	EC-No	EC-Index-No	Formula	Molecular Weight	Weight %
67-63-0	200-661-7	603-117-00-0	(CH <sub>3</sub> ) <sub>2</sub> CHOH	60.10 g/mol	>99

#### Hazardous ingredients according to Regulation (EC) No 1272/2008

Component	Concentration	Classification
<b>Propan-2-ol</b>		
CAS-No 67-63-0 EC-No 200-661-7 EC-Index-No 603-117-00-0	>99%	Flammable liquids (Category 2), H225 Eye irritation (Category 2), H319 Specific target organ toxicity - single exposure (Category 3), Central nervous system, H336

For the full text of the H-Statements mentioned in this Section, see Section 16

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance.
Inhalation	Move to fresh air in case of accidental inhalation of vapors. Keep patient warm. In case of shortness of breath, give oxygen. Apply artificial respiration only if patient is not breathing or under medical supervision. No artificial aspiration mouth to mouth or mouth to nose. Use suitable instruments/apparatus.
Skin contact	Remove contaminated clothing and wash affected skin with soap and water. If signs of poisoning appear, treat as for inhalation. Wash contaminated clothing before reuse.
Eye contact	Contaminated combustible material, e.g. clothing ignites more readily and burns fiercely. If the substance has got into the eyes, immediately wash out with plenty of water at least 15 minutes. Obtain medical attention.
Ingestion	Rinse mouth. Do not induce vomiting. Keep patient warm. In case of shortness of breath, give oxygen. Apply artificial respiration only if patient is not breathing or under medical supervision. No artificial aspiration mouth to mouth or mouth to nose. Use suitable instruments/apparatus. Obtain medical attention. Never give anything by mouth to an unconscious person.

#### 4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in section 2.2 and section 11

#### 4.3 Indication of any immediate medical attention and special treatment needed

After swallowing, avoid vomiting. Risk of aspiration. Keep airways free. In case of spontaneous vomiting. Risk of aspiration. Pulmonary failure possible. Call in physician.

### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

##### Suitable extinguishing media

Extinguish with carbon dioxide, dry chemical, foam or water spray. In the event of fire, cool tanks with water spray.

#### 5.2 Special hazards arising from the substance or mixture

Vapors may form explosive mixture with air. Flash back possible over considerable distance.

#### 5.3 Advice for firefighters

Wear self-contained breathing apparatus and protective suit.

#### 5.4 Further information

Standard procedure for chemical fires. Take measures to prevent electrostatic charging. Prevent firefighting water from entering surface water or groundwater.

### SECTION 6: Accidental release measures

#### 6.1 Personal precautions, protective equipment and emergency procedures

Evacuate personnel to safe areas. Do not breathe vapors or spray mist. Remove all sources of ignition. Wear a positive-pressure supplied-air respirator, flame retardant antistatic protective clothing. Shut off leaks if without risk. Keep people away from and upwind of spill/leak.

#### 6.2 Environmental precautions

Contain or absorb leaking liquid with sand or earth, consults an expert. Prevent liquid entering sewers, basements and workpits. If substance has entered a water course or sewer or contaminated soil, advise police.

#### 6.3 Methods and materials for containment and cleaning up

Spillage: May react with combustible substances creating fire or explosion hazard and formation of toxic fumes. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Soak up with inert absorbent material (e.g. sand, silica gel). Prevent liquid entering sewers, basements and workpits; vapor may create explosive atmosphere. Transfer to covered steel drums. Dispose of promptly.

#### 6.4 Reference to other sections

For disposal see **Section 13**.

### SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

Keep container tightly closed. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Use only in area provided with appropriate exhaust ventilation. Do not breathe vapors or spray mist. Avoid contact with skin, eyes and clothing. Do not empty into drains.

#### 7.2 Conditions for safe storage, including any incompatibilities

Keep tightly closed at room temperature in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition. Keep out of direct sunlight and away from incompatible materials. Store in original container. Electrical equipment should be protected to the appropriate standard.

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Derived No Effect Level (DNEL)

Application Area	Health Effects	Exposure	Value
Worker	Long-term Systemic effects	Inhalation	500 mg/m <sup>3</sup>
Worker	Long-term Systemic effects	Skin contact	888 mg/kg Body weight
Consumer	Long-term Systemic effects	Ingestion	26 mg/kg Body weight
Consumer	Long-term Systemic effects	Inhalation	89 mg/m <sup>3</sup>
Consumer	Long-term Systemic effects	Skin contact	319 mg/kg Body weight

#### Predicted No Effect Concentration (PNEC)

Compartment	Value
Fresh water	140.9 mg/l
Fresh water sediment	552 mg/kg
Marine Sediment	552 mg/kg
Marine water	140.9 mg/l
Soil	28 mg/kg

### 8.2 Exposure controls

#### Appropriate engineering controls

The product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Ventilation hoods and fans required when working with organic solvents or in hot melt applications.

#### Individual protection measures (Personal protective equipment, PPE)

##### Eye/face protection

Goggles giving complete protection to eyes.

##### Skin protection

Chemical resistant apron / flame retardant antistatic protective clothing, heavy duty work shoes.

Handle with gloves

- Full contact wears gloves from nitrile rubber material.
- Splash contact wears gloves from polychloroprene material.

The select protective gloves have to satisfy the specifications of EU Directive 89/686 EEC and standard EN 374 derived from it.

##### Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment. Required when vapor/aerosols are generated filter A (EN 141 or EN 14387).

##### Environmental exposure controls

Prevent liquid entering sewers, basements and workpits.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Appearance: Form	Liquid
: Color	Colorless
Odour	Alcohol like
Odour Threshold	Not Available
pH	Neutral at 20°C (200g/l H <sub>2</sub> O)
Melting point/range	-89.5°C

Boiling point/range	82.4 °C
Flash point	12 °C (closed cup)
Evaporation rate	Not Available
Flammability (solid, gas)	Not Available
Explosion limits: lower	2.0 %(V)
upper	13.4 %(V)
Vapor Pressure	43 hPa at 20°C
Relative vapor density	2.07
Density	0.786 g/ml at 20°C
Water solubility	Soluble at 20°C
Partition coefficient (n-octanol/water)	log Pow: 0.05
Auto-Ignition temperature	425 °C
Decomposition Temperature	Not Available
Viscosity	2.2 mPa.s at 20°C
Explosive properties	Not Explosive
Oxidizing properties	The substance or mixture is not classified as oxidizing.

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Highly flammable. Hygroscopic. Solvent for oils and rubber. Explosible with air in a vaporous/gaseous state.

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

Risk of explosion in contact with strong oxidizing agents, nitric acid, oxygen, hydrogen peroxide, barium perchlorate, sodium dichromate, phosgene / iron salt, nitrogen dioxide, trinitro methane.

The substance can react dangerously with alkali metals, aluminium, amines, chlorine, strong acids, hydrogen peroxide, aldehydes, aluminium triisopropoxide, chlorine compounds, chromium trioxide, iron, potassium-tert.-butoxide, oleum, palladium + hydrogen, phosgene, phosphorus trichloride.

The substance forms an explosive mixture with air.

### 10.4 Conditions to avoid

Heat, flames and sparks.

### 10.5 Incompatible materials

Alkali metals, alkaline earth metals, aluminum in powder form, oxidizing agents, perchlorates, CrO<sub>3</sub>, nitric acid, nitrogen oxides, hydrogen peroxide, organic nitro compounds, aldehydes, amines, fuming sulfuric acid, phosgene.

Unsuitable working materials: Various plastics, rubber.

### 10.6 Hazardous decomposition products

Carbon monoxides, Carbon dioxides, (Hazardous decomposition products from under fire condition).

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

LD<sub>50</sub> (oral, rat): 5045 mg/kg

LC<sub>50</sub> (inhalation, rat): 46.5 mg/l/4 h

LD<sub>50</sub> (dermal, rabbit): 12800 mg/kg

LDLo (oral, human): 3570 mg/kg

**Acute oral toxicity**

Risk of aspiration, pneumonia (chemical pneumonitis)  
Absorption: Headache, dizziness, inebriation, unconsciousness, narcosis.

**Acute inhalation toxicity**

Irritation symptoms in the respiratory tract, drowsiness.

**Skin corrosion/irritation**

Degreasing effect on the skin, possibly followed by secondary inflammation.

**Serious eye damage/eye irritation**

Irritations

**Respiratory or skin sensitization**

Sensitisation test: guinea pig is negative

**Germ cell mutagenicity**

Mutagenicity (mammal cell test): Micronucleus negative.

**Carcinogenicity**

Not Available

**Reproductive toxicity**

Not Available

**Teratogenicity**

No teratogenic effect in animal experiments.

**Specific target organ toxicity (STOT) - single exposure**

May cause drowsiness or dizziness.

**Specific target organ toxicity (STOT) - repeated exposure**

Not Available

**Aspiration hazard**

Not Available

**Further information**

After absorption: Headache, dizziness, inebriation, unconsciousness, narcosis.  
After uptake of large quantities: respiratory paralysis, coma.

**SECTION 12: Ecological information****12.1 Toxicity**

Toxicity to fish	LC <sub>50</sub> L.macrochirus: 1400 mg/l / 96h
Toxicity to daphnia and other aquatic invertebrates	EC <sub>50</sub> Daphnia magna: 13299mg/l /48h
Toxicity to algae	IC <sub>5</sub> Desmodesmus subspicatus: 1000 mg/l /72h
Toxicity to bacteria	EC <sub>5</sub> Ps. Putida: 1050 mg/l /16h

**12.2 Persistence and degradability**

Biodegradability 95%/21 d, Readily biodegradable.

**12.3 Bioaccumulative potential**

Partition coefficient (n-octanol/water) log Pow: 0.05 (experimental)  
No bioaccumulation is to be expected (log P o/w <1)

**12.4 Mobility in soil**

Not Available

**12.5 Other adverse effects**

Do not allow to enter waters, waste water or soil.

**SECTION 13: Disposal considerations****13.1 Waste treatment methods****Product**

There are no uniform EC Regulations for the disposal of chemicals or residues. Chemical residues generally count as special waste. The disposal of the latter is regulated in the EC member countries through corresponding law and regulations. We recommend that you contact either the authorities in charge or approved waste disposal companies which will advise you on how to dispose of special waste or burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations.

**Contaminated packaging**

Disposal in compliance with official regulations. Handle contaminated packaging as hazardous waste in the same way of the substance itself. If not officially specified differently, non-contaminated packaging may be treated like household waste or recycled.

**SECTION 14: Transport information****Land Transport (ADR/RID)**

UN Number	1219
UN proper shipping name	ISOPROPANOL
Transport hazard class(es)	3
Packing group	II
Environmental hazards	No
Special precautions for user	Yes

**Sea transport (IMDG)**

UN Number	1219
UN proper shipping name	ISOPROPANOL
Transport hazard class(es)	3
Packing group	II
Marine pollutant	No
Special precautions for user	Yes
EmS	F-E S-D

**Air transport (IATA)**

UN Number	1219
UN proper shipping name	ISOPROPANOL
Transport hazard class(es)	3
Packing group	II
Environmental hazards	No
Special precautions for user	No

**River transport (AND/ADNR)**

(Not examined)

**SECTION 15: Regulatory information**

This safety datasheet complies with the requirements of Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

**15.1 Safety, health and environmental regulations/legislation specific for the substance or Mixture**

Not Available

**15.2 Chemical Safety Assessment**

For this product a chemical safety assessment was not carried out.

**SECTION 16: Other information****Full text of H-Statements referred to under sections 2 and 3**

H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

**Recommended restrictions**

Take notice of labels and safety data sheets for the working. Chemicals Take necessary action to avoid static electricity discharge.

**Reference**

Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

Labelling according to EC Directives 67/548 EEC and Regulation (EC) No 1272/2008.

Transportation information according to Recommendations on the Transport of Dangerous Goods, Model Regulations. Twelfth revised edition. United Nations.

Institute for Occupational Safety and Health of the German Social Accident Insurance in Sankt Augustin/Germany,

Source: IFA for Databases on hazardous substances (GESTIS).

**Further information**

Contact to RCI Labscan Limited.

**Revision Date**

01/04/2020

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