SAFETY DATA SHEET
Isopropanol

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

1.1. Product identifier

Product name	Isopropanol
Product number	0371
REACH registration number	01-2119457558-25-xxxx
CAS number	67-63-0
EC number	200-661-7

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

Identified uses	Solvent for Industrial Use Use in cleaning agents Process chemical raw material for photochemicals

1.3. Details of the supplier of the safety data sheet

Supplier	Grosvenor Electronic Supplies (UK) Priory Tec. Park Saxon Way, Hessle, East Yorkshire , HU13 9PB +44 (0)1482 627327 (Tel) +44 (0)1482 627328 (Fax)
Contact person	sales@grosvenor-group..com

1.4. Emergency telephone number

Emergency telephone

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards	Flam. Liq. 2 - H225
Health hazards	Eye Irrit. 2 - H319 STOT SE 3 - H336
Environmental hazards	Not Classified

2.2. Label elements

EC number 200-661-7

Hazard pictograms


Isopropanol

Signal word	Danger
Hazard statements	H225 Highly flammable liquid and vapour. H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness.
Precautionary statements	P243 Take action to prevent static discharges. P261 Avoid breathing vapour/ spray. P271 Use only outdoors or in a well-ventilated area. 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.
Contains	PROPAN-2-OL

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.2. Mixtures

PROPAN-2-OL		100.0%
CAS number: 67-63-0	EC number: 200-661-7	REACH registration number: 01-2119457558-25-xxxx

Classification
Flam. Liq. 2 - H225
Eye Irrit. 2 - H319
STOT SE 3 - H336

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information	Remove affected person from source of contamination.
Inhalation	Move affected person to fresh air at once. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. If breathing stops, provide artificial respiration. Keep affected person warm and at rest. Get medical attention immediately.
Ingestion	Give plenty of water to drink. DO NOT induce vomiting. Get medical attention immediately.
Skin contact	Rinse immediately with plenty of water. Remove contaminated clothing. Get medical attention if irritation persists after washing.
Eye contact	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes and get medical attention.

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

General information	No additional symptoms or effects are anticipated.

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

Specific treatments	Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Isopropanol

Suitable extinguishing media	Alcohol-resistant foam. Carbon dioxide (CO2). Dry chemicals, sand, dolomite etc. Water spray.

5.2. Special hazards arising from the substance or mixture

5.3. Advice for firefighters

Protective actions during firefighting	Cool containers exposed to flames with water until well after the fire is out. Use water spray to reduce vapours. If risk of water pollution occurs, notify appropriate authorities. Do not use water jet as an extinguisher, as this will spread the fire.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Provide adequate ventilation. No smoking, sparks, flames or other sources of ignition near spillage.

6.2. Environmental precautions

Environmental precautions	Do not allow to enter drains, sewers or watercourses. Inform the relevant authorities if this occurs.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Eliminate all sources of ignition. No smoking, sparks, flames or other sources of ignition near spillage. Provide adequate ventilation. Absorb spillage with non-combustible, absorbent material. Collect and place in suitable waste disposal containers and seal securely. Do not allow to enter drains, sewers or watercourses.

6.4. Reference to other sections

Reference to other sections	For personal protection, see Section 8. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions	Keep away from heat, sparks and open flame. Avoid contact with skin and eyes. Avoid inhalation of vapours. Provide adequate ventilation. Vapours may accumulate on the floor and in low-lying areas.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions	Keep away from oxidising materials, heat and flames. May attack some plastics, rubber and coatings. Store in tightly-closed, original container in a dry, cool and well-ventilated place.
Storage class	Flammable liquid storage.

7.3. Specific end use(s)

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

PROPAN-2-OL

Long-term exposure limit (8-hour TWA): WEL 400 ppm 999 mg/m³
Short-term exposure limit (15-minute): WEL 500 ppm 1250 mg/m³
WEL = Workplace Exposure Limit

PROPAN-2-OL (CAS: 67-63-0)

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DNEL	Industry - Dermal; Long term systemic effects: 888 mg/kg/day Industry - Inhalation; Long term systemic effects: 500 mg/m³ Consumer - Dermal; Long term systemic effects: 319 mg/kg/day Consumer - Inhalation; Long term systemic effects: 89 mg/m³ Consumer - Oral; Long term systemic effects: 26 mg/kg/day
PNEC	- Fresh water; Long term 140.9 mg/l - marine water; Long term 140.9 mg/l - Sediment; Long term 552 mg/kg - Soil; Long term 28 mg/kg

8.2. Exposure controls

Protective equipment

Appropriate engineering controls	Provide adequate general and local exhaust ventilation.
Eye/face protection	Wear chemical splash goggles. Personal protective equipment for eye and face protection should comply with European Standard EN166.
Hand protection	Wear protective gloves made of the following material: Polyvinyl chloride (PVC). To protect hands from chemicals, gloves should comply with European Standard EN374. It should be noted that liquid may penetrate the gloves. Frequent changes are recommended.
Other skin and body protection	Use engineering controls to reduce air contamination to permissible exposure level. Provide eyewash station and safety shower. Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact. Wear apron or protective clothing in case of contact.
Hygiene measures	Provide eyewash station and safety shower. Use engineering controls to reduce air contamination to permissible exposure level. Wash at the end of each work shift and before eating, smoking and using the toilet. Wash promptly if skin becomes contaminated.
Respiratory protection	CCROVF, CCR with organic vapour respirator and full face piece.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Colourless.
Odour	Alcoholic.
Melting point	-89°C
Initial boiling point and range	82°C
Flash point	12°C
Upper/lower flammability or explosive limits	Lower flammable/explosive limit: 2 Upper flammable/explosive limit: 12
Vapour pressure	42 hPa @ 20°C
Relative density	0.7855 @ 20°C
Solubility(ies)	Miscible with the following materials: Organic solvents. Miscible with water.

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Auto-ignition temperature	>399°C
Explosive properties	Not explosive.

9.2. Other information

Refractive index	1.376 - 1.378

SECTION 10: Stability and reactivity

10.1. Reactivity

10.2. Chemical stability

Stability	Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Will not polymerise.

10.4. Conditions to avoid

Conditions to avoid	Avoid heat, flames and other sources of ignition.

10.5. Incompatible materials

Materials to avoid	Strong oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products	Does not decompose when used and stored as recommended.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Skin sensitisation

Skin sensitisation	Buehler test: - Guinea pig: Not sensitising.
Inhalation	Vapours may cause drowsiness and dizziness.
Eye contact	Irritating to eyes.
Acute and chronic health hazards	Symptoms following overexposure may include the following: Irritation of eyes and mucous membranes. Narcotic effect. A single exposure may cause the following adverse effects: Central nervous system depression.
Route of exposure	Skin and/or eye contact Ingestion. Skin absorption
Target organs	Central nervous system Eyes Skin Respiratory system, lungs
Medical symptoms	Irritation of eyes and mucous membranes. Dilated pupils. Rhinitis (inflammation of the nasal mucous membranes). General respiratory distress, unproductive cough. Central nervous system depression. Drowsiness, dizziness, disorientation, vertigo.

SECTION 12: Ecological information

12.1. Toxicity

Acute aquatic toxicity

Acute toxicity - fish	, 48 hours: >100 mg/l, Leuciscus idus (Golden orfe)
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: >100 mg/l, Daphnia magna

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Acute toxicity - aquatic plants	IC_{50}, 72 hours: >100 mg/l, Algae

12.2. Persistence and degradability

Persistence and degradability	Readily biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential	The product does not contain any substances expected to be bioaccumulating.

12.4. Mobility in soil

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment	This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects	No known significant effects.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information	Waste is classified as hazardous waste. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.
Disposal methods	Absorb in vermiculite, dry sand or earth and place into containers. Dispose of waste via a licensed waste disposal contractor. Confirm disposal procedures with environmental engineer and local regulations. Waste material and any included combustible absorbent and containers should be suitable for incineration at an approved facility.

SECTION 14: Transport information

14.1. UN number

UN No. (ADR/RID)	1219
UN No. (IMDG)	1219
UN No. (ICAO)	1219
UN No. (ADN)	1219

14.2. UN proper shipping name

Proper shipping name (ADR/RID)	ISOPROPANOL (ISOPROPYL ALCOHOL)
Proper shipping name (IMDG)	ISOPROPANOL (ISOPROPYL ALCOHOL)
Proper shipping name (ICAO)	ISOPROPANOL (ISOPROPYL ALCOHOL)
Proper shipping name (ADN)	ISOPROPANOL (ISOPROPYL ALCOHOL)

14.3. Transport hazard class(es)

ADR/RID class	3
ADR/RID classification code	F1
ADR/RID label	3
IMDG class	3
ICAO class/division	3
ADN class	3

Isopropanol

Transport labels

14.4. Packing group

ADR/RID packing group	II
IMDG packing group	II
ICAO packing group	II
ADN packing group	II

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant No.

14.6. Special precautions for user

EmS	F-E, S-D
ADR transport category	2
Emergency Action Code	•2YE
Hazard Identification Number (ADR/RID)	33
Tunnel restriction code	(D/E)

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU legislation	Dangerous Substances Directive 67/548/EEC. Regulation (EC) No 1272/2008 CLP. Regulation (EC) No 1907/2006 REACH.
Guidance	Workplace Exposure Limits EH40.

15.2. Chemical safety assessment

A chemical safety assessment has been carried out.

Inventories

EU - EINECS/ELINCS
Present.

Canada - DSL/NDSL
Present.

US - TSCA
Present.

Australia - AICS
Present.

Japan - ENCS
Present.

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Korea - KECI
Present.

China - IECSC
Present.

Philippines – PICCS
Present.

New Zealand - NZIOC
Present.

SECTION 16: Other information

General information	Only trained personnel should use this material. Since empty containers retain product residue, follow label warnings, even after container is emptied. For further Health and Safety information contact: Health and Safety Officer. Labels should not be removed from containers until they have been cleaned and no product remains within.
Key literature references and sources for data	Manufacturer's Material Safety Data Sheet Approved Supply List
Revision comments	Updated company address.
Issued by	Compliance Department
Revision date	15/10/2018
Revision	9
Supersedes date	10/04/2018
SDS number	0371
SDS status	Approved.
Hazard statements in full	H225 Highly flammable liquid and vapour. H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness.