



1. Identification of the Substance

Part Number ipa001

Product Isopropyl Alcohol (IPA)

2. General Composition

Name	EC No.	CAS-No.	Content	Classification
PROPAN-2-OL	200-661-7	67-63-0	60-100%	F;R11 Xi;R36 R67

The Full Text for all R-Phrases are Displayed in Section 16

EU INDEX NO. 606-001-00-8
EC (EINECS) NO. 200-662-2
CAS-NO. 67-64-1

3. Hazard Identification

Highly flammable. Irritating to eyes. Vapours may cause drowsiness and dizziness.

CLASSIFICATION Xi;R36, F;R11, R67.

4. First Aid Measures

GENERAL INFORMATION

NOTE! Keep affected person away from heat, sparks and flames! Consult a physician for specific advice.

INHALATION

Move the exposed 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 the affected person warm and at rest. Get prompt medical attention.

INGESTION

NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! Remove victim immediately from source of exposure. Provide rest, warmth and fresh air. Promptly get affected person to drink large volumes of water to dilute the swallowed chemical. Get medical attention immediately!

SKIN CONTACT

Remove affected person from source of contamination. Remove contaminated clothing. Wash skin thoroughly with soap and water for several minutes. Get medical attention if irritation persists after washing.

EYE CONTACT

Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes and get medical attention.

5. Fire Fighting Measures

EXTINGUISHING MEDIA

Fire can be extinguished using: Water spray, fog or mist. Foam. Dry chemicals, sand, dolomite etc. Carbon dioxide (CO₂).

SPECIAL FIRE FIGHTING PROCEDURES

Avoid breathing fire vapours. Move container from fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. Avoid water in straight hose stream; will scatter and spread fire. Keep run-off water out of sewers and water sources. Dike for water control. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.

UNUSUAL FIRE & EXPLOSION HAZARDS

Forms explosive mixtures with air. Extremely flammable. May explode in a fire. May travel considerable distance to source of ignition and flash back. Vapour explosion and poison hazard indoors, outdoors and in sewers.

PROTECTIVE MEASURES IN FIRE

Wear self-contained breathing apparatus and full protective clothing.

6. Accidental Release Measures

PERSONAL PRECAUTIONS

Wear suitable protective clothing as specified under section 8 of this safety data sheet - Exposure Controls and Personal Protection.

ENVIRONMENTAL PRECAUTIONS

Do not allow spilled material to enter drains or water courses.

SPILL CLEAN UP METHODS

Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Stop leak if possible without risk. Do not allow chemical to enter confined spaces such as sewers due to explosion risk. Clean-up personnel should use respiratory and/or liquid contact protection. Absorb in vermiculite, dry sand or earth and place into containers.

7. Handling and Storage

USAGE PRECAUTIONS

Avoid spilling, skin and eye contact. Keep away from heat, sparks and open flame. Ventilate well, avoid breathing vapours. Use approved respirator if air contamination is above accepted level. Use explosion proof electric equipment. Static electricity and formation of sparks must be prevented.

STORAGE PRECAUTIONS

Flammable/combustible - Keep away from oxidisers, heat and flames. Store in tightly closed original container in a cool, dry well-ventilated place. Keep in original container. Ground container and transfer equipment to eliminate static electric sparks.

STORAGE CLASS

Flammable liquid storage.

8. Exposure Controls/Personal Protection

Name	Std	LT - ppm	LT - mg/m ³	ST - ppm	ST - mg/m ³
PROPAN-2-OL	OES	400 ppm	999 mg/m ³	500 ppm	1250 mg/m ³
ISOPROPANOL	OES	500 ppm	1210 mg/m ³	1500 ppm	3620 mg/m ³

PROTECTIVE EQUIPMENT



PROCESS CONDITIONS

Provide eyewash station.

ENGINEERING MEASURES

Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded. Explosion-proof general and local exhaust ventilation.

RESPIRATORY EQUIPMENT

No specific recommendation made, but respiratory protection must be used if the general level exceeds the Recommended Occupational Exposure Limit.

HAND PROTECTION

Use protective gloves. Use protective gloves made of: Gloves of nitrile rubber, PVA or Viton are recommended.

EYE PROTECTION

Use approved safety goggles or face shield. Contact lenses should not be worn when working with this chemical!

OTHER PROTECTION

Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact.

HYGIENE MEASURES

DO NOT SMOKE IN WORK AREA! Wash promptly with soap & water if skin becomes contaminated. Promptly remove non-impervious clothing that becomes wet. Wash at the end of each work shift and before eating, smoking and using the toilet.

9. Physical and Chemical Properties

APPEARANCE	Liquid		
COLOUR	Colourless		
ODOUR	Alcohol		
SOLUBILITY	Miscible with water.		
MOL WEIGHT	60.11	BOILING POINT (°C)	82.760 mm Hg
RELATIVE DENSITY	0.79 @ 20 °c	VAPOUR DENSITY (air=1)	2.70
VAPOUR PRESSURE	33.00 @ 20 °c	EVAPORATION RATE	2.83
VOLATILE BY VOL (%)	100	ODOUR THRESHOLD, LOWER	100
FLASH POINT (°C)	12 CC (Closed cup).	AUTO IGNITION TEMPERATURE (°C)	398
FLAMMABILITY LIMIT - LOWER(%)	2.50	FLAMMABILITY LIMIT - UPPER(%)	12.70
SOLUBILITY VALUE (g/100g H ₂ O@20°C)	100		

10. Stability and Reactivity

STABILITY

Stable under normal temperature conditions and recommended use.

CONDITIONS TO AVOID

Avoid heat, flames and other sources of ignition.

MATERIALS TO AVOID

Strong oxidising substances. Strong acids. Reacts with Aluminium to liberate hydrogen gas which forms explosive mixtures with air.

HAZARDOUS DECOMPOSITION PRODUCTS

Fire creates: Toxic gases/vapours/fumes of: Carbon monoxide (CO). Carbon dioxide (CO₂).

11. Toxicological Information

TOXIC DOSE 1 - LD 50 5840 mg/kg (oral rat)

GENERAL INFORMATION

Prolonged and repeated contact with solvents over a long period may lead to permanent health problems.

INHALATION

Exposure to organic solvent vapours in excess of the stated occupational exposure limit may result in adverse effects such as irritation of the mucous membrane and the respiratory system and adverse effects on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.

INGESTION

May cause stomach pain or vomiting. Significant absorption may cause sleepiness, intoxication and pulmonary oedema.

SKIN CONTACT

Prolonged or repeated skin contact with the product may cause removal of natural fats from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. Absorption of organic solvents through the skin can cause some of the same acute and chronic effects as inhalation.

EYE CONTACT

Irritating to eyes. Irritating and may cause redness and pain.

HEALTH WARNINGS

Irritant of eyes and mucous membranes. CNS depressant. Anaesthetic in high concentrations.

ROUTE OF ENTRY

Inhalation. Skin absorption. Ingestion. Skin and/or eye contact.

TARGET ORGANS

Central nervous system. Eyes. Gastro-intestinal tract. Respiratory system, lungs.

MEDICAL SYMPTOMS

High concentrations of vapours may irritate respiratory system and lead to headache, fatigue, nausea and vomiting.

MEDICAL CONSIDERATIONS

Convulsive disorders, CNS problems.

12. Ecological Information

ECOTOXICITY

Not regarded as dangerous for the environment.

MOBILITY

The product contains volatile organic compounds (VOC) which will evaporate easily from all surfaces.

13. Disposal

DISPOSAL METHODS

Dispose of waste and residues in accordance with local authority requirements. This material and its container must be disposed of as hazardous waste.

14. Transport Information



UK ROAD CLASS	3		
PROPER SHIPPING NAME	ISOPROPANOL (ISOPROPYL ALCOHOL)		
UN NO. ROAD	1219	UK ROAD PACK GR.	II
ADR CLASS NO.	3	ADR CLASS	Class 3: Flammable liquids.
ADR PACK GROUP	II	HAZARD No. (ADR)	33
ADR LABEL NO.	3	HAZCHEM CODE	ZYE
CEFC TEC(R) NO.	30GF 1-+II	RID CLASS NO.	3
RID PACK GROUP	II	UN NO. SEA	1219
IMDG CLASS	3	IMDG PACK GR.	II
EMS	F-E, S-D	MFAG	See Guide
MARINE POLLUTANT	No.	UN NO. AIR	1219
ICAO CLASS	3	AIR PACK GR.	II

15. Regulatory Information

LABELLING



Irritant



Highly Flammable

RISK PHRASES

R11	Highly flammable.
R36	Irritating to eyes.
R67	Vapours may cause drowsiness and dizziness.

SAFETY PHRASES

S9	Keep container in a well-ventilated place.
S16	Keep away from sources of ignition - No smoking.
S25	Avoid contact with eyes.
S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S51	Use only in well-ventilated areas.
S60	This material and its container must be disposed of as hazardous waste.

STATUTORY INSTRUMENTS

Chemicals (Hazard Information and Packaging) Regulations, 2002

16. Other Information

REVISION DATE 24-10-2005

REV. NO./REPL. SDS GENERATED 002

RISK PHRASES IN FULL

R11	Highly flammable.
R36	Irritating to eyes.
R67	Vapours may cause drowsiness and dizziness.