

Safety data sheet as per Commission Regulation (EU) 2020/878

Product: Isopropyl acetate



SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Trade name	Isopropyl acetate
Chemical Name	1-Methylethyl acetate/ Propan-2-yl acetate
CAS Number	108-21-4
EC Number	203-561-1

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

Relevant identified uses	Industrial Use: For manufacture of chemicals, in coatings, cleaning agents, metal working fluids, as a process solvent Professional use: In coatings, paints, cleaning agents, solvents, letal working fluids Consumer use: In cosmetics and other personal care products, pigments in inks and toners, coatings, cleaning agents, solvent in chemical indication inks
Uses identified against	Not for use other than those specified

1.3 Details of the supplier of the safety data sheet:

Manufacturer	Prasol Chemicals Limited Prasol House, Plot No.A-17/2/3, T.T.C. Indl. Area, Khairne M.I.D.C., Navi Mumbai - 400 710. Maharashtra, India.
Telephone	+91-22-27782555/ 61952500
Telefax	+91-22-61952577
e-mail address	sales@prasolchem.com; inquiry@prasolchem.com

1.4 Emergency telephone number

Telephone	+91-22- 27782555/ 61952500
Language	English

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

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

Flammable Liquid	Category 2	H225	Highly flammable liquid and vapor
Eye Irritation	Category 2	H319	Causes serious eye irritation
Specific Target Organ Toxicity	Category 3	H336	May cause respiratory irritation.
		EUH066	Repeated exposure may cause skin dryness or cracking

Information concerning particular hazards for human and environment: No further information

2.2 Label elements

Labeling according to Regulation (EC) No 1272/2008 (CLP)

Hazard pictograms



GHS02



GHS07

Signal word Danger

Hazard statements	H225	Highly flammable liquid and vapor
	H319	Causes serious eye irritation
	H336	May cause respiratory irritation.
	EUH066	Repeated exposure may cause skin dryness or cracking

Precautionary statements

General	P103	Read label before use.
Prevention	P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
	P233	Keep container tightly closed.
	P240	Ground and bond container and receiving equipment
	P241	Use explosion - proof electrical, ventilating or lighting equipment.
	P242	Use non-sparking tools.
	P243	Take action to prevent static discharge.
	P261	Avoid breathing fume/gas/mist/ vapours/spray.
	P264	Wash hands thoroughly after handling.
	P271	Use only outdoors or in a well -ventilated area
	P280	Use protective gloves and eye protection.
Response	P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

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Storage	P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breath
	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 doctor if you feel unwell.
	P337+P313	If eye irritation persists: Get medical advice.
	P370+P378	In case of fire: Use CO ₂ , dry powder, foam or water spray to extinguish.
	P403+P233	Store in a well-ventilated place. Keep container tightly closed.
Disposal	P403+P235	Store in a well-ventilated place. Keep cool.
	P405	Store locked up.
	P501	Dispose of contents and container in accordance with national regulations

2.3 Other hazards

Not a PBT, vPVB substance according to the criteria of Annex XIII to REACH regulation

Not having endocrine disruptive properties as per criteria of Delegated Regulations (EC) 2017/2100 or (EC) 2018/605

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Name	Isopropyl acetate
CAS Number	108-21-4
EC Number	203-561-1
Molecular Formula	C ₅ H ₁₀ O ₂
Molecular Weight	102.13

Ingredient	Classification	Concentration (%)	SCL, M-factor, ATE
Isopropyl acetate	Flam. Liq, 2, Eye Irrit. 2, STOT SE 3 H225, H319, H336, EUH066	100	Not assigned

3.2 Mixtures not applicable

None of the ingredients present are classified as skin sensitisers 1A, respiratory sensitisers 1A, aspiration hazards and endocrine disruptors.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General information

Take off all contaminated clothing immediately.

After inhalation

If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If unconscious, evaluate the need for artificial respiration. Get immediate medical attention.

After skin contact

Wash off with plenty of water immediately, seek medical advice if necessary.

After eye contact

Rinse with plenty of water immediately and seek medical advice.

After swallowing

Do not induce vomiting and seek medical advice immediately.

4.2 Most important symptoms and effects, both acute and delayed

Prolonged or repeated exposure can cause: Nausea, Headache, Vomiting, narcosis

After inhalation

EXPOSURE TO HIGH CONCENTRATIONS: Central nervous system depression. Headache. Dizziness. Coordination disorders. Narcosis. Impaired concentration. Respiratory difficulties.

After skin contact

Red skin. Tingling/irritation of the skin.

After eye contact

Irritation of the eye tissue. Inflammation/damage of the eye tissue.

After swallowing

AFTER INGESTION OF HIGH QUANTITIES: Vomiting. Nausea. Disturbances of consciousness

Chronic symptoms

Skin rash/inflammation

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically and supportively.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

CO₂, dry powder, foam or water spray

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Highly flammable. Explosive mixtures with air may even form at room temperature. Beware of re-ignition
Vapours form potentially explosive mixtures with air. Heavier than air, they proceed at floor level and may back-flash over great distances when ignited. Ignition by hot surfaces, sparks and open flames.

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5.3 Advice for firefighters

May form toxic carbon oxides if case of fire.
Do not expose to high temperature.
Danger of bursting and explosion.
Use fine water spray to cool endangered containers.
Move undamaged containers from immediate hazard area.
Do not allow fire water to penetrate into surface or ground water.
Fire residuals and contaminated extinguishing water must be disposed of in accordance with the regulations of the local authorities.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

For small spills and large spills: Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Clear spills immediately

For non-emergency personnel

Protective equipment: Gloves, Face shield, Protective clothing.
Emergency procedures: Mark the danger area. No naked flames. Wash contaminated clothes.

For emergency responders

Protective equipment: Equip cleanup crew with proper protection.
Emergency procedures: Ventilate area.

6.2 Environmental precautions

Plug leak if safely possible.
Do not allow to enter drains, surface waters, basements or pits.
When released into the environment, alert police and fire brigade.

6.3 Methods and material for containment and cleaning up

For containment: Contain released product, collect/pump into suitable containers.
Plug the leak, cut off the supply
For cleaning up: Soak up with inert absorbent material eg. sand, earth, vermiculite or powdered lime stone and keep in suitable, closed containers for disposal. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.

6.4 Reference to other sections

Section 8 for information on personal protection equipment.
Section 13 for disposal information

◆ SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Protective measures

Measures to prevent fire: Keep away from naked flames/heat. Use spark-/explosion proof appliances.

Measures to prevent aerosol and dust generation: Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Thoroughly clean/dry the installation before use.

Measures to protect the environment: Keep container tightly closed. If possible, use material transfer, metering and blending plants that are closed.

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Advice on general occupational hygiene

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions

Keep only in the original container in a well ventilated place away from ignition sources and incompatible materials. Keep container closed when not in use
Follow normal measures for preventive fire protection.

Packaging material Incompatible products Storage conditions

SUITABLE MATERIAL: steel, stainless steel, glass
Strong bases. Strong acids, reducers, acid anhydrides
Ventilation at floor level. Store at ambient temperature in a dry area. Keep container tightly closed in a dry and well-ventilated place. Residual vapours might explode on ignition; do not apply heat, cut, drill and grind or weld on or near the container.

Advice on common storage

Storage stability

Observe prohibition against storing together!
Stable under recommended storage conditions

Storage class

2 Flammable liquid

7.3 Specific end use(s)

No additional information available

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure Limit	100ppm TLV
DNEL/DMEL (Workers)	
Acute - local effects, inhalation	558 mg/m ³
Long-term - systemic effects, dermal	27 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	275 mg/m ³
Long-term - local effects, inhalation	227 mg/m ³
DNEL/DMEL (General population)	
Acute - local effects, inhalation	335mg/m ³
Long-term - systemic effects, oral	16 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	168 mg/m ³
Long-term - systemic effects, dermal	16 mg/kg bodyweight/day
Long-term - local effects, inhalation	136 mg/m ³
PNEC (Water)	
PNEC aqua (freshwater)	0.22 mg/l
PNEC aqua (marine water)	0.022 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	1.25 mg/kg dwt
PNEC sediment (marine water)	0.125 mg/kg dwt
PNEC (Soil)	
PNEC soil	0.35 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	190 mg/l

8.2 Exposure controls

Appropriate engineering controls	Explosion protection required. Provide good ventilation and/or an exhaust system in the work area.
Personal protective equipment	
For eye/ face protection	closed goggles, face shield
For skin protection	
Hand protection	Butyl-rubber 0.5 mm > 480 min
Body protection	Use solvent-resistant protective clothing. Flame-retardant antistatic protective clothing; safety shoes
For Respiratory protection	Respiratory equipment with suitable filter or a self-contained respiratory apparatus.
Thermal hazards	Highly flammable liquid; do not expose to heat
For Environmental exposure	If possible use closed metering and blending plants. Do not inhale vapours / aerosols. Avoid contact with skin and eyes. Remove immediately all contaminated clothing. Use disposable clothing if appropriate. Do not eat, drink or smoke during use.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state	Liquid
Colour	Colourless to light yellow
Odour	Pleasant, aromatic fruity
Odour threshold	0.45ppm
Melting point	-73.4°C
Boiling point	88.6°C
Flammability (solid, gas)	flammable
Lower and upper explosion limit	1.8 - 7.8% v/v
Flash point	5°C (Closed cup) Flam. Liq. 2 H225
Ignition temperature	479°C
Decomposition temperature	no data available
pH	not determined (does not liberate H ions when dissolved)
Kinematic viscosity at 20 °C	0.6mm ² /s
Relative density	0.8718 at 20°C
Solubility in water	31.9g/l, very soluble at 20°C
Partition coefficient	1.03 log Kow (n-octanol/water) at 20°C
Vapour pressure	6.03kPa at 20°C
Relative vapour density	3.5 (air =1)

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Particle characteristics	Not applicable (substance is a liquid)
9.2 Other information	
Evaporation rate	3.0 (nBuAc=1)
Explosive properties	No explosive properties based on chemical structure
Oxidizing properties	no oxidizing properties based on chemical structure
Heat of combustion	-635.3 cal/g·mol
Heat of vaporization	7703 cal/g·mol

◆ SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity	Vapours form potentially explosive mixtures with air. Heavier than air, they proceed at floor level and may back-flash over great distances when ignited. May become electrostatically charged.
10.2 Chemical stability	Under storage at normal ambient temperatures (-40°C to +40°C, depending on the geographical location), the product is stable. It is slowly decomposed by water on storage.
10.3 Possibility of hazardous reactions	No known hazardous reactions if used as directed
10.4 Conditions to avoid	Highly flammable. Concentrated vapours are heavier than air. Forms explosive mixtures with air, also in empty, uncleaned containers.
10.5 Incompatible materials	oxidizing agents, acids, alkalis, Acid catalysts (sulphuric acid, hydrochloric acid, oxalic acid), Iodine, Bases, Acetic anhydride, Hydrogen peroxide (concentrated solutions)
10.6 Hazardous decomposition products	Thermal decomposition products- carbon oxides

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects as defined in Regulation (EC) No 1272/2008

Acute toxicity

LD50	oral	rat	6750 mg/kg bw
LC0	inhalation	8h, rat	50600 mg/l
LD50	Dermal	rabbit	>17.4 ml/kg bw

Skin irritation

slightly irritating, rabbit 24h; may be harmful if absorbed through skin

Serious eye irritation

Moderately irritating - 24 h (rabbit) **Cat 2 H319**

Respiratory or skin sensitization

No sensitizing effects known

Germ cell mutagenicity

non mutagenic (Ames test)

Carcinogenicity

no indications for a carcinogenic potential

Reproductive toxicity

no adverse effect on reproduction (rat)

STOT-single exposure

Affected organs: central nervous system Route of exposure: Inhalation

STOT-repeated exposure

faintly narcotic **Cat 3 H336** (central nervous system, inhalation)

Aspiration hazard

no data available

11.2 Information on other hazards

Endocrine disrupting properties

No endocrine disrupting properties

Other information

No further information

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Aquatic toxicity

Toxicity to fish	LC50	96h	400g/L	<i>Pimephales promelas</i>
Toxicity to aquatic invertebrates	EC50	48h	110mg/L	<i>Artemia Salina</i>
Toxicity to aquatic algae and cyanobacteria	EC50	72h	370 mg/L	<i>Pseudokirchneriella subcapitata</i>
Toxicity to microorganisms	EC50	3h	190mg	<i>Psuedomonas putida</i>

12.2 Persistence and degradability

Biodegradation

readily biodegradable (76% in 20days)

12.3 Bioaccumulative potential

Bioconcentration factor 0.5

very low potential for bioaccumulation

12.4 Mobility in soil

log Koc <3; very low potential for geoaccumulation

12.5 Results of PBT and vPvB assessment

Not a PBT, vPvB substance according to the REACH regulation

12.6 Endocrine disrupting properties

No endocrine disrupting properties

12.7 Other adverse effects

No further information available

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SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods	Observe all federal, state, and local environmental regulations.
Product disposal	Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
Packaging disposal	Clean container with water. Recover waste water for processing later. Destroy packaging by incineration at an approved waste disposal site.
Sewage disposal	Do not dispose in sewage.

SECTION 14: TRANSPORT INFORMATION

	ADR/RID	IMDG	ICAO/IATA
14.1 UN Number	1220	1220	1220
14.2 UN proper shipping name	ISOPROPYL ACETATE		
14.3 Transport hazard class	3	3	3
14.4 Packaging group	II	II	II
14.5 Environmental hazards	not environmentally hazardous, not a marine pollutant		
14.6 Special precautions for the user	Flammable liquid; Flash point 5°C (closed cup)		
Danger group (Kemmler)	30		
EmS Number	F-E, S-D		
14.7 Maritime transport in bulk according to IMO instruments	Ship type: 3; Pollution Category: Z		

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture	
Major accident hazard	Seveso III P5a,b,c (Flammable liquids)
International Chemical Inventory Status	
USA (TSCA)	Listed (Tracking No. 24943)
Canada (DSL)	listed
Australia (AICS)	listed
Japan (MITI)	listed
Korea (KECL)	Listed (KE No 21670)
Philippines (PICCS)	listed
China	listed
New Zealand	listed
Taiwan	listed
15.2 Chemical safety assessment	A Chemical Safety Assessment will be carried out at the time of REACH registration

SECTION 16: OTHER INFORMATION

Indication of changes: Sections in which changes have been made since the last version are marked with a diamond ♦ in the left hand margin.

Abbreviations and acronyms:

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
AICS	Australian Inventory of Chemical Substances
ATE	Acute Toxicity Estimate
CAS	Chemical Abstracts Service (division of the American Chemical Society)
CLP	Classification for Labeling and Packaging
DMEL	Derived minimal effect level
DNEL	Derived No-Effect Level
DSL	Domestic Substances List
EC	European Commission
EC50	Half maximal effective concentration
EINECS	European Inventory of Existing Commercial Chemical Substances
GHS	Globally Harmonized System of Classification and Labeling of Chemicals
IATA	International Air Transport Association
IBC	International Bulk Chemical
ICAO	International Civil Aviation Organization
IMDG	International Maritime Code for Dangerous Goods

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KECL	Korea Existing Chemicals List
KOC	Soil adsorption coefficient
KOW	Partition Coefficient octanol-water
LC50	Lethal concentration, 50 percent
LD50	Lethal dose, 50 percent
M-factor	Multiplication Factor
MITI	Ministry of International Trade and Industry
PBT	Persistent, bioaccumulative and toxic substances
PICCS	Philippine Inventory of Chemicals and Chemical Substances
PNEC	Predicted No-Effect Concentration
RID	Regulations Concerning the International Transport of Dangerous Goods by Rail
SCL	Specific concentration limit
STOT	Specific target organ toxicity
TSCA	Toxic Substances Control Act
UN	United Nations
vPVB	(very) Persistent, (very) Bioaccumulative

Key literature references and sources for data

Commission Regulation (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

ECHA <https://echa.europa.eu/registration-dossier/-/registered-dossier/14777>

Chemid <https://chem.nlm.nih.gov/chemidplus/rn/108-21-4>

CDC <https://www.cdc.gov/niosh/docs/81-123/pdfs/0358.pdf>

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End of safety data sheet