

According to directive 1907/2006/EC, 2020/878
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Trade name: ISOPROPANOL

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

1.1 Product identification:

Product name/name:	ISOPROPANOL
Substance name :	propane-2-ol
Index no. :	603-117-00-0
CAS No :	67-63-0
EC No :	200-661-7
EC Registration :	01-2119457558-25-xxxx

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

Use of the substance or mixture:	Identified uses: See table on the first page of the appendix for a complete overview of identified uses.
Uses advised against :	No advised uses are currently identified.
Notes :	Check product quality before referring to an exposure scenario attached to this safety data sheet: the exposure scenarios given are not related to product quality.

1.3 Details of the supplier of the safety data sheet:

Responsible distributor :	ASSYST bvba / A.S.O.W. bvba Hellegatstraat 13a 2590 Berlaar Belgium Tel: +32 495 50 61 14 / +32 496 83 70 27 Website: www.assyst.org / www.artsuppliesonweb.com Email: ao@assyst.org / vera.opsommer@assyst.org
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1.4 Emergency phone number:

For Belgium:	Call the Poison Control Centre (070 245 245 - free) , if not available: 02 264 96 30 (normal rate) or your doctor. In life-threatening situations, always call the European emergency number 112 .
NHS 24 Direct	For help from a GP, visit your GP surgery's website, use an online service to contact your GP, or call the surgery. For urgent medical help , use the NHS 111 online service, or call 111 if you are unable to get help online. For life-threatening emergencies, call 999 for an ambulance. There is more information about getting medical help on the NHS website.

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture:

Classification according to directive (EC) No 1272/2008 and its amendments.

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 H phrases referred to in this section, see section 16.

Most significant adverse effects

Human health : See section 11 for toxicological information.

Physical and chemical hazards: See section 9/10 for physicochemical information.

Potential environmental effects : See section 12 for information on the environment.

2.2 Labelling elements:

Labelling according to regulation (EC) No 1272/2008 [CLP/GHS]:

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Hazard pictograms:

Signal word:

Danger

Contains:

- ✓ propane-2-ol

Hazard statements:

H225 Highly flammable liquid and vapour.

H319 Causes severe eye irritation.

H336 May cause drowsiness or dizziness.

Safety recommendations:

Prevention:

P210 Keep away from heat, hot surfaces, sparks, open flames and other sources of ignition. Do not smoke.

P261 Avoid inhalation of dust/fume/gas/mist/vapour/spray.

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

Response:

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes; remove contact lenses, if possible; continue rinsing.

P304 + P340 + P312 IF INHALED: Remove the person to fresh air and ensure that he/she can breathe easily. In case of feeling unwell, call a POISON CENTER/doctor.

Storage :

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

2.3 Other hazards:

This substance/mixture does not contain any components that can be considered persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information:

No information available on endocrine disrupting properties for the environment.

Toxicological information:

No information available on endocrine disrupting properties for human health.

SECTION 3: Composition and information on ingredients

3.1 Substances:

Component	Classification	Concentration *
propane-2-ol Index no. : 603-117-00-0 CAS No : 67-63-0 EC No : 200-661-7 EC Registration : 01-2119457558-25-xxxx	Flam. Liq.2 - H225 Eye Irrit.2 - H319 STOT SE3 - H336	>= 90 - <= 100

For the full text of H phrases referred to in this section, see section 16.

SECTION 4: First aid measures

4.1 Description of first-aid measures:

General advice :

Remove exposure, put down.

Remove contaminated clothing immediately.

When inhaled :

Transfer to fresh air.

In case of irregular breathing or respiratory arrest, apply artificial respiration.

If unconscious, lay person on his side.

Consult a doctor after significant exposure.

On contact with skin :

Immediately wash with soap and plenty of water.

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In case of persistent skin irritation, consult a doctor.

On contact with eyes :

Rinse immediately with plenty of water, including under the eyelids, for at least 10 minutes.

Immediately consult an ophthalmologist.

Go to an eye hospital if possible.

If swallowed :

Clean mouth with water and then drink lots of water.

Never let an unconscious person drink (or eat).

DO NOT induce vomiting.

If vomiting occurs, the head should be kept low so that vomit does not enter the lungs.

Call a doctor immediately.

4.2. Main acute and delayed symptoms and effects

Symptoms :

Inhalation of high vapour concentrations may cause symptoms such as headache, dizziness, fatigue, nausea and vomiting.

See section 11 for more detailed information on health effects and symptoms.

Effects :

See section 11 for more detailed information on health effects and symptoms.

4.3. Indication of immediate medical attention and special

Treatment

Symptomatic treatment.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media:

Suitable extinguishing agents

Use water spray, alcohol-resistant foam, drying powder, or carbon dioxide.

Unsuitable extinguishing agents

Strong water jet.

5.2 Special hazards arising from the substance or mixture

Specific hazards in firefighting :

The vapour may be invisible, heavier than air and spread over the ground.

Vapours can form explosive mixtures with air.

Fire recoil possible over a considerable distance.

Hazardous combustion products:

Carbon monoxide, Carbon dioxide (CO₂).

5.3 Advice for firefighters

Special protective equipment for firefighters:

Wear compressed air mask in case of fire

Wearing suitable protective clothing is necessary (chemical suit).

Further advice :

Cool closed containers near the fire with water spray.

Pressure increase when heated - risk of cracking.

Collect contaminated firefighting water separately.

It should not drain to the sewerage system.

SECTION 6: Measures in case of accidental release of the substance or mixture

6.1 Personal precautions, protective equipment and emergency procedures:

Personal precautions

Use personal protective equipment.

Keep away from heat and ignition sources.

Use personal protective equipment.

Keep unprotected persons away.

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Ensure adequate air ventilation.
Avoid contact with eyes and skin.
Do not inhale vapours or spray mist.

6.2 Environmental precautions

Environmental precautions

Do not drain into surface water or the sewerage system.
Avoid penetration into the soil.

6.3 Containment and cleaning methods and materials

Containment and cleaning methods and material:

Contain spill and collect with non-combustible absorbent materials, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local/national regulations (see section 13).

6.4. Reference to other sections

See Section 1 for emergency contact details.
See Section 8 for information on personal protective equipment.
See section 13 for information on waste treatment.

SECTION 7: Handling and storage:

7.1 Precautions for safe handling of the substance or mixture:

Safe handling advice:

Keep in tightly closed container.
Ensure adequate ventilation.
Use personal protective equipment.
Avoid contact with eyes, skin and clothing.
Do not inhale vapours or spray mist.
In an emergency, eye showers should be available nearby.

Hygiene measures:

Keep away from food, drink and animal feed.
No smoking, eating and drinking in the workplace.
Wash hands before every work break and at the end of the working day.
Remove all soiled clothing immediately.

7.2 Conditions for safe storage, including incompatible products

Requirements for storage areas and containers:

Store in original container.
Store in an area fitted with a solvent-resistant floor.
Unsuitable materials for the containers are: Aluminium; polystyrene; ethylene-propylene-diene rubber; butyl rubber; Natural rubber

Advice on protection against fire and explosion:

Keep away from sources of ignition - No smoking.
Vapours are heavier than air and may spread across the floor.
Vapours can form explosive mixtures with air.
Take measures to prevent the generation of electrostatic charge.
Use only in an area equipped with explosion-proof equipment.

Details of storage conditions:

Store tightly closed in a dry and cool place.
Do not expose to direct sunlight.
Store in a well-ventilated place.

Advice for mixed storage:

Incompatible with oxidising agents.
Do not store together with oxidising and self-igniting products.
Keep away from food, drink and animal feed.

Suitable packaging materials:

Stainless steel.

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7.3 Specific end use

Specific use :

Identified uses: See table on the first page of the appendix for a complete overview of identified uses.

SECTION 8: Exposure controls/personal protection measures

8.1 Control parameters:

The product contains no ingredients for which exposure values have been established.

Component: propane-2-ol CAS No 67-63-0

Derived no-effect doses (DNEL) / derived minimum effect (DMEL)

DNEL Workers, long-term - systemic effects, Skin contact : 888 mg/kg bw/day

DNEL Workers, long-term - systemic effects, Inhalation : 500 mg/m³

DNEL Consumers, long-term - systemic effects, Skin contact : 319 mg/kg bw/day

DNEL Consumers, long-term - systemic effects, Inhalation : 89 mg/m³

DNEL Consumers, long-term - systemic effects, Ingestion : 26 mg/kg bw/day

Predicted no-effect concentration (PNEC)

Freshwater: 140.9 mg/l

Seawater: 140.9 mg/l

Intermittent releases: 140.9 mg/l

Wastewater treatment plant: 2251 mg/l

Sediment: 552 mg/kg d.w.

Soil: 28 mg/kg

Secondary poisoning: 160 mg/kg of food

Other occupational exposure limits

Belgium. OEL, Time-weighted average (TWA):

200 ppm, 500 mg/m³

Belgium. OEL, Short-term exposure limit (STEL)

400 ppm, 1,000 mg/m³, (15 minutes)

8.2 Exposure control measures

Appropriate technical measures

See protective measures in sections 7 and 8.

Personal protective equipment

Respiratory protection

Advice : In case of insufficient ventilation, wear suitable respiratory protection.

When aerosol or mist is formed, use suitable respiratory protection.

Recommended filter type: A

Combination filter: A-P2

In case of prolonged exposure use self-breathing apparatus.

The equipment must comply with EN 14387

Hand protection

Recommendation : Protective gloves according to EN 374.

Observe regulations on permeability and soak time, as supplied by the glove supplier.

Also take into account specific local conditions of use, such as danger of cuts, wear and tear and touch time.

Safety gloves should be replaced when worn.

Material : Nitrile rubber

Breakthrough time : >= 8 h

Glove thickness : 0.35 mm

Material : Fluorinated rubber

Breakthrough time : >= 8 h

Glove thickness : 0.4 mm

Material : butyl rubber

Breakthrough time : >= 8 h

Glove thickness : 0.5 mm

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Eye protection

Opinion :

Safety dust goggles

Skin and body protection

Opinion :

Solvent-resistant protective clothing.

Managing environmental exposure

General advice :

Do not drain into surface water or the sewerage system.

Avoid penetration into the soil.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties:

Physical state:	Liquid
Colour:	colourless, clear
Odour:	alcoholic
Odour threshold value:	No data available
Melting point/trajectory:	-89 °C
Boiling point/boiling range:	82 °C Method: ASTM D1078
Flammability (solid, gas):	Not applicable
Upper explosion limit:	13 %(V)
Lower explosion limit:	2 %(V)
Flash point:	12 °C Method: ASTM D 56
Self-ignition temperature:	> 350 °C
Decomposition temperature:	No data available
Self-accelerating decomposition temperature (SADT):	No data available
pH:	No data available
Viscosity	
Viscosity, dynamic:	2.5 mPa.s (20 °C)
Viscosity, kinematic:	2.66 mm ² /s (25 °C) Method: ASTM D 7042
Expiry time:	No data available
Solubility	
Solubility in water:	completely soluble
Solubility in other solvents:	No data available
Decomposition rate:	No data available
Partition coefficient: n-octanol/water:	log Pow: 0,05
Dispersion stability:	No data available
Vapour pressure:	43 hPa (20 °C)
Relative density:	No data available
Bulk specific gravity:	No data available
Relative vapour density:	> 1 (Air = 1.0)
Particle characteristics:	No data available

9.2 Other information

Explosive substances :	The product is not explosive There may be a risk of explosion if vapour/air mixes.
Oxidising properties:	non-oxidising
Evaporation rate:	3,9 (n-Butyl acetate = 1)

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Molecular weight: 60.10 g/mol

SECTION 10: Stability and reactivity

10.1 Reactivity:

Opinion :

No decomposition if stored and applied as indicated.

10.2. Chemical stability

Opinion :

Stable under recommended storage conditions.

10.3. Possible hazardous reactions

Dangerous reactions :

Possible formation of peroxide.

Note :

There may be a risk of explosion if vapour/air mixes.

10.4. Conditions to avoid

Conditions to avoid:

Heat, flames and sparks.

10.5. Incompatible materials

Materials to avoid :

Strong oxidising agents, Amines, Aldehydes, Alkanolamines, Alkali, Strong acids.

10.6. Hazardous decomposition products

Hazardous decomposition products:

In case of fire: Carbon oxides.

SECTION 11: Toxicological information

11.1 Information on toxicological effects:

Information on hazard classes as defined in Regulation (EC) No 1272/2008

Component: propane-2-ol CAS No 67-63-0

Acute toxicity

Oral

LD50 : 5840 mg/kg (Rat) (Guideline test OECD 401)

Inhalation

LC50 : > 25 mg/l (Rat; 6 h; vapours) (Guideline test OECD 403)

Skin

LD50 : 13900 mg/kg (Rabbit) (Guideline test OECD 402)

Irritation

Skin

Result :

No skin irritation (Guideline test OECD 404)

Degreases the skin, which can become dry and rough as a result.

Prolonged or repeated skin contact may lead to dermatitis.

Eyes

Result :

Eye irritation (Guideline test OECD 405)

Splashes in the eyes can cause severe pain.

Vapour is irritating.

Sensitisation

Result :

not sensitising (Buehler test; Skin; Guinea pig) (Guideline test OECD 406)

CMR effects

Carcinogenicity :

NOEL : 5,000 ppm

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(Negative, Mouse, male and female)(Inhalation; 0, 500, 2500, 5000 ppm; 78 weeks; Frequency of treatment: 5 days/week)(Guideline test OECD 451)

CMR properties

Carcinogenicity: Based on available data; classification criteria not met.

Mutagenicity : In vitro tests showed no mutagenic effects.

In vivo tests showed no mutagenic effects.

Teratogenicity : No effects on or through lactation.

Reproductive toxicity : Based on available data; classification criteria not met.

Genotoxicity in vitro

Result :

negative (bacterial reverse mutation test; Salmonella typhimurium; with and without metabolic activation) (Guideline test OECD 471)

negative (In vitro gene mutation test in mammalian cells; CHO (Chinese hamster ovary) cells; with and without metabolic activation) (Guideline test OECD 476)

Genotoxicity in vivo

Result : negative (In vivo micronucleus test; Mouse, male and female) (intraperitoneal;) (Guideline test OECD 474)

Teratogenicity

NOAEL Maternal : 400 mg/kg bw/day

NOAEL Development : 400 mg/kg bw/day

(Rat, Sprague-Dawley)(Oral)(Guideline test OECD 414)

No side effects.

Reproductive toxicity:

NOAEL Parent: 853 mg/kg bw/day (One-generation reproductive toxicity study; Rat, wistar, male and female)(Oral)(Guideline test OECD 415)

No negative effects.

NOAEL Parent : 500 mg/kg bw/day (Two-generation reproductive toxicity study; Rat, Sprague-Dawley, male and female)(Oral)(Guideline test OECD 416)

No negative effects.

Specific target organ toxicity

Single exposure

Inhalation :

Target organs: central nervous system.

May cause drowsiness or dizziness.

Repeated exposure

Notes :

Repeated oral and inhalation exposure studies have shown effects in target organs in male rats (kidneys) and target organs in male and female mice (thyroid) through mechanisms of action not relevant to humans.

Other toxic properties

Aspiration hazard

Aspiration hazard if swallowed - may enter lungs and cause damage.

Aspiration can cause pulmonary oedema and pneumonia.

Based on available data; classification criteria not met.

11.2 Additional information

Data for the product

Endocrine-disrupting properties

Rating :

No information available on endocrine disrupting properties for human health.

SECTION 12: Ecological information

12.1 Toxicity:

Component: propane-2-ol CAS No 67-63-0

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Acute toxicity

Fish

LC50 : 9,640 mg/l (Pimephales promelas, mortality; 96 h) (flow-through test; Guideline test OECD 203)

Toxicity to daphnia and other aquatic invertebrates

LC50 : 9,714 mg/l (Daphnia magna, mortality rate; 24 h) (static test; OECD Test Guideline 202)

algae

EC50 : > 100 mg/l (Scenedesmus subspicatus; 72 h)

LOEC 1000 mg/l (algae; 8 d)

Bacteria

EC50 : > 100 mg/l (Bacteria) no harmful action

12.2 Persistence and Degradability:

Component: propane-2-ol CAS No 67-63-0

Persistence and degradability

Persistence

Result :

Transformation due to hydrolysis expectation not significant.

Transformation due to photolysis expectation not significant.

Biodegradability

Result :

53 % (aerobic; Domestic sewage; to related: O2 consumption; Exposure time: 5 d)(Directive 67/548/EEC, Annex V, C.5.) Readily biodegradable.

12.3 Bioaccumulation:

Component: propane-2-ol CAS No 67-63-0

Bioaccumulation

Result :

log Pow 0,05 (25 °C)

Bioaccumulation is not expected.

12.4 Mobility in soil:

Component: propane-2-ol CAS No 67-63-0

Mobility

Water : The product is soluble in water.

Soil : Mobile in soil

12.5 Results of PBT and vPvB assessment

Data for the product

Results of PBT and vPvB assessment

Result :

This substance/mixture does not contain any components that can be considered persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Component: propane-2-ol CAS No 67-63-0

Results of PBT and vPvB assessment

Result :

The substance is not persistent, bioaccumulative and toxic (PBT).

Substance is not very persistent and very bioaccumulative (vPvB).

12.6 Endocrine disrupting properties

Data for the product

Potential endocrine disruption:

No information available on endocrine disrupting properties for the environment.

12.7 Other adverse effects

Data for the product

Additional ecological information

Result :

Do not drain into surface water or the sewerage system.

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Avoid penetration into the soil.

SECTION 13: Disposal instructions

13.1 Waste treatment methods:

Product:

Disposal together with normal waste is prohibited.
Special disposal is required according to local regulations.
Do not allow product to enter drains.
Contact waste management service.
This product must be disposed of or recovered in accordance with Directive 2008/98/EC on waste, as last amended.

Contaminated packaging:

Empty used containers thoroughly.
Packaging can be reused after thorough cleaning.
If reuse is not possible, dispose of according to local regulations.
Do not burn or handle the empty vessel with cutting torch.
Risk of explosion.

European waste list number (EWCN):

A waste code according to the European Waste Catalogue cannot be assigned for this product, as the intended use dictates the assignment.
The waste code is established in consultation with the regional waste disposal authority.

SECTION 14: Information relating to transport

14.1. UN or ID number

1219

14.2. Proper cargo name according to UN model regulations

ADR	ISOPROPANOL
RID :	ISOPROPANOL
IMDG :	ISOPROPANOL

14.3. Transport hazard class(es)

ADR Class:	3
(Labels; Classification code; Hazard identification no.; Tunnel restriction code) :	3; F1; 33; (D/E)
RID Class :	3
(Labels; Classification code; Hazard identification no.):	3; F1; 33
IMDG Class:	3
(Labels; EMS):	3; F-E, S-D

14.4. Packaging group

ADR :	II
RID :	II
IMDG :	II

14.5. Environmental hazards

Environmentally hazardous according to ADR :	no
Environmentally hazardous according to RID :	no
Marine pollution according to IMDG code :	no

14.6. Special precautions for user

Expires.

14.7 Sea transport in bulk in accordance with IMO instruments

Not applicable for product, as delivered.

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SECTION 15: Statutory information

15.1 Safety, health and environmental regulations and legislation specific to the substance or mixture:

Data for the product**Other regulations :**

SDS updated according to Regulation (EU) 2020/878

Component: propane-2-ol CAS No 67-63-0**Regulation (EU) No 649/2012 on the export and import of dangerous chemicals:**

Substance/mixture is not covered by this legislation.

EU. REACH, Annex XVII, Marketing and use restrictions (Regulation 1907/2006/EC) :

Item Neg: , 40; For professional users only; Listed

Item Neg.: , 75; Listed

Item Neg.: , 3; Listed

Directive 2012/18/EU (SEVESO III) Annex I :

Requirements for low threshold establishments: 5,000 tonnes; Part 1: Categories of hazardous substances; P5c: Flammable liquids, Category 2 or 3 not covered by P5a and P5b. The information given is valid if the product is stored below its boiling point and at a pressure of 1013 hPa.

Requirements for high threshold establishments: 50,000 tonnes; Part 1: Categories of hazardous substances; P5c: Flammable liquids, Category 2 or 3 not covered by P5a and P5b. The information given is valid if the product is stored below its boiling point and at a pressure of 1013 hPa.

Notification status**propane-2-ol:****Regulatory list**

Regulatory list	Notification	Notification number
VN INVL	YES	
TH INV	YES	55-1-05311
TH INV	YES	2905.12
PHARM (JP)	YES	
AU AIICL	YES	
TSCA	YES	
EINECS	YES	200-661-7
DSL	YES	
KECI (KR)	YES	KE-29363
ENCS (JP)	YES	(2)-207
ISHL (JP)	YES	2-(8)-319
JEX (JP)	YES	(2)-207
ISHL (JP)	YES	(2)-207
NZIOC	YES	HSR001180
IECSC	YES	
INSQ	YES	
ONT INV	YES	
TCSI	YES	
PICCS (PH)	YES	

15.2 Chemical safety assessment:

A chemical safety assessment has been carried out for this substance.

SECTION 16: Other information**Indication of changes (revised safety data sheet)**

Aligning with regulation: Regulation (EC) No 1907/2006 (REACH), amended by 2020/878/EU.

List of relevant sentences (code and full text as mentioned in sections 2 and 3)

H225 Highly flammable liquid and vapour.

H319 Causes severe eye irritation.

H336 May cause drowsiness or dizziness.

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Further information

Key literature references and data sources:

Supplier information and data from the "Database of Registered Substances" of the European Chemicals Agency (ECHA) were used to produce this safety data sheet.

Methods used for pr:

The classification for human health, physical and chemical risks and environmental hazards were derived from a combination of calculation methods and, where available, test data.

Hints for training :

Workers should be regularly trained on the safe handling of the products based on the information provided in the safety data sheet and the local conditions of the workplace information.

National requirements for training of workers in the handling of hazardous substances must be complied with.

Other information :

The information provided here is correct and complete to the best of our knowledge at the date of issue of this safety data sheet. The information relates only to the named product and does not guarantee the quality and completeness of the product's properties, or in case the product is used together with other products or in any other process.