

→ Safety Data Sheet

According to SANS 10234:2008 and SANS 11014:2010

Issue date:13/02/2020 Revision date: 13/02/2025 Version: 1.0

SECTION 1: Identification

Product identifier

: PROPAN-1-OL (N-PROPANOL) Trade name

FC-No : 200-746-9 EC Index-No. : 603-003-00-0 CAS-No. : 71-23-8 UN-No. (ADR) 1274 Product code 116195xxx Formula : C3H8O

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

Recommended uses and restrictions : For laboratory use only

Supplier's details

Labchem (Pty)Ltd

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Emergency telephone number

Emergency number : +27 11 452 1116

SECTION 2: Hazards identification

Classification of the substance or mixture

Classification according to the United Nations GHS

Flammable liquids, Category 2 Acute toxicity (dermal), Category 5 H313 Serious eye damage/eye irritation, H318 Category 1

Specific target organ toxicity — Single exposure, Category 3, Narcosis Hazardous to the aquatic environment -

Full text of H statements : see section 16

Acute Hazard Not classified

22 Label elements

Labelling according to the United Nations GHS

Hazard pictograms (GHS-ZA)





GHS05



GHS02

GHS07

Signal word (GHS-ZA) : Danger

Hazard statements (GHS-ZA) H225 - Highly flammable liquid and vapour.

H336

H313 - May be harmful in contact with skin H318 - Causes serious eye damage. H336 - May cause drowsiness or dizziness.

Precautionary statements (GHS-ZA) 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 equipment.

P242 - Use non-sparking tools.

P243 - Take action to prevent static discharges.

P261 - Avoid breathing dust/fume/gas/mist/vapours/spray. 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/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.

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P310 - Immediately call a POISON CENTER or doctor. P312 - Call a POISON CENTER or doctor if you feel unwell.

P370+P378 - In case of fire: Use media other than water to extinguish. P403+P233 - Store in a well-ventilated place. Keep container tightly closed.

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

P405 - Store locked up.

P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Adverse physicochemical, human health and environmental effects

Other hazards

Highly flammable liquid and vapour, May cause drowsiness or dizziness, Harmful in contact with skin, Causes serious eye damage.

SECTION 3: Composition/information on ingredients

Substances

2.3.

Substance identification codes: See section 1.1

Name	Product identifier	%	Classification according to the United Nations GHS
1-propanol (Main constituent)	(CAS-No.) 71-23-8	≥ 85	Flam. Liq. 2, H225 Acute Tox. 5 (Dermal), H313 Eye Dam. 1, H318 STOT SE 3, H336 Aquatic Acute Not classified

Full text of H-statements: see section 16

Not applicable

SECTION 4: First aid measures

Description of first aid measures

First-aid measures general

Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital. Never give alcohol to drink. Call a poison center or a doctor if you feel unwell.

First-aid measures after inhalation

Remove person to fresh air and keep comfortable for breathing. Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

First-aid measures after skin contact

Rinse with water. Soap may be used. Take victim to a doctor if irritation persists. Rinse skin with water/shower. Take off immediately all contaminated clothing.

First-aid measures after eye contact

Rinse immediately with plenty of water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply neutralizing agents. Take victim to an ophthalmologist. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.

First-aid measures after ingestion

: Rinse mouth with water. Do not induce vomiting. Call Poison Information Centre (www.big.be/antigif.html). Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital. Doctor: gastric lavage. Call a poison center or a doctor if you feel unwell.

Most important symptoms and effects, both acute and delayed

Symptoms/effects

: May cause drowsiness or dizziness.

Symptoms/effects after inhalation

: EXPOSURE TO HIGH CONCENTRATIONS: Central nervous system depression. Headache. Dizziness. Nausea. Vomiting. Coordination disorders. Mental confusion. Disturbances of consciousness.

Symptoms/effects after skin contact

Slight irritation

Symptoms/effects after eye contact

Corrosion of the eye tissue. Inflammation/damage of the eye tissue. Serious damage to eyes.

Symptoms/effects after ingestion

Gastrointestinal complaints. Abdominal pain. Risk of aspiration pneumonia. AFTER INGESTION OF HIGH QUANTITIES: Central nervous system depression. Symptoms similar to those listed under inhalation. FOLLOWING SYMPTOMS MAY APPEAR LATER: Decreased renal function

Chronic symptoms

: ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Dry skin. Skin rash/inflammation.

Causes serious eye damage. Caution! Substance is absorbed through the skin.

Potential adverse human health effects and symptoms

Practically non-toxic if swallowed (LD50 oral, rat > 2000 mg/kg). Practically non-toxic through skin (LD50 skin 2000/5000 mg/kg). Slightly irritant to skin. May cause drowsiness or dizziness.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

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SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media

: Quick-acting ABC powder extinguisher. Quick-acting BC powder extinguisher. Quick-acting class B foam extinguisher. Quick-acting CO2 extinguisher. Class B foam (alcohol-resistant). Water spray if puddle cannot expand. Water spray. Dry powder. Foam. Carbon dioxide.

Unsuitable extinguishing media

Water (quick-acting extinguisher, reel); risk of puddle expansion. Water; risk of puddle

expansion.

Special hazards arising from the substance or mixture

Fire hazard

DIRECT FIRE HAZARD: Highly flammable liquid and vapour. Gas/vapour flammable with air within explosion limits. INDIRECT FIRE HAZARD: May be ignited by sparks. Gas/yapour spreads at floor level: ignition hazard. Reactions involving a fire hazard: see "Reactivity Hazard". Highly flammable liquid and vapour.

Explosion hazard

DIRECT EXPLOSION HAZARD: Gas/vapour explosive with air within explosion limits. INDIRECT EXPLOSION HAZARD: may be ignited by sparks. Reactions with explosion hazards: see "Reactivity Hazard".

Hazardous decomposition products in case of

: Upon combustion: CO and CO2 are formed.

5.3. Advice for firefighters

Firefighting instructions

Cool tanks/drums with water spray/remove them into safety. Do not move the load if exposed to

Protection during firefighting

Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

No additional information available

For non-emergency personnel 6.1.1.

Protective equipment

: Gloves. Protective goggles. Protective clothing.

Emergency procedures

Ventilate spillage area. Keep upwind. Mark the danger area. Consider evacuation. Seal off lowlying areas. Close doors and windows of adjacent premises. Stop engines and no smoking. No naked flames or sparks. Spark- and explosionproof appliances and lighting equipment. Keep containers closed. Wash contaminated clothes. No open flames, no sparks, and no smoking. Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid contact with skin, eyes and clothing.

6.1.2. For emergency responders

Protective equipment

: Do not attempt to take action without suitable protective equipment. Compressed air/oxygen apparatus. For further information refer to section 8: "Exposure controls/personal protection".

Environmental precautions

Avoid release to the environment. Prevent spreading in sewers.

Methods and material for containment and cleaning up

For containment

Other information

: Contain released product, pump into suitable containers. Plug the leak, cut off the supply. Dam up the liquid spill. Try to reduce evaporation. Measure the concentration of the explosive gasair mixture. Dilute/disperse combustible gas/vapour with water curtain. Dilute narcotic gases/vapours with water spray. Do not use compressed air for pumping over spills.

Methods for cleaning up

Take up liquid spill into absorbent material. Take up liquid spill into absorbent material, e.g.: dry sand/earth/vermiculite or powdered limestone. Scoop absorbed substance into closing containers. Carefully collect the spill/leftovers. Damaged/cooled tanks must be emptied. Do not use compressed air for pumping over spills. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling. Notify authorities if product enters sewers or public waters.

Dispose of materials or solid residues at an authorized site.

SECTION 7: Handling and storage

Precautions for safe handling

Precautions for safe handling

: Use spark-/explosionproof appliances and lighting system. Take precautions against electrostatic charges. Keep away from naked flames/heat. Keep away from ignition sources/sparks. Measure the concentration in the air regularly. Work under local exhaust/ventilation. Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Handle uncleaned empty containers as full ones. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Do not use compressed air for pumping over. Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapours may accumulate in the container. Use explosionproof equipment. Wear personal protective equipment. Use only outdoors or in a well-ventilated area. Avoid breathing dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing.

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Hygiene measures : Observe strict hygiene. Wash contaminated clothing before reuse. Do not eat, drink or smoke

when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Ground/bond container and receiving equipment.

Storage conditions : Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.

Storage area : Store in a cool area. Ventilation at floor level. Fireproof storeroom. Provide for a tub to collect

spills. Under a shelter/in the open. Store only in a limited quantity. May be stored under

nitrogen. May be stored under argon. Meet the legal requirements.

: KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.

Information on mixed storage : KEEP SUBSTANCE AWAY FROM: oxidizing agents. (strong) acids. highly flammable

materials. halogens.

Special rules on packaging : SPECIAL REQUIREMENTS: closing, clean, correctly labelled, meet the legal requirements.

Secure fragile packagings in solid containers.

Packaging materials : SUITABLE MATERIAL: steel. iron. copper. glass.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Heat and ignition sources

PROPAN-1-OL (N-PROPANOL) (71-23-8)	
South Africa - Occupational Exposure Limits (Recommended Limits)	
Local name	n-Propanol (Propan-1-ol)
OEL TWA (mg/m³)	500 mg/m³
OEL TWA (ppm)	200 ppm
OEL STEL (mg/m³)	625 mg/m³
OEL STEL (ppm)	250 ppm
Remark	Sk
Regulatory reference	Government Notice. R: 1179

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment (PPE)

Materials for protective clothing : GIVE EXCELLENT RESISTANCE: butyl rubber. nitrile rubber. viton. GIVE GOOD

RESISTANCE: neoprene. tetrafluoroethylene. PVA. GIVE POOR RESISTANCE: natural

rubber. PVC. plastics

Hand protection : Glove:

Eye protection : Protective goggles (EN 166)

Skin and body protection : Protective clothing

Respiratory protection : Full face mask with filter type A at conc. in air > exposure limit

Personal protective equipment symbol(s):









8.4. Exposure limit values for the other components

No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: LiquidAppearance: Liquid.Molecular mass: 60.09 g/molColour: Colourless.

Odour : Alcohol odour. Mild odour.

Odour threshold : No data available

pH : 7 (10 %)

pH solution : No data available

Relative evaporation rate (butylacetate=1) : 1.3

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Relative evaporation rate (ether=1) : 11

Melting point : -127 °C (1013 hPa)
Freezing point : No data available
Boiling point : 97 °C (1013 hPa)

Flash point : 15 °C (Closed cup, 1013.25 hPa)

Critical temperature : 264 °C

Auto-ignition temperature : 400 °C (1013 hPa, DIN 51794: Self-ignition temperature)

Decomposition temperature : No data available
Flammability (solid, gas) : Not applicable
Vapour pressure : 28.2 hPa (25 °C)
Vapour pressure at 50 °C : 117 hPa
Critical pressure : 51696 hPa

Relative vapour density at 20 °C : 2.1

Relative density : 0.8 (20 °C)
Relative density of saturated gas/air mixture : 1.02

Density : 800 kg/m³ (20 °C) Relative gas density : No data available

Solubility : Soluble in water. Soluble in ethanol. Soluble in ether. Soluble in acetone. Soluble in

propyleneglycol. Water: complete Ethanol: complete Ether: complete Acetone: > 10 g/100ml

Partition coefficient n-octanol/water (Log Pow) : 0.25 (Experimental value)

Partition coefficient n-octanol/water (Log Kow) : No data available
Viscosity, kinematic : 2.875 mm²/s
Viscosity, dynamic : 2.3 mPa·s (20 °C)
Explosive properties : No data available
Oxidising properties : No data available
Explosive limits : 2 – 14 vol %

2 – 14 Vol % 50 – 440 g/m³

9.2. Other information

Specific conductivity : 2000000 pS/m (25 °C)

Saturation concentration : 46 g/m³ VOC content : 100 %

Other properties : Gas/vapour heavier than air at 20°C. Clear. Volatile. Neutral reaction.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reacts violently with many compounds e.g.: with (strong) oxidizers and with (some) acids with (increased) risk of fire/explosion. Highly flammable liquid and vapour.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified

Acute toxicity (dermal) : May be harmful in contact with skin.

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Respiratory or skin sensitisation

According to SANS 10234:2008 and SANS 11014:2010

Acute toxicity (inhalation)	Not classified
PROPAN-1-OL (N-PROPANOL) (71-23-8)	
LD50 oral rat	> 2000 mg/kg (Rat, Oral)
LD50 dermal rabbit	4049 mg/kg (Rabbit, Dermal)
LC50 inhalation rat (mg/l)	9.8 mg/l (4 h, Rat, Inhalation)
Skin corrosion/irritation :	Not classified

Skin corrosion/irritation : Not classified pH: 7 (10 %)

Serious eye damage/irritation : Causes serious eye damage.

pH: 7 (10 %)
: Not classified
: Not classified

Germ cell mutagenicity : Not classified Carcinogenicity : Not classified Reproductive toxicity : Not classified

STOT-single exposure : May cause drowsiness or dizziness.

STOT-repeated exposure : Not classified
Aspiration hazard : Not classified

PROPAN-1-OL (N-PROPANOL) (71-23-8)		
	Viscosity, kinematic	2.875 mm ² /s

Potential adverse human health effects and symptoms

: Practically non-toxic if swallowed (LD50 oral, rat > 2000 mg/kg). Practically non-toxic through skin (LD50 skin 2000/5000 mg/kg). Slightly irritant to skin. May cause drowsiness or dizziness. Causes serious eye damage. Caution! Substance is absorbed through the skin.

SECTION 12: Ecological information

12.1. Toxicity	
Ecology - general	: Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008.
Ecology - air	 Not included in the list of substances which may contribute to the greenhouse effect (IPCC). Not included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014). Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).
Ecology - water	: Not harmful to crustacea. Not harmful to fishes. Groundwater pollutant. Mild water pollutant

(surface water). Not harmful to algae. Very toxic to plankton.

Hazardous to the aquatic environment, short-

term (acute)

: Not classified.

Hazardous to the aquatic environment, long-

term (chronic)

: Not classified

PROPAN-1-OL (N-PROPANOL) (71-23-8)	
LC50 fish 1	4480 mg/l (96 h, Pimephales promelas, Flow-through system)
EC50 Daphnia 1	3644 mg/l (48 h, Daphnia magna)
Partition coefficient n-octanol/water (Log Pow)	0.25 (Experimental value)

12.2. Persistence and degradability

PROPAN-1-OL (N-PROPANOL) (71-23-8)	
Persistence and degradability	Biodegradable in the soil. Biodegradable in the soil under anaerobic conditions. Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.47 – 1.63 g O ₂ /g substance
Chemical oxygen demand (COD)	2.23 g O₂/g substance
ThOD	2.4 g O ₂ /g substance
BOD (% of ThOD)	0.20 – 0.44

12.3. Bioaccumulative potential

PROPAN-1-OL (N-PROPANOL) (71-23-8)	
Partition coefficient n-octanol/water (Log Pow)	0.25 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

12.4. Mobility in soil

PROPAN-1-OL (N-PROPANOL) (71-23-8)	
Mobility in soil	No additional information available
Surface tension	0.024 N/m (20 °C)
Partition coefficient n-octanol/water (Log Pow)	0.25 (Experimental value)

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According to SANS 10234:2008 and SANS 11014:2010

12.5. Other adverse effects

Ozone : Not classified

Other adverse effects : No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods

: Dispose of contents/container in accordance with licensed collector's sorting instructions.

Product/Packaging disposal recommendations

: Do not discharge into surface water. Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Recycle by distillation. Remove to an authorized waste incinerator for solvents with energy recovery. Obtain the consent of pollution control authorities before discharging to wastewater treatment.

plants

Additional information : Hazardous waste accor

Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997. Flammable vapours may accumulate in the

container

SECTION 14: Transport information

In accordance with SANS / IMDG / IATA

SANS	IMDG	IATA
14.1. UN number		
1274	1274	1274
14.2. Proper Shipping Name		
n-PROPANOL(PROPYL ALCOHOL, NORMAL)	n-PROPANOL (PROPYL ALCOHOL, NORMAL)	n-Propanol
14.3. Transport hazard class(es)		
3	3	3
3	3	Not applicable
14.4. Packing group		
II	l II	II
14.5. Environmental hazards		
Dangerous for the environment : No	Dangerous for the environment : No :	Dangerous for the environment : No
No supplementary information available		

14.6. Special precautions for user

- SANS

Transport regulations (UN) : Subject to the provisions

Limited quantities (SANS) : 1 L
Limited quantities (SANS) : 1 L

Packagings, large packagings and IBCs

Packing instructions (SANS)

: P001, IBC02

Portable tank and bulk containers instructions

(SANS)

: T4

Portable tank and bulk container special

: TP1

provisions (SANS)

- IMDG

Transport regulations (IMDG) : Subject to the provisions

Limited quantities (IMDG) : 1 L

Excepted quantities (IMDG) : E2

Packing instructions (IMDG) : P001

IBC packing instructions (IMDG) : IBC02

Tank instructions (IMDG) : T4

Tank special provisions (IMDG) : TP1

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EmS-No. (Fire) : F-E - FIRE SCHEDULE Echo - NON-WATER-REACTIVE FLAMMABLE LIQUIDS

EmS-No. (Spillage) : S-D - SPILLAGE SCHEDULE Delta - FLAMMABLE LIQUIDS

Stowage category (IMDG) : B

Flash point (IMDG) : 15°C to 23°C c.c.

Properties and observations (IMDG) : Colourless liquid. Explosive limits: 2% to 12% Flashpoint: 15°C to 23°C c.c. Miscible with

water.

- IATA

Transport regulations (IATA) : Subject to the provisions

PCA Excepted quantities (IATA) PCA Limited quantities (IATA) : Y341 PCA limited quantity max net quantity (IATA) : 1L PCA packing instructions (IATA) : 353 PCA max net quantity (IATA) : 5L CAO packing instructions (IATA) : 364 CAO max net quantity (IATA) : 60L Special provisions (IATA) : A3 ERG code (IATA) : 3L

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health, and environmental national regulations specific for the product

Regulatory reference : SANS 10234:2008; SANS 11014:2010; SANS 10228:2012; SANS 10229:2010; SANS

10232(1,2,4), SANS 10231:2018; Occupational Health and Safety Act 85 of 1993; National

Road Traffic Act 93 of 1996.

SECTION 16: Other information

Issue date : 13/02/2020 Revision date : 13/02/2025

Full text of H-statements:

 TON OTHER CHARGE		
H225	Highly flammable liquid and vapour.	
H313	May be harmful in contact with skin	
H318	Causes serious eye damage.	
H336	May cause drowsiness or dizziness.	

SDS South Africa

The data provided in this Safety Data Sheet (SDS) is correct to the best of our knowledge. The data relates to the specific product as named and is ntended as a guide to the safe handling of the product in all its facets. The data may no longer be valid if the product is used in any process or in combination with other products. This SDS is not a quality specification nor any form of guarantee.

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