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Safety data sheet according to 1907/2006/EC, Article 31

revised on: 20.02.2023 Version number 7 Creation Date: 18.04.2016

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

· 1.1 Product identifier

· Trade name: 2-Propanol

· Article number: 1136, 1155, 1157, 1164, 1175, 1178, 1179, 1182, 1184, 1197, 3102

· CAS Number:

67-63-0

· EC number:

200-661-7

· Index number:

603-117-00-0

- · Registration number 01-2119457558-25-XXXX
- 1.2 Relevant identified uses of the substance or mixture and uses advised against
- · Sector of Use

SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites

SU9 Manufacture of fine chemicals

SU24 Scientific research and development

· Product category

PC19 Intermediate

PC20 Processing aids such as pH-regulators, flocculants, precipitants, neutralization agents

PC21 Laboratory chemicals

PC29 Pharmaceuticals

PC39 Cosmetics, personal care products

PC40 Extraction agents

· Process category

PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.

PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition

PROC4 Chemical production where opportunity for exposure arises

· Environmental release category

ERC1 Manufacture of the substance

ERC2 Formulation into mixture

ERC6a Use of intermediate

· Application of the substance / the mixture

Industrial use

Reagent for analysis

Laboratory chemicals

· 1.3 Details of the supplier of the safety data sheet

· Manufacturer/Supplier:

Th. Geyer GmbH & Co. KG

Dornierstr. 4 - 6

D-71272 Renningen

Tel.: +49(0)7159-1637-0, Fax:+49 (0)7159/18417

www.thgeyer.de

sicherheitsdatenblaetter@thgeyer.de

· Further information obtainable from: Product management department

· 1.4 Emergency telephone number:

National Poisons Information Service

City Hospital

Dudley Road

Birmingham B18 7QH

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Tel.:Emergency: (00 44) 87 06 00 62 66

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Members of the public seeking specific information on poisons should contact:

In England and Wales: NHS 111 - dial 111

In Scotland: NHS 24 - dial 111

SECTION 2: Hazards identification

- · 2.1 Classification of the substance or mixture
- · Classification according to Regulation (EC) No 1272/2008



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



Eye Irrit. 2 H319 Causes serious eye irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

- · 2.2 Label elements
- · Labelling according to Regulation (EC) No 1272/2008

The substance is classified and labelled according to the GB CLP regulation.

· Hazard pictograms





GHS02 GHS07

- · Signal word Danger
- · Hazard statements

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

· Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No

smoking.

P240 Ground and bond container and receiving equipment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.
P304+P340 Wear protective gloves/protective clothing/eye protection/face protection.
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.

P501 Dispose of contents/container in accordance with local/regional/national/international

regulations.

- · 2.3 Other hazards
- · Results of PBT and vPvB assessment
- · **PBT:** Not applicable. · **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- · 3.1 Substances
- · CAS No. Description CAS: 67-63-0 2-Propanol

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Identification number(s)
EC number: 200-661-7
Index number: 603-117-00-0

SECTION 4: First aid measures

· 4.1 Description of first aid measures

· General information:

First aider needs to protect himself.

Immediately remove any clothing soiled by the product.

· After inhalation:

Remove person from danger area.

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

After skin contact:

After prolonged contact or any signs of skin changes (redness or other signs of inflammation) seek medical attention.

Flush contaminated skijn with soap and plenty of water.

· After eye contact:

Protect unharmed eye.

Rinse opened eye for several minutes under running water. Then consult a doctor.

Remove contact lenses

· After swallowing:

Do not induce vomiting; call for medical help immediately.

Rinse mouth and then drink 200 - 300 ml of water.

A person vomiting while laying on their back should be turned onto their side.

- Information for doctor: Please observe safety data sheet/label.
- 4.2 Most important symptoms and effects, both acute and delayed

Headache

Breathing difficulty

Dazed feeling

Gastric or intestinal disorders

· Hazards

Danger of impaired breathing.

Danger of pulmonary oedema.

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

Give Glucocorticoid-Aerosol in case of lung irritation.

Later observation for pneumonia and pulmonary oedema.

Symptomatic treatment.

SECTION 5: Firefighting measures

- 5.1 Extinguishing media
- · Suitable extinguishing agents:

Water spray, powder, carbon dioxide or foam. Fight larger fires with water spray or alcohol resistant foam.

- · For safety reasons unsuitable extinguishing agents: Water with full jet.
- 5.2 Special hazards arising from the substance or mixture

In case of fire, the following can be released:

Nitrogen oxides (NOx)

Carbon monoxide (CÓ)

Under certain fire conditions, traces of other toxic gases cannot be excluded.

Formation of toxic gases is possible during heating or in case of fire.

Combustible.

- · 5.3 Advice for firefighters
- · Protective equipment:

Wear fully protective suit.

Wear self-contained respiratory protective device.

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Do not inhale explosion gases or combustion gases.

Additional information

Cool endangered receptacles with water spray.

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures

Wear protective clothing.

Particular danger of slipping on leaked/spilled product.

Keep away from ignition sources.

Avoid contact with eyes and skin.

Ensure adequate ventilation.

• 6.2 Environmental precautions: Do not allow to enter sewers/surface or ground water.

· 6.3 Methods and material for containment and cleaning up:

Cover drains.

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Ensure adequate ventilation.

Dispose of the material collected according to regulations.

6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

· 7.1 Precautions for safe handling

Keep away from heat and direct sunlight.

Use solvent-proof equipment.

Store in cool, dry place in tightly closed receptacles.

Apply the general protection and hygiene measures for the handling with chemicals.

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

· Information about fire - and explosion protection:

Highly volatile, flammable constituents are released during processing.

Traces of flammable substances may collect in the steam chamber of enclosed systems. Keep clear ofignition sources.

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

· 7.2 Conditions for safe storage, including any incompatibilities

· Storage:

Requirements to be met by storerooms and receptacles:

Prevent any seepage into the ground.

Provide alkali-resistant floor.

Store in a cool location.

Store only in the original receptacle.

Information about storage in one common storage facility:

Store away from flammable substances.

Store away from foodstuffs.

Store away from oxidising agents.

Further information about storage conditions:

Keep container tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

Storage class: 3

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· 7.3 Specific end use(s) No further relevant information available.

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SECTION 8: Exposure controls/personal protection

- · 8.1 Control parameters
- Ingredients with limit values that require monitoring at the workplace:

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WEL Short-term value: 1250 mg/m³, 500 ppm Long-term value: 999 mg/m³, 400 ppm

- · Additional information: The lists valid during the making were used as basis.
- 8.2 Exposure controls
- · Appropriate engineering controls No further data; see item 7.
- Individual protection measures, such as personal protective equipment
- · General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

· Respiratory protection:

Not necessary if room is well-ventilated.

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device. If air-purifying respiratory protection is required according to the risk assessment, wear a respirator with full-face mask with combination filter (US) or with filter type ABEK (EN 14387) filter cartridge. If the respirator is the only protective measure, an ambient air self-contained breathing apparatus with afull face mask must be worn. Respirators and components must be approved to appropriate government standards (for example, NIOSH (US) or CEN (EU)). Translated with www.DeepL.com/Translator (free version)

· Hand protection



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

Fluorocarbon rubber (Viton)

Butyl rubber, BR

Nitrile rubber, NBR

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye/face protection



Tightly sealed goggles

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· Body protection:

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Protective work clothing (e. g. safety shoes EN ISO 20345, long-sleeved protective working garments).

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

Physical stateColour:Odour:Alcohol-like

• **Melting point/freezing point:** -89 °C (2-Propanol)

Boiling point or initial boiling point and boiling

range 82 °C (2-Propanol) Flammability Highly flammable.

· Lower and upper explosion limit

Lower: 2 Vol %Upper: 12 Vol %

Flash point:
 Ignition temperature:
 Decomposition temperature:
 pH
 12 °C (2-Propanol)
 425 °C (2-Propanol)
 Not determined.
 Not determined.

· Viscosity:

Kinematic viscosity Dynamic at 20 °C: Not determined. 2.43 mPas

Solubility

water at 20 °C:

· Partition coefficient n-octanol/water (log value) Not determined.

· Vapour pressure at 20 °C:

· Density and/or relative density

Density at 20 °C: 0.79 g/cm³

Relative density

Not determined.

Vapour density

Not determined.

Not determined.

· 9.2 Other information

· Appearance:

· Form: Fluid

Important information on protection of health and environment, and on safety.

• Auto-ignition temperature: Not determined.

• Explosive properties: Product is not explosive. However, formation of

43 hPa

explosive air/vapour mixtures are possible.

· Molecular weight 60 g/mol

· Change in condition

• Evaporation rate Not determined.

· Information with regard to physical hazard classes

Explosives
Flammable gases
Aerosols
Oxidising gases
Gases under pressure
Void
Void

· Flammable liquids Highly flammable liquid and vapour.

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· Flammable solids	Void	
· Self-reactive substances and mixtures	Void	
· Pyrophoric liquids	Void	
Pyrophoric solids	Void	
Self-heating substances and mixtures	Void	
· Substances and mixtures, which emit flamma	ble	
gases in contact with water	Void	
· Oxidising liquids	Void	
Oxidising solids	Void	
Organic peroxides	Void	
Corrosive to metals	Void	
Desensitised explosives	Void	

SECTION 10: Stability and reactivity

- · 10.1 Reactivity No further relevant information available.
- · 10.2 Chemical stability Stable with proper storage and handling.
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- 10.3 Possibility of hazardous reactions

Explosive reaction with oxidising agents such as calcium chlorate and or peroxides.

Forms explosive gas mixture with air.

- · 10.4 Conditions to avoid Heat, flames and sparks
- 10.5 Incompatible materials: Avoid contact with other chemicals.
- · 10.6 Hazardous decomposition products: On fire: see chapter 5

SECTION 11: Toxicological information

- · 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008
- · Acute toxicity Based on available data, the classification criteria are not met.

· LD/LC50 values relevant for classification:				
Oral	LD50	5,045 mg/kg (rat)		
Dermal	LD50	12,800 mg/kg (rabbit)		
Inhalative	LC50	5,045 mg/kg (rat) 12,800 mg/kg (rabbit) 30 mg/l (rat)		

- · Skin corrosion/irritation Based on available data, the classification criteria are not met.
- · Serious eye damage/irritation Causes serious eye irritation.
- · Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
- · Germ cell mutagenicity Based on available data, the classification criteria are not met.
- · Carcinogenicity Based on available data, the classification criteria are not met.
- Reproductive toxicity Based on available data, the classification criteria are not met.
- · STOT-single exposure May cause drowsiness or dizziness.
- · STOT-repeated exposure Based on available data, the classification criteria are not met.
- · Aspiration hazard Based on available data, the classification criteria are not met.
- · Subacute to chronic toxicity: -
- · 11.2 Information on other hazards
- · Endocrine disrupting properties Substance is not listed.

SECTION 12: Ecological information

- · 12.1 Toxicity
- · Aquatic toxicity: No further relevant information available.
- · 12.2 Persistence and degradability No further relevant information available.
- 12.3 Bioaccumulative potential No further relevant information available.
- 12.4 Mobility in soil No further relevant information available.

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- 12.5 Results of PBT and vPvB assessment
- · **PBT**: Not applicable. · **vPvB**: Not applicable.
- · 12.6 Endocrine disrupting properties

The product does not contain substances with endocrine disrupting properties.

- 12.7 Other adverse effects
- · Additional ecological information:
- · General notes:

Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

SECTION 13: Disposal considerations

· 13.1 Waste treatment methods

Observe local (country-specific) regulations and laws

This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system. Chemicals must be disposed of in compliance with the respective national regulations.

· European waste catalogue		
07 00 00	WASTES FROM ORGANIC CHEMICAL PROCESSES	
07 01 00	wastes from the manufacture, formulation, supply and use (MFSU) of basic organic chemicals	
07 01 04*	other organic solvents, washing liquids and mother liquors	
HP3	Flammable	
HP4	Irritant - skin irritation and eye damage	
HP5	Specific Target Organ Toxicity (STOT)/Aspiration Toxicity	

- · Uncleaned packaging:
- · **Recommendation:** Disposal must be made according to official regulations.
- Recommended cleansing agents: Water, if necessary together with cleansing agents.

SECTION 14: Transport information

- · 14.1 UN number or ID number
- · ADR, IMDG, IATA UN1219

· 14.2 UN proper shipping name

1219 ISOPROPANOL (ISOPROPYL ALCOHOL) · IMDG, IATA ISOPROPANOL (ISOPROPYL ALCOHOL)

- · 14.3 Transport hazard class(es)
- ADR



· Class 3 (F1) Flammable liquids.

· Label

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· IMDG, IATA	
· Class	3 Flammable liquids.
· Label	3
· 14.4 Packing group · ADR, IMDG, IATA	II
· 14.5 Environmental hazards:	Not applicable.
· 14.6 Special precautions for user	Warning: Flammable liquids.
Hazard identification number (Kemler code):	33
EMS Number:	F-E,S-D
· Stowage Category	В
 14.7 Maritime transport in bulk according to IM instruments 	
	Not applicable.
· Transport/Additional information:	
· ADR	
Limited quantities (LQ)	1L
Excepted quantities (EQ)	Code: E2
	Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· Transport category	2
Tunnel restriction code	D/E
·IMDG	
Limited quantities (LQ)	1L
Excepted quantities (EQ)	Code: E2
	Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml

SECTION 15: Regulatory information

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

UN 1219 ISOPROPANOL (ISOPROPYL ALCOHOL), 3, II

· Inventory of Hazardous Chemicals

CAS: 67-63-0 2-Propanol

· UN "Model Regulation":

- · Directive 2012/18/EU
- · Named dangerous substances ANNEX I Substance is not listed.
- · Seveso category P5c FLAMMABLE LIQUIDS
- Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t
- · Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 t
- · REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3, 40
- DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment Annex II

Substance is not listed.

- · REGULATION (EU) 2019/1148
- · Annex I RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

Substance is not listed.

· Annex II - REPORTABLE EXPLOSIVES PRECURSORS Substance is not listed.

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Regulation (EC) No 273/2004 on drug precursors Substance is not listed.

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- Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

Substance is not listed.

- · National regulations:
- · Information about limitation of use:

Employment restrictions concerning juveniles must be observed.

Employment restrictions concerning pregnant and lactating women must be observed.

· 15.2 Chemical safety assessment: A Chemical Safety Assessment has been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship. Application, use and handling of our products take place out of our control and are solely your responsibility.

- · Department issuing SDS: Product management
- · Contact: Product management
- Abbreviations and acronyms:

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Flammable liquids – Category 2

Eye Irrit. 2: Serious eye damage/eye irritation - Category 2

STOT SE 3: Specific target organ toxicity (single exposure) - Category 3

* Data compared to the previous version altered.

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Annex: Exposure scenario

- · Short title of the exposure scenario Chemicals for Laboratory and industrial use
- · Sector of Use
- SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
- SU9 Manufacture of fine chemicals
- SU24 Scientific research and development

· Product category

- PC19 Intermediate
- PC20 Processing aids such as pH-regulators, flocculants, precipitants, neutralization agents
- PC21 Laboratory chemicals
- PC29 Pharmaceuticals
- PC39 Cosmetics, personal care products
- PC40 Extraction agents

· Process category

PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.

PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition

PROC4 Chemical production where opportunity for exposure arises

Environmental release category

- ERC1 Manufacture of the substance
- ERC2 Formulation into mixture
- ERC6a Use of intermediate

Description of the activities / processes covered in the Exposure Scenario

See section 1 of the annex to the Safety Data Sheet.

- · Conditions of use
- · Duration and frequency 5 workdays/week.
- · Physical parameters
- · Physical state Fluid
- · Concentration of the substance in the mixture Raw material.
- Other operational conditions Observe the general safety regulations when handling chemicals.
- Other operational conditions affecting environmental exposure

Observe section 6 of the Safety Data Sheet (Accidental release measures).

· Other operational conditions affecting worker exposure

Avoid contact with eyes.

Take precautionary measures against static discharge.

Keep away from sources of ignition - No smoking.

Do not breathe gas/vapour/aerosol.

- Other operational conditions affecting consumer exposure Keep out of the reach of children.
- Other operational conditions affecting consumer exposure during the use of the product Not applicable.
- · Risk management measures
- · Worker protection

· Organisational protective measures

Provide Internal Plant Instruction.

Employment restrictions concerning juveniles must be observed.

Employment restrictions concerning pregnant and lactating women must be observed.

Technical protective measures

Provide explosion-proof electrical equipment.

Ensure that suitable extractors are available on processing machines

· Personal protective measures

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes.

Tightly sealed goggles

Measures for consumer protection

Ensure adequate labelling.

Keep locked up and out of the reach of children.

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• Environmental protection measures

Avoid release to the environment. Obtain special instructions / refer to Safety Data Sheet.

- \cdot Water Do not allow to reach ground water, water bodies or sewage system.
- · Soil Prevent contamination of soil.
- · Notes In case of unintended release of the product: See section 6 of the Safety Data Sheet.
- **Disposal measures** Ensure that waste is collected and contained.
- Disposal procedures

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- · Waste type Partially emptied and uncleaned packaging
- · Exposure estimation
- Worker (oral) Detailed information on the exposure estimation can be found at http://www.ecetoc.org/tra.
- · Worker (dermal) Detailed information on the exposure estimation can be found at http://www.ecetoc.org/tra.
- · Worker (inhalation) Detailed information on the exposure estimation can be found at http://www.ecetoc.org/tra.
- **Environment**

Detailed information on the estimation of the environmental exposure can be found at http://ecb.irc.ec.europa.eu/euses/.

- · Consumer Not relevant for this Exposure Scenario.
- · Guidance for downstream users

Whether the downstream user acts within the scope of the Exposure Scenario can be verified based on the information in sections 1 to 8.

For the risk assessment, the tools recommended by ECHA can be used.

- F