

Safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



1-Propanol \geq 99,5%, for synthesis

article number: **9169**
Version: **2.0 en**
Replaces version of: 2016-03-15
Version: (1)

date of compilation: 2016-03-15
Revision: 2018-10-08

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

1.1 Product identifier

| | |
|---------------------------------|-----------------------|
| Identification of the substance | 1-Propanol |
| Article number | 9169 |
| Registration number (REACH) | 01-2119486761-29-xxxx |
| Index No | 603-003-00-0 |
| EC number | 200-746-9 |
| CAS number | 71-23-8 |

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

Identified uses: laboratory chemical
laboratory and analytical use

1.3 Details of the supplier of the safety data sheet

Carl Roth GmbH + Co KG
Schoemperlenstr. 3-5
D-76185 Karlsruhe
Germany

Telephone: +49 (0) 721 - 56 06 0
Telefax: +49 (0) 721 - 56 06 149
e-mail: sicherheit@carlroth.de
Website: www.carlroth.de

Competent person responsible for the safety data sheet : Department Health, Safety and Environment

e-mail (competent person) : sicherheit@carlroth.de

1.4 Emergency telephone number

Emergency information service **Poison Centre Munich: +49/(0)89 19240**

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

| Classification acc. to GHS | | | |
|----------------------------|---|---------------------------|------------------|
| Section | Hazard class | Hazard class and category | Hazard statement |
| 2.6 | flammable liquid | (Flam. Liq. 2) | H225 |
| 3.3 | serious eye damage/eye irritation | (Eye Dam. 1) | H318 |
| 3.8D | specific target organ toxicity - single exposure (narcotic effects, drowsiness) | (STOT SE 3) | H336 |

Safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



1-Propanol \geq 99,5%, for synthesis

article number: 9169

The most important adverse physicochemical, human health and environmental effects

Narcotic effects.

2.2 Label elements

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

Signal word

Danger

Pictograms

GHS02, GHS05,
GHS07



Hazard statements

H225 Highly flammable liquid and vapour
H318 Causes serious eye damage
H336 May cause drowsiness or dizziness

Precautionary statements

Precautionary statements - prevention

P210 Keep away from open flames and hot surfaces. No smoking.
P233 Keep container tightly closed.
P280 Wear protective gloves/eye protection.

Precautionary statements - response

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/doctor.

Labelling of packages where the contents do not exceed 125 ml

Signal word: **Danger**

Symbol(s)



H318 Causes serious eye damage.
P280 Wear protective gloves/eye protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/doctor.

2.3 Other hazards

There is no additional information.

Safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



1-Propanol $\geq 99,5\%$, for synthesis

article number: **9169**

SECTION 3: Composition/information on ingredients

3.1 Substances

| | |
|-----------------------------|-----------------------|
| Name of substance | n-Propanol |
| Index No | 603-003-00-0 |
| Registration number (REACH) | 01-2119486761-29-xxxx |
| EC number | 200-746-9 |
| CAS number | 71-23-8 |
| Molecular formula | C_3H_8O |
| Molar mass | 60,1 g/mol |

SECTION 4: First aid measures

4.1 Description of first aid measures



General notes

Take off contaminated clothing.

Following inhalation

Remove person to fresh air and keep comfortable for breathing. Call a doctor if you feel unwell.

Following skin contact

Rinse skin with water/shower.

Following eye contact

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

Following ingestion

Observe aspiration hazard if vomiting occurs. Call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

Irritant effects, Cough, Drowsiness, Headache, Dizziness, Vertigo, Dyspnoea, Narcosis, Risk of serious damage to eyes

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures

5.1 Extinguishing media



Safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



1-Propanol \geq 99,5%, for synthesis

article number: 9169

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings
water spray, foam, alcohol resistant foam, dry extinguishing powder, carbon dioxide (CO₂)

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Combustible. Vapours may form explosive mixtures with air.

Hazardous combustion products

In case of fire may be liberated: carbon monoxide (CO), carbon dioxide (CO₂)

5.3 Advice for firefighters

Vapours are heavier than air. Beware of reignition. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures



For non-emergency personnel

Do not breathe vapour/spray. Avoid contact with skin and eyes. Avoidance of ignition sources.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Explosive properties.

6.3 Methods and material for containment and cleaning up

Advices on how to contain a spill

Covering of drains.

Advices on how to clean up a spill

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Provide adequate ventilation as well as local exhaustion at critical locations. Avoid: Aerosol or mist formation. When not in use, keep containers tightly closed.

• Measures to prevent fire as well as aerosol and dust generation



Keep away from sources of ignition - No smoking.

Take precautionary measures against static discharge.

Safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



1-Propanol \geq 99,5%, for synthesis

article number: 9169

Advice on general occupational hygiene

Wash hands before breaks and after work. When using do not smoke.

7.2 Conditions for safe storage, including any incompatibilities

Store in a well-ventilated place. Keep container tightly closed.

Incompatible substances or mixtures

Observe hints for combined storage.

Consideration of other advice

Ground/bond container and receiving equipment.

• Ventilation requirements

Use local and general ventilation.

• Specific designs for storage rooms or vessels

Recommended storage temperature: 15 – 25 °C.

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

National limit values

Occupational exposure limit values (Workplace Exposure Limits)

| Country | Name of agent | CAS No | Notation | Identifier | TWA [ppm] | TWA [mg/m ³] | STEL [ppm] | STEL [mg/m ³] | Source |
|---------|---------------|---------|----------|------------|-----------|--------------------------|------------|---------------------------|----------------------|
| IE | n-propanol | 71-23-8 | | OELV | 100 | | | | S.I. No. 619 of 2001 |

Notation

STEL Short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

TWA Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

Relevant DNELs/DMELs/PNECs and other threshold levels

• human health values

| Endpoint | Threshold level | Protection goal, route of exposure | Used in | Exposure time |
|----------|-------------------------|------------------------------------|-------------------|----------------------------|
| DNEL | 1.723 mg/m ³ | human, inhalatory | worker (industry) | chronic - local effects |
| DNEL | 268 mg/m ³ | human, inhalatory | worker (industry) | chronic - systemic effects |
| DNEL | 1.723 mg/m ³ | human, inhalatory | worker (industry) | acute - systemic effects |
| DNEL | 136 mg/kg bw/day | human, dermal | worker (industry) | chronic - systemic effects |

Safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



1-Propanol \geq 99,5%, for synthesis

article number: 9169

• environmental values

| Endpoint | Threshold level | Environmental compartment | Exposure time |
|----------|-----------------|------------------------------|------------------------------|
| PNEC | 10 mg/l | freshwater | short-term (single instance) |
| PNEC | 1 mg/l | marine water | short-term (single instance) |
| PNEC | 96 mg/l | sewage treatment plant (STP) | short-term (single instance) |
| PNEC | 22,8 mg/kg | freshwater sediment | short-term (single instance) |
| PNEC | 2,28 mg/kg | marine sediment | short-term (single instance) |
| PNEC | 2,2 mg/kg | soil | short-term (single instance) |

8.2 Exposure controls

Individual protection measures (personal protective equipment)

Eye/face protection



Use safety goggle with side protection.

Skin protection



• hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

• type of material

NBR (Nitrile rubber)

• material thickness

0,4 mm.

• breakthrough times of the glove material

>480 minutes (permeation: level 6)

• other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

Flame-retardant protective clothing.

Respiratory protection



Respiratory protection necessary at: Aerosol or mist formation. Type: A (against organic gases and vapours with a boiling point of > 65 °C, colour code: Brown).

Environmental exposure controls

Keep away from drains, surface and ground water.

Safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



1-Propanol $\geq 99,5\%$, for synthesis

article number: 9169

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

| | |
|-----------------|-------------------|
| Physical state | liquid (fluid) |
| Colour | colourless |
| Odour | like: alcohol |
| Odour threshold | No data available |

Other physical and chemical parameters

| | |
|---|--|
| pH (value) | ~ 7 (water: 200 g/l, 20 °C) |
| Melting point/freezing point | -127 °C |
| Initial boiling point and boiling range | 96 – 98 °C |
| Flash point | 15 °C (closed cup) |
| Evaporation rate | no data available |
| Flammability (solid, gas) | not relevant (fluid) |
| <u>Explosive limits</u> | |
| • lower explosion limit (LEL) | 2,1 vol% |
| • upper explosion limit (UEL) | 19,2 vol% |
| Explosion limits of dust clouds | not relevant |
| Vapour pressure | 19 hPa at 20 °C |
| Density | 0,8 g/cm ³ at 20 °C |
| Vapour density | 2,1 (air = 1) |
| Bulk density | Not applicable |
| Relative density | Information on this property is not available. |
| <u>Solubility(ies)</u> | |
| Water solubility | miscible in any proportion |
| <u>Partition coefficient</u> | |
| n-octanol/water (log KOW) | 0,2 (pH value: 7, 25 °C) (ECHA) |
| Auto-ignition temperature | 360 °C |
| Decomposition temperature | no data available |
| Viscosity | |
| • dynamic viscosity | 2,3 mPa s at 20 °C |
| Explosive properties | Shall not be classified as explosive |
| Oxidising properties | none |

9.2 Other information

| | |
|--------------------------------------|--|
| Temperature class (EU, acc. to ATEX) | T2 (Maximum permissible surface temperature on the equipment: 300°C) |
|--------------------------------------|--|

Safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



1-Propanol $\geq 99,5\%$, for synthesis

article number: 9169

SECTION 10: Stability and reactivity

10.1 Reactivity

Risk of ignition. Vapours can form explosive mixtures with air.

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions

Violent reaction with: Alkali metals, Alkaline earth metal, Strong oxidiser

10.4 Conditions to avoid

Keep away from heat.

10.5 Incompatible materials

different plastics, Rubber articles

10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Shall not be classified as acutely toxic.

| Exposure route | Endpoint | Value | Species | Source |
|----------------|----------|-------------|---------|--------|
| oral | LD50 | 1.870 mg/kg | rat | TOXNET |
| dermal | LD50 | 5.040 mg/kg | rabbit | TOXNET |

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

Summary of evaluation of the CMR properties

Shall not be classified as germ cell mutagenic, carcinogenic nor as a reproductive toxicant

• Specific target organ toxicity - single exposure

May cause drowsiness or dizziness.

• Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

Symptoms related to the physical, chemical and toxicological characteristics

Safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



1-Propanol $\geq 99,5\%$, for synthesis

article number: 9169

• If swallowed

vomiting, presenting an aspiration hazard

• If in eyes

Causes serious eye damage, risk of blindness

• If inhaled

Irritation to respiratory tract, cough, drowsiness, headache, vertigo, dizziness, breathing difficulties

• If on skin

Frequently or prolonged contact with skin may cause dermal irritation

Other information

Other adverse effects: Dyspnoea, Narcosis

SECTION 12: Ecological information

12.1 Toxicity

acc. to 1272/2008/EC: Shall not be classified as hazardous to the aquatic environment.

Aquatic toxicity (acute)

| Endpoint | Value | Species | Source | Exposure time |
|----------|------------|-----------------------|--------|---------------|
| LC50 | 4.555 mg/l | fish | ECHA | 96 h |
| EC50 | 3.644 mg/l | aquatic invertebrates | ECHA | 48 h |
| ErC50 | 9.170 mg/l | algae | ECHA | 48 h |

Aquatic toxicity (chronic)

| Endpoint | Value | Species | Source | Exposure time |
|----------|-----------|-----------------------|--------|---------------|
| EC50 | >100 mg/l | aquatic invertebrates | ECHA | 21 d |
| NOEC | >100 mg/l | aquatic invertebrates | ECHA | 21 d |

12.2 Process of degradability

The substance is readily biodegradable.

Theoretical Oxygen Demand: 2,4 g/g

Theoretical Carbon Dioxide: 2,197 mg/mg

Biochemical Oxygen Demand: 73 % von CSB

| Process | Degradation rate | Time |
|------------------|------------------|------|
| biotic/abiotic | 75 % | 20 d |
| oxygen depletion | 64 % | 5 d |

12.3 Bioaccumulative potential

Does not significantly accumulate in organisms.

n-octanol/water (log KOW)

0,2 (pH value: 7, 25 °C)

12.4 Mobility in soil

Data are not available.

Henry's law constant

0,177 Pa m³/mol at 20 °C

Safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



1-Propanol $\geq 99,5\%$, for synthesis

article number: 9169

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Other adverse effects

Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods



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

Sewage disposal-relevant information

Do not empty into drains.

Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used.

Sewage disposal-relevant information

Do not empty into drains.

Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used.


13.2 Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions.

SECTION 14: Transport information

| | | |
|------|--|---|
| 14.1 | UN number | 1274 |
| 14.2 | UN proper shipping name | n-PROPANOL |
| | Hazardous ingredients | 1-Propanol |
| 14.3 | Transport hazard class(es) |  |
| | Class | 3 (flammable liquids) |
| 14.4 | Packing group | II (substance presenting medium danger) |
| 14.5 | Environmental hazards | NONE (non-environmentally hazardous acc. to the dangerous goods regulations) |
| 14.6 | Special precautions for user | |
| | Provisions for dangerous goods (ADR) should be complied within the premises. | |
| 14.7 | Transport in bulk according to Annex II of MARPOL and the IBC Code | |

Safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



1-Propanol $\geq 99,5\%$, for synthesis

article number: 9169

The cargo is not intended to be carried in bulk.

14.8 Information for each of the UN Model Regulations

• Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)

| | |
|---------------------------------------|----------------------------------|
| UN number | 1274 |
| Proper shipping name | n-PROPANOL |
| Particulars in the transport document | UN1274, n-PROPANOL, 3, II, (D/E) |
| Class | 3 |
| Classification code | F1 |
| Packing group | II |
| Danger label(s) | 3 |



| | |
|-------------------------------|-----|
| Excepted quantities (EQ) | E2 |
| Limited quantities (LQ) | 1 L |
| Transport category (TC) | 2 |
| Tunnel restriction code (TRC) | D/E |
| Hazard identification No | 33 |

• International Maritime Dangerous Goods Code (IMDG)

| | |
|--|--------------------------------------|
| UN number | 1274 |
| Proper shipping name | n-PROPANOL |
| Particulars in the shipper's declaration | UN1274, n-PROPANOL, 3, II, 15°C c.c. |
| Class | 3 |
| Marine pollutant | - |
| Packing group | II |
| Danger label(s) | 3 |



| | |
|--------------------------|----------|
| Special provisions (SP) | - |
| Excepted quantities (EQ) | E2 |
| Limited quantities (LQ) | 1 L |
| EmS | F-E, S-D |
| Stowage category | B |

• International Civil Aviation Organization (ICAO-IATA/DGR)

| | |
|----------------------|------------|
| UN number | 1274 |
| Proper shipping name | n-Propanol |

Safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



1-Propanol \geq 99,5%, for synthesis

article number: 9169

| | |
|--|---------------------------|
| Particulars in the shipper's declaration | UN1274, n-Propanol, 3, II |
| Class | 3 |
| Packing group | II |
| Danger label(s) | 3 |



| | |
|--------------------------|-----|
| Special provisions (SP) | A3 |
| Excepted quantities (EQ) | E2 |
| Limited quantities (LQ) | 1 L |

SECTION 15: Regulatory information

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

Relevant provisions of the European Union (EU)

- **Regulation 649/2012/EU concerning the export and import of hazardous chemicals (PIC)**

Not listed.

- **Regulation 1005/2009/EC on substances that deplete the ozone layer (ODS)**

Not listed.

- **Regulation 850/2004/EC on persistent organic pollutants (POP)**

Not listed.

- **Restrictions according to REACH, Annex XVII**

| Name of substance | CAS No | Wt% | Type of registration | Conditions of restriction | No |
|-------------------|--------|-----|-------------------------|---------------------------|----|
| 1-Propanol | | 100 | 1907/2006/EC annex XVII | R3 | 3 |
| 1-Propanol | | 100 | 1907/2006/EC annex XVII | R40 | 40 |

Legend

R3

1. Shall not be used in:
 - ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,
 - tricks and jokes,
 - games for one or more participants, or any article intended to be used as such, even with ornamental aspects,
2. Articles not complying with paragraph 1 shall not be placed on the market.
3. Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they:
 - can be used as fuel in decorative oil lamps for supply to the general public, and,
 - present an aspiration hazard and are labelled with R65 or H304,
4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN).
5. Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of dangerous substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met:
 - (a) lamp oils, labelled with R65 or H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: 'Keep lamps filled with this liquid out of the reach of children'; and, by 1 December 2010, 'Just a sip of lamp oil - or even sucking the wick of lamps - may lead to life-threatening lung damage';
 - (b) grill lighter fluids, labelled with R65 or H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: 'Just a sip of grill lighter may lead to life threatening lung damage';
 - (c) lamp oils and grill lighters, labelled with R65 or H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.
6. No later than 1 June 2014, the Commission shall request the European Chemicals Agency to prepare a dossier, in accordance with Article 69 of the present Regulation with a view to ban, if appropriate, grill lighter fluids and

Safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



1-Propanol ≥ 99,5%, for synthesis

article number: 9169

Legend

| | |
|-----|---|
| | fuel for decorative lamps, labelled R65 or H304, intended for supply to the general public. |
| | 7. Natural or legal persons placing on the market for the first time lamp oils and grill lighter fluids, labelled with R65 or H304, shall by 1 December 2011, and annually thereafter, provide data on alternatives to lamp oils and grill lighter fluids labelled R65 or H304 to the competent authority in the Member State concerned. Member States shall make those data available to the Commission. |
| R40 | 1. Shall not be used, as substance or as mixtures in aerosol dispensers where these aerosol dispensers are intended for supply to the general public for entertainment and decorative purposes such as the following: - metallic glitter intended mainly for decoration, - artificial snow and frost, - 'whoopie' cushions, - silly string aerosols, - imitation excrement, - horns for parties, - decorative flakes and foams, - artificial cobwebs, - stink bombs. 2. Without prejudice to the application of other Community provisions on the classification, packaging and labelling of substances, suppliers shall ensure before the placing on the market that the packaging of aerosol dispensers referred to above is marked visibly, legibly and indelibly with: 'For professional users only'. 3. By way of derogation, paragraphs 1 and 2 shall not apply to the aerosol dispensers referred to Article 8 (1a) of Council Directive 75/324/EEC (2). 4. The aerosol dispensers referred to in paragraphs 1 and 2 shall not be placed on the market unless they conform to the requirements indicated. |

• Restrictions according to REACH, Title VIII

None.

• List of substances subject to authorisation (REACH, Annex XIV)/SVHC - candidate list

not listed

• Seveso Directive

| 2012/18/EU (Seveso III) | | | |
|-------------------------|---------------------------------------|---|-------|
| No | Dangerous substance/hazard categories | Qualifying quantity (tonnes) for the application of lower and upper-tier requirements | Notes |
| P5c | flammable liquids (cat. 2, 3) | 5.000 50.000 | 51) |

Notation

51) Flammable liquids, categories 2 or 3 not covered by P5a and P5b

• Directive 75/324/EEC relating to aerosol dispensers

Filling batch

Deco-Paint Directive (2004/42/EC)

| | |
|-------------|------------------|
| VOC content | 100 % 800 g/l |
|-------------|------------------|

Directive on industrial emissions (VOCs, 2010/75/EU)

| | |
|-------------|---------|
| VOC content | 100 % |
| VOC content | 800 g/l |

Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) - Annex II

not listed

Regulation 166/2006/EC concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

not listed

Safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



1-Propanol ≥ 99,5%, for synthesis

article number: 9169

Directive 2000/60/EC establishing a framework for Community action in the field of water policy (WFD)

not listed

Regulation 98/2013/EU on the marketing and use of explosives precursors

not listed

Regulation 111/2005/EC laying down rules for the monitoring of trade between the Community and third countries in drug precursors

not listed

National inventories

Substance is listed in the following national inventories:

| Country | National inventories | Status |
|---------|----------------------|---------------------|
| AU | AICS | substance is listed |
| CA | DSL | substance is listed |
| CN | IECSC | substance is listed |
| EU | ECSI | substance is listed |
| EU | REACH Reg. | substance is listed |
| JP | CSCL-ENCS | substance is listed |
| KR | KECI | substance is listed |
| MX | INSQ | substance is listed |
| NZ | NZIoC | substance is listed |
| PH | PICCS | substance is listed |
| TR | CICR | substance is listed |
| TW | TCSI | substance is listed |
| US | TSCA | substance is listed |

Legend

| | |
|------------|---|
| AICS | Australian Inventory of Chemical Substances |
| CICR | Chemical Inventory and Control Regulation |
| CSCL-ENCS | List of Existing and New Chemical Substances (CSCL-ENCS) |
| DSL | Domestic Substances List (DSL) |
| ECSI | EC Substance Inventory (EINECS, ELINCS, NLP) |
| IECSC | Inventory of Existing Chemical Substances Produced or Imported in China |
| INSQ | National Inventory of Chemical Substances |
| KECI | Korea Existing Chemicals Inventory |
| NZIoC | New Zealand Inventory of Chemicals |
| PICCS | Philippine Inventory of Chemicals and Chemical Substances |
| REACH Reg. | REACH registered substances |
| TCSI | Taiwan Chemical Substance Inventory |
| TSCA | Toxic Substance Control Act |

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance.

Safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



1-Propanol \geq 99,5%, for synthesis

article number: 9169

SECTION 16: Other information

16.1 Indication of changes (revised safety data sheet)

| Section | Former entry (text/value) | Actual entry (text/value) | Safety-relevant |
|---------|--|---|-----------------|
| 2.2 | | Pictograms: change in the listing (table) | yes |
| 2.2 | | Precautionary statements - prevention: change in the listing (table) | yes |
| 8.1 | | • human health values: change in the listing (table) | yes |
| 8.1 | | • environmental values: change in the listing (table) | yes |
| 14.3 | Transport hazard class(es) | Transport hazard class(es): class 3 hazard - flammable liquids | yes |
| 14.8 | Particulars in the transport document: UN1274, n-PROPANOL, (propán-1-ol), 3, II, (D/E) | Particulars in the transport document: UN1274, n-PROPANOL, 3, II, (D/E) | yes |
| 14.8 | Particulars in the shipper's declaration: UN1274, n-PROPANOL, (propán-1-ol), 3, II, 15°C c.c. | Particulars in the shipper's declaration: UN1274, n-PROPANOL, 3, II, 15°C c.c. | yes |
| 14.8 | | Marine pollutant: - | yes |
| 14.8 | | • International Civil Aviation Organization (ICAO-IATA/DGR) | yes |
| 14.8 | | UN number: 1274 | yes |
| 14.8 | | Proper shipping name: n-Propanol | yes |
| 14.8 | | Particulars in the shipper's declaration: UN1274, n-Propanol, 3, II | yes |
| 14.8 | | Class: 3 | yes |
| 14.8 | | Packing group: II | yes |
| 14.8 | | Danger label(s): 3 | yes |
| 14.8 | | Danger label(s): change in the listing (table) | yes |
| 14.8 | | Special provisions (SP): A3 | yes |
| 14.8 | | Excepted quantities (EQ): E2 | yes |
| 14.8 | | Limited quantities (LQ): 1 L | yes |

Safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



1-Propanol ≥ 99,5%, for synthesis

article number: 9169

Abbreviations and acronyms

| Abbr. | Descriptions of used abbreviations |
|----------------------|---|
| ADN | Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways) |
| ADR | Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road) |
| CAS | Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances) |
| CLP | Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures |
| CMR | Carcinogenic, Mutagenic or toxic for Reproduction |
| DGR | Dangerous Goods Regulations (see IATA/DGR) |
| DMEL | Derived Minimal Effect Level |
| DNEL | Derived No-Effect Level |
| EINECS | European Inventory of Existing Commercial Chemical Substances |
| ELINCS | European List of Notified Chemical Substances |
| EmS | Emergency Schedule |
| GHS | "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations |
| IATA | International Air Transport Association |
| IATA/DGR | Dangerous Goods Regulations (DGR) for the air transport (IATA) |
| ICAO | International Civil Aviation Organization |
| IMDG | International Maritime Dangerous Goods Code |
| index No | the Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008 |
| MARPOL | International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant") |
| NLP | No-Longer Polymer |
| PBT | Persistent, Bioaccumulative and Toxic |
| PNEC | Predicted No-Effect Concentration |
| ppm | parts per million |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals |
| RID | Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail) |
| S.I. No. 619 of 2001 | Safety, Health and Welfare at Work (Chemical Agents) Regulations 2001 |
| STEL | short-term exposure limit |
| SVHC | Substance of Very High Concern |
| TWA | time-weighted average |
| VOC | Volatile Organic Compounds |
| vPvB | very Persistent and very Bioaccumulative |

Safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



1-Propanol \geq 99,5%, for synthesis

article number: 9169

Key literature references and sources for data

- Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU
- Regulation (EC) No. 1272/2008 (CLP, EU GHS)
- Dangerous Goods Regulations (DGR) for the air transport (IATA)
- International Maritime Dangerous Goods Code (IMDG)

List of relevant phrases (code and full text as stated in chapter 2 and 3)

| Code | Text |
|------|------------------------------------|
| H225 | highly flammable liquid and vapour |
| H318 | causes serious eye damage |
| H336 | may cause drowsiness or dizziness |

Disclaimer

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.