# N-PROPYL ALCOHOL FOR SYNTHESIS MSDS

CAS-No.: 71-23-8 MSDS



### MATERIAL SAFETY DATA SHEET (MSDS)

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

1.1. Product identifier

Product form : Substance

:

EC-No. : 200-746-9
CAS-No. : 71-23-8
Product code : 00267

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

#### 1.2.1. Relevant identified uses

Use of the substance/mixture : Laboratory chemicals, Manufacture of substances

#### 1.2.2. Uses advised against

No additional information available

#### 1.3. Details of the supplier of the safety data sheet

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#### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flammable liquids, H225

Category 2

Serious eye damage/eye H318

irritation, Category 1

Specific target organ H336

toxicity — Single exposure, Category 3,

Narcosis

Full text of hazard classes and H-statements : see section 16

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according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

#### Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

F; R11 Xi; R41 R67

Full text of R-phrases: see section 16

#### Adverse physicochemical, human health and environmental effects

No additional information available

#### 2.2. Label elements

#### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :







GHS02

GHS05

GHS07

Signal word (CLP) : Danger

Hazard statements (CLP) : H225 - Highly flammable liquid and vapour.

H318 - Causes serious eye damage.

H336 - May cause drowsiness or dizziness.

Precautionary statements (CLP) : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition

sources. No smoking.

P261 - Avoid breathing vapours, dust, fume, gas.

P280 - Wear protective gloves, protective clothing, face protection, 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.

#### 2.3. Other hazards

No additional information available

#### **SECTION 3: Composition/information on ingredients**

#### 3.1. Substances

Name : n-PROPYL ALCOHOL For Synthesis

CAS-No. : 71-23-8 EC-No. : 200-746-9

Full text of R- and H-statements: see section 16

#### 3.2. Mixtures

Not applicable

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#### **SECTION 4: First aid measures**

#### 4.1. Description of first aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a POISON

CENTER/doctor if you feel unwell.

First-aid measures after skin contact : Get immediate medical advice/attention. Wash with plenty of water/....

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present

and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

First-aid measures after ingestion : Rinse mouth. Do not induce vomiting. Get medical advice/attention.

#### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation : May cause drowsiness or dizziness. Symptoms/effects after eye contact : Causes serious eye damage.

#### 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

#### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media : Carbon dioxide. Dry powder. Foam. Water spray.
Unsuitable extinguishing media : Do not use extinguishing media containing water.

#### 5.2. Special hazards arising from the substance or mixture

Fire hazard : Highly flammable liquid and vapour.

Explosion hazard : May form flammable/explosive vapour-air mixture.

#### 5.3. Advice for firefighters

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory

protection.

#### **SECTION 6: Accidental release measures**

#### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Remove ignition sources. Use special care to avoid static electric charges. No open

flames. No smoking.

#### 6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders

Protective equipment : Use personal protective equipment as required.

Emergency procedures : Ventilate area.

#### 6.2. Environmental precautions

Avoid release to the environment.

#### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : On land, sweep or shovel into suitable containers. Collect spillage.

#### 6.4. Reference to other sections

No additional information available

#### **SECTION 7: Handling and storage**

#### 7.1. Precautions for safe handling

Additional hazards when processed

- : Handle empty containers with care because residual vapours are flammable.
- Precautions for safe handling : Avoid contact with skin and eyes. Use only non-sparking tools. Keep away from sources of ignition No smoking. Use only outdoors or in a well-ventilated area. Do

not breathe vapours.

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Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands and other exposed

areas with mild soap and water before eating, drinking or smoking and when leaving

work.

#### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed.

Ground/bond container and receiving equipment.

Storage conditions : Keep in fireproof place. Keep container tightly closed.

Incompatible materials : Heat sources.

#### 7.3. Specific end use(s)

No additional information available

#### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

No additional information available

#### 8.2. Exposure controls

Hand protection : Protective gloves

Eye protection : Chemical goggles or safety glasses
Skin and body protection : Wear suitable protective clothing

Respiratory protection : Where exposure through inhalation may occur from use, respiratory protection

equipment is recommended

#### **SECTION 9: Physical and chemical properties**

#### 9.1. Information on basic physical and chemical properties

Physical state : Liquid

Colour : Clear Colorless.

Odour : alcoholic odour.

Odour threshold : No data available

pH : No data available

Relative evaporation rate (butylacetate=1) : 1.3

Melting point : -127 °C

Freezing point : No data available

Boiling point : 97 °C

Flash point : 15 °C

Auto-ignition temperature : 412 °C

Decomposition temperature : No data available

Flammability (solid, gas) : Flammable

Highly flammable liquid and vapour.

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Vapour pressure : 33 mm Hg at 20 °C

Relative vapour density at 20 °C : 2.1

Relative density : No data available

Density : 0.804 g/cm<sup>3</sup>

Solubility : Water: Infinitely soluble

Log Pow : No data available

Viscosity, kinematic : No data available

Viscosity, dynamic : 2.27 mPa.s at 20°C

Explosive properties : No data available

Oxidising properties : No data available

Explosive limits : 0.023 - 0.137 vol %

#### 9.2. Other information

No additional information available

#### **SECTION 10: Stability and reactivity**

#### 10.1. Reactivity

No additional information available

#### 10.2. Chemical stability

Stable under normal conditions.

#### 10.3. Possibility of hazardous reactions

No additional information available

#### 10.4. Conditions to avoid

Open flame. Heat. Sparks.

#### 10.5. Incompatible materials

No additional information available

#### 10.6. Hazardous decomposition products

May release flammable gases.

#### **SECTION 11: Toxicological information**

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Causes serious eye damage.

Respiratory or skin sensitisation : Not classified Germ cell mutagenicity : Not classified Carcinogenicity : Not classified

Reproductive toxicity : Not classified

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STOT-single exposure : May cause drowsiness or dizziness.

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

#### n-PROPYL ALCOHOL For Synthesis (71-23-8)

Viscosity, kinematic 2.82338308 mm<sup>2</sup>/s

#### **SECTION 12: Ecological information**

#### 12.1. Toxicity

No additional information available

#### 12.2. Persistence and degradability

No additional information available

#### 12.3. Bioaccumulative potential

No additional information available

#### 12.4. Mobility in soil

No additional information available

#### 12.5. Results of PBT and vPvB assessment

No additional information available

#### 12.6. Other adverse effects

No additional information available

#### **SECTION 13: Disposal considerations**

#### 13.1. Waste treatment methods

Product/Packaging disposal recommendations

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

Additional information

: Handle empty containers with care because residual vapours are flammable.

#### **SECTION 14: Transport information**

In accordance with ADR / RID / IMDG / IATA / ADN

#### 14.1. UN number

UN-No. (ADR) : 1274 UN-No. (IMDG) : 1274 UN-No. (IATA) : 1274 UN-No. (ADN) : 1274 UN-No. (RID) : 1274

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#### 14.2. UN proper shipping name

Proper Shipping Name (ADR) : N-PROPANOL (PROPYL ALCOHOL, NORMAL)
Proper Shipping Name (IMDG) : n-PROPANOL (PROPYL ALCOHOL, NORMAL)

Proper Shipping Name (IATA) : n-Propanol

Proper Shipping Name (ADN) : N-PROPANOL (PROPYL ALCOHOL, NORMAL)
Proper Shipping Name (RID) : n-PROPANOL (PROPYL ALCOHOL, NORMAL)

Transport document description (ADR) : UN 1274 N-PROPANOL (PROPYL ALCOHOL, NORMAL), 3, II, (D/E)
Transport document description (IMDG) : UN 1274 n-PROPANOL (PROPYL ALCOHOL, NORMAL), 3, II (15°C c.c.)

Transport document description (IATA) : UN 1274 n-Propanol, 3, II

Transport document description (ADN) : UN 1274 N-PROPANOL (PROPYL ALCOHOL, NORMAL), 3, II Transport document description (RID) : UN 1274 n-PROPANOL (PROPYL ALCOHOL, NORMAL), 3, II

#### 14.3. Transport hazard class(es)

#### **ADR**

Transport hazard class(es) (ADR) : 3
Danger labels (ADR) : 3



#### **IMDG**

Transport hazard class(es) (IMDG) : 3
Danger labels (IMDG) : 3



#### **IATA**

Transport hazard class(es) (IATA) : 3
Hazard labels (IATA) : 3



#### ADN

Transport hazard class(es) (ADN) : 3
Danger labels (ADN) : 3



#### RID

Transport hazard class(es) (RID) : 3

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Danger labels (RID)



#### 14.4. **Packing group**

Packing group (ADR) : II Packing group (IMDG) : 11 Packing group (IATA) : 11 Packing group (ADN) : 11 Packing group (RID) : II

#### **Environmental hazards** 14.5.

Dangerous for the environment : No Marine pollutant : No

Other information : No supplementary information available

#### Special precautions for user

#### - Overland transport

: F1 Classification code (ADR) Limited quantities (ADR) : 11 Excepted quantities (ADR) : E2

Packing instructions (ADR) : P001, IBC02, R001

: MP19 Mixed packing provisions (ADR) Portable tank and bulk container : T4

instructions (ADR)

Portable tank and bulk container special

provisions (ADR)

: TP1

Tank code (ADR) : LGBF Vehicle for tank carriage : FL Transport category (ADR) : 2 Special provisions for carriage - Operation : S2, S20

(ADR)

Hazard identification number (Kemler No.)

Orange plates

Tunnel restriction code (ADR) : D/E EAC code : •2YE

### - Transport by sea

Limited quantities (IMDG) : 1 L Excepted quantities (IMDG) : E2 Packing instructions (IMDG) : P001 IBC packing instructions (IMDG) : IBC02 Tank instructions (IMDG) : T4 : TP1 Tank special provisions (IMDG) EmS-No. (Fire) : F-E EmS-No. (Spillage) : S-D Stowage category (IMDG) : B

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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.

MFAG-No : 129

- Air transport

PCA Excepted quantities (IATA) : E2
PCA Limited quantities (IATA) : Y341
PCA limited quantity max net quantity : 1L

(IATA)

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

- Inland waterway transport

Classification code (ADN) : F1
Limited quantities (ADN) : 1 L
Excepted quantities (ADN) : E2
Carriage permitted (ADN) : T

Equipment required (ADN) : PP, EX, A
Ventilation (ADN) : VE01
Number of blue cones/lights (ADN) : 1

- Rail transport

Classification code (RID) : F1
Limited quantities (RID) : 1L
Excepted quantities (RID) : E2

Packing instructions (RID) : P001, IBC02, R001

Mixed packing provisions (RID) : MP19
Portable tank and bulk container : T4

instructions (RID)

Portable tank and bulk container special

provisions (RID)

: TP1

Tank codes for RID tanks (RID) : LGBF
Transport category (RID) : 2
Colis express (express parcels) (RID) : CE7
Hazard identification number (RID) : 33

#### 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 regulations/legislation specific for the substance or mixture

#### 15.1.1. EU-Regulations

No REACH Annex XVII restrictions

n-PROPYL ALCOHOL For Synthesis is not on the REACH Candidate List n-PROPYL ALCOHOL For Synthesis is not on the REACH Annex XIV List

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#### 15.1.2. National regulations

#### Germany

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV

12th Ordinance Implementing the Federal : Is not subject of the 12. BlmSchV (Hazardous Incident Ordinance)

#### **Netherlands**

SZW-lijst van kankerverwekkende stoffen : The substance is not listed SZW-lijst van mutagene stoffen : The substance is not listed NIET-limitatieve lijst van voor de : The substance is not listed voortplanting giftige stoffen – Borstvoeding

NIET-limitatieve lijst van voor de voortplanting giftige stoffen –

: The substance is not listed

Vruchtbaarheid

: The substance is not listed

NIET-limitatieve lijst van voor de

 $voortplanting\ giftige\ stoffen-Ontwikkeling$ 

**Denmark** 

Class for fire hazard : Class I-1 Store unit : 1 liter

Classification remarks : F <Flam. Liq. 2>; Emergency management guidelines for the storage of flammable

liquids must be followed

Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product

#### 15.2. Chemical safety assessment

No additional information available

#### **SECTION 16: Other information**

#### Full text of R-, H- and EUH-statements:

Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Flam. Liq. 2	Flammable liquids, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Narcosis
H225	Highly flammable liquid and vapour.
H318	Causes serious eye damage.
H336	May cause drowsiness or dizziness.
R11	Highly flammable
R41	Risk of serious damage to eyes
R67	Vapours may cause drowsiness and dizziness
F	Highly flammable
Xi	Irritant

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This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product

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