

# Safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH)



**n-Undecan  $\geq$  95%, for synthesis**

article number: **8781**

Version: **2.0 en**

Replaces version of: 2015-07-28

Version: (1)

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Revision: 2021-10-27

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

### 1.1 Product identifier

|                                 |   |
|---------------------------------|---|
| Identification of the substance | <b>n-Undecan <math>\geq</math> 95%, for synthesis</b> |
| Article number                  | 8781  |
| Registration number (REACH)     | 01-2119486569-17-xxxx                                 |
| EC number                       | 214-300-6   |
| CAS number                      | 1120-21-4   |

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

|                           |   |
|---------------------------|---|
| Relevant identified uses: | Laboratory chemical<br>Laboratory and analytical use  |
| Uses advised against:     | Do not use for products which come into contact with foodstuffs. Do not use for private purposes (household). |

### 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](mailto:sicherheit@carlroth.de)

**Website:** [www.carlroth.de](http://www.carlroth.de)

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

**e-mail (competent person):** [sicherheit@carlroth.de](mailto:sicherheit@carlroth.de)

### 1.4 Emergency telephone number

| Name  | Street    | Postal code/city     | Telephone    | Website |
|---|-----------|----------------------|--------------|---------|
| National Poisons Information Service<br>City Hospital | Dudley Rd | B187QH<br>Birmingham | 844 892 0111 |         |

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

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

| Section | Hazard class      | Cat-egory | Hazard class and category | Hazard statement |
|---------|-------------------|-----------|---------------------------|------------------|
| 3.10    | Aspiration hazard | 1         | Asp. Tox. 1               | H304             |

# Safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH)



**n-Undecan  $\geq$  95%, for synthesis**

article number: **8781**

## Supplemental hazard information

| Code   | Supplemental hazard information                      |
|--------|--|
| EUH066 | repeated exposure may cause skin dryness or cracking |

For full text of abbreviations: see SECTION 16

## 2.2 Label elements

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

#### Signal word

**Danger**

#### Pictograms

GHS08



#### Hazard statements

H304 May be fatal if swallowed and enters airways

#### Precautionary statements

##### **Precautionary statements - response**

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor  
P331 Do NOT induce vomiting

##### **Precautionary statements - storage**

P405 Store locked up

##### **Precautionary statements - disposal**

P501 Dispose of contents/container to industrial combustion plant

#### Supplemental hazard information

EUH066 Repeated exposure may cause skin dryness or cracking.

#### **Labelling of packages where the contents do not exceed 125 ml**

Signal word: **Danger**

Symbol(s)



H304 May be fatal if swallowed and enters airways.  
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.  
P331 Do NOT induce vomiting.  
P405 Store locked up.  
P501 Dispose of contents/container to industrial combustion plant.  
EUH066 Repeated exposure may cause skin dryness or cracking.

## 2.3 Other hazards

This material is combustible, but will not ignite readily.

#### **Results of PBT and vPvB assessment**

According to the results of its assessment, this substance is not a PBT or a vPvB.

# Safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH)



n-Undecan  $\geq 95\%$ , for synthesis

article number: 8781

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

|                   |                       |
|-------------------|-----------------------|
| Name of substance | n-Undecan             |
| Molecular formula | $C_{11}H_{24}$        |
| Molar mass        | 156,3 g/mol           |
| REACH Reg. No     | 01-2119486569-17-xxxx |
| CAS No            | 1120-21-4             |
| EC No             | 214-300-6             |

## SECTION 4: First aid measures

### 4.1 Description of first aid measures



#### General notes

Take off contaminated clothing.

#### Following inhalation

Provide fresh air.

#### Following skin contact

Rinse skin with water/shower.

#### Following eye contact

Rinse cautiously with water for several minutes. In all cases of doubt, or when symptoms persist, seek medical advice.

#### Following ingestion

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

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

Aspiration hazard

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

none

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media



#### Suitable extinguishing media

co-ordinate firefighting measures to the fire surroundings  
water spray, dry extinguishing powder, BC-powder, carbon dioxide (CO<sub>2</sub>)

# Safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH)



**n-Undecan  $\geq$  95%, for synthesis**

article number: **8781**

## Unsuitable extinguishing media

water jet

## 5.2 Special hazards arising from the substance or mixture

Combustible. Vapours are heavier than air, spread along floors and form explosive mixtures with air.

### Hazardous combustion products

In case of fire may be liberated: Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>)

## 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. 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

Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. Avoid contact with skin, eyes and clothes. Do not breathe vapour/spray.

### 6.2 Environmental precautions

Keep away from drains, surface and ground water.

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

#### Advice on how to contain a spill

Covering of drains.

#### Advice on how to clean up a spill

Absorb with liquid-binding material (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

Provision of sufficient ventilation.

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



Keep away from sources of ignition - No smoking.

#### Advice on general occupational hygiene

Wash hands before breaks and after work. Keep away from food, drink and animal feedingstuffs.

# Safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH)



n-Undecan  $\geq$  95%, for synthesis

article number: 8781

## 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed.

### Incompatible substances or mixtures

Observe hints for combined storage.

### Consideration of other advice:

### 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)

This information is not available.

#### Environmental values

| Relevant PNECs and other threshold levels |                             |                       |                              |                              |
|---|-----------------------------|-----------------------|------------------------------|------------------------------|
| End-point                                 | Threshold level             | Organism              | Environmental compartment    | Exposure time                |
| PNEC                                      | 3,5 $\mu\text{g}/\text{l}$  | aquatic organisms     | water                        | intermittent release         |
| PNEC                                      | 0,92 $\mu\text{g}/\text{l}$ | aquatic organisms     | freshwater                   | short-term (single instance) |
| PNEC                                      | 0,92 $\mu\text{g}/\text{l}$ | aquatic organisms     | marine water                 | short-term (single instance) |
| PNEC                                      | 14 $\mu\text{g}/\text{l}$   | aquatic organisms     | sewage treatment plant (STP) | short-term (single instance) |
| PNEC                                      | 1 $\text{mg}/\text{kg}$     | aquatic organisms     | freshwater sediment          | short-term (single instance) |
| PNEC                                      | 1 $\text{mg}/\text{kg}$     | aquatic organisms     | marine sediment              | short-term (single instance) |
| PNEC                                      | 1 $\text{mg}/\text{kg}$     | terrestrial organisms | 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



# Safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH)



## n-Undecan $\geq$ 95%, for synthesis

article number: **8781**

### • 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. The times are approximate values from measurements at 22 °C and permanent contact. Increased temperatures due to heated substances, body heat etc. and a reduction of the effective layer thickness by stretching can lead to a considerable reduction of the breakthrough time. If in doubt, contact manufacturer. At an approx. 1.5 times larger / smaller layer thickness, the respective breakthrough time is doubled / halved. The data apply only to the pure substance. When transferred to substance mixtures, they may only be considered as a guide.

### • type of material

NBR (Nitrile rubber)

### • material thickness

>0,11 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.

### 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.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

|  |   |
|--|---|
| Physical state   | liquid  |
| Colour   | colourless  |
| Odour  | characteristic  |
| Melting point/freezing point                             | -26 °C at 1.013 hPa (ECHA)                                |
| Boiling point or initial boiling point and boiling range | 185,8 – 200,5 °C at 1.013 hPa (ECHA)                      |
| Flammability   | this material is combustible, but will not ignite readily |
| Lower and upper explosion limit                          | 0,6 vol% (LEL) - 6,5 vol% (UEL)                           |
| Flash point  | 65 °C at 1.013 hPa (ECHA)                                 |
| Auto-ignition temperature                                | 240 °C  |
| Decomposition temperature                                | not relevant  |
| pH (value)   | not determined  |

# Safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH)



## n-Undecan $\geq$ 95%, for synthesis

article number: **8781**

|   |   |
|---|---|
| Kinematic viscosity                                 | 1,597 mm <sup>2</sup> /s at 20 °C                                     |
| <u>Solubility(ies)</u>                              |   |
| Water solubility                                    | 0,00002 g/l at 25 °C (ECHA)   |
| <u>Partition coefficient</u>                        |   |
| Partition coefficient n-octanol/water (log value):  | 6,42 (pH value: 7, 25 °C) (ECHA)                                      |
| Soil organic carbon/water (log KOC)                 | 4,75 (ECHA)   |
| Vapour pressure                                     | not determined  |
| Density   | 0,744 g/cm <sup>3</sup> at 15 °C                                      |
| Relative vapour density                             | 5,4 (air = 1)   |
| Particle characteristics                            | not relevant (liquid)   |
| <u>Other safety parameters</u>                      |   |
| Oxidising properties                                | none  |
| <b>9.2 Other information</b>                        |   |
| Information with regard to physical hazard classes: | hazard classes acc. to GHS (physical hazards): not relevant           |
| Other safety characteristics:                       |   |
| Refractive index                                    | 1,417   |
| Temperature class (EU, acc. to ATEX)                | T3<br>Maximum permissible surface temperature on the equipment: 200°C |

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

This material is not reactive under normal ambient conditions.

#### If heated

Vapours may 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:** strong oxidiser

### 10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

# Safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH)



**n-Undecan ≥ 95%, for synthesis**

article number: **8781**

## 10.5 Incompatible materials

There is no additional information.

## 10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

## SECTION 11: Toxicological information

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

**Classification according to GHS (1272/2008/EC, CLP)**

#### Acute toxicity

Shall not be classified as acutely toxic.

| Acute toxicity |          |              |         |        |        |
|----------------|----------|--------------|---------|--------|--------|
| Exposure route | Endpoint | Value        | Species | Method | Source |
| dermal         | LD50     | ≥3.160 mg/kg | rabbit  |        | ECHA   |

#### Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

#### Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

#### Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

#### Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

#### Carcinogenicity

Shall not be classified as carcinogenic.

#### Reproductive toxicity

Shall not be classified as a reproductive toxicant.

#### Specific target organ toxicity - single exposure

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

#### Specific target organ toxicity - repeated exposure

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

#### Aspiration hazard

May be fatal if swallowed and enters airways.

#### Symptoms related to the physical, chemical and toxicological characteristics

- **If swallowed**

aspiration hazard

- **If in eyes**

Data are not available.

- **If inhaled**

Data are not available.



# Safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH)



n-Undecan  $\geq$  95%, for synthesis

article number: 8781

- **If on skin**

Data are not available.

- **Other information**

none

## 11.2 Endocrine disrupting properties

Not listed.

## 11.3 Information on other hazards

There is no additional information.

## SECTION 12: Ecological information

### 12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

| Aquatic toxicity (acute) |                     |                       |        |               |
|--------------------------|---------------------|-----------------------|--------|---------------|
| Endpoint                 | Value               | Species               | Source | Exposure time |
| LL50                     | $>100 \text{ mg/l}$ | fish                  | ECHA   | 24 h          |
| EL50                     | $100 \text{ mg/l}$  | aquatic invertebrates | ECHA   | 48 h          |

### Biodegradation

The substance is readily biodegradable.

### 12.2 Process of degradability

Theoretical Oxygen Demand:  $3,48 \text{ mg/mg}$   
Theoretical Carbon Dioxide:  $3,097 \text{ mg/mg}$

| Process of degradability  |                  |      |
|---------------------------|------------------|------|
| Process                   | Degradation rate | Time |
| oxygen depletion          | 7,3 %            | 4 d  |
| carbon dioxide generation | 0 %              | 3 d  |

### 12.3 Bioaccumulative potential

The substance fulfils the very bioaccumulative criterion.

|                           |                                  |
|---------------------------|----------------------------------|
| n-octanol/water (log KOW) | 6,42 (pH value: 7, 25 °C) (ECHA) |
|---------------------------|----------------------------------|

### 12.4 Mobility in soil

|  |                                     |
|--|-------------------------------------|
| Henry's law constant                                 | $195.509 \text{ Pa m}^3/\text{mol}$ |
| The Organic Carbon normalised adsorption coefficient | 4,75 (ECHA)                         |

### 12.5 Results of PBT and vPvB assessment

Data are not available.

# Safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH)



n-Undecan  $\geq$  95%, for synthesis

article number: 8781

## 12.6 Endocrine disrupting properties

Not listed.

## 12.7 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.

### 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. Waste catalogue ordinance (Germany).

### 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 or ID number

|             |         |
|-------------|---------|
| ADR/RID/ADN | UN 2330 |
| IMDG-Code   | UN 2330 |
| ICAO-TI     | UN 2330 |

### 14.2 UN proper shipping name

|             |          |
|-------------|----------|
| ADR/RID/ADN | UNDECANE |
| IMDG-Code   | UNDECANE |
| ICAO-TI     | Undecane |

### 14.3 Transport hazard class(es)

|             |   |
|-------------|---|
| ADR/RID/ADN | 3 |
| IMDG-Code   | 3 |
| ICAO-TI     | 3 |

### 14.4 Packing group

|             |     |
|-------------|-----|
| ADR/RID/ADN | III |
| IMDG-Code   | III |
| ICAO-TI     | III |

# Safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH)



## n-Undecan $\geq$ 95%, for synthesis

article number: **8781**

**14.5 Environmental hazards** 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 Maritime transport in bulk according to IMO instruments


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) - Additional information

|   |                                 |
|---|---------------------------------|
| Proper shipping name  | UNDECANE                        |
| Particulars in the transport document   | UN2330, UNDECANE, 3, III, (D/E) |
| Classification code   | F1                              |
| Danger label(s)   | 3                               |
|  |                                 |
| Excepted quantities (EQ)  | E1                              |
| Limited quantities (LQ)   | 5 L                             |
| Transport category (TC)   | 3                               |
| Tunnel restriction code (TRC)   | D/E                             |
| Hazard identification No  | 30                              |
| <b>Emergency Action Code</b>  | 3Y                              |

#### International Maritime Dangerous Goods Code (IMDG) - Additional information

|   |                          |
|---|--------------------------|
| Proper shipping name  | UNDECANE                 |
| Particulars in the shipper's declaration  | UN2330, UNDECANE, 3, III |
| Marine pollutant  | -                        |
| Danger label(s)   | 3                        |
|  |                          |
| Special provisions (SP)   | -                        |
| Excepted quantities (EQ)  | E1                       |
| Limited quantities (LQ)   | 5 L                      |
| EmS   | F-E, S-E                 |
| Stowage category  | A                        |

# Safety data sheet


according to Regulation (EC) No. 1907/2006 (REACH)



n-Undecan  $\geq$  95%, for synthesis

article number: 8781

## International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information

|   |                          |
|---|--------------------------|
| Proper shipping name  | Undecane                 |
| Particulars in the shipper's declaration  | UN2330, Undecane, 3, III |
| Danger label(s)   | 3                        |
|  |                          |
| Excepted quantities (EQ)  | E1                       |
| Limited quantities (LQ)   | 10 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)

#### Restrictions according to REACH, Annex XVII

| Dangerous substances with restrictions (REACH, Annex XVII) |  |        |             |    |
|--|--|--------|-------------|----|
| Name of substance  | Name acc. to inventory   | CAS No | Restriction | No |
| n-Undecan  | this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC |        | R3          | 3  |

#### Legend

- R3
- 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,
  - Articles not complying with paragraph 1 shall not be placed on the market.
  - 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 H304.
  - 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).
  - Without prejudice to the implementation of other Union provisions relating to the classification, labelling and packaging of substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met:
    - lamp oils, labelled with 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";
    - grill lighter fluids, labelled with 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 fluid may lead to life threatening lung damage";
    - lamps oils and grill lighters, labelled with H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.;

#### 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 |
|                         | not assigned                          |   |       |

# Safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH)



**n-Undecan ≥ 95%, for synthesis**

article number: **8781**

## Deco-Paint Directive

|                    |                    |
|--------------------|--------------------|
| <b>VOC content</b> | 100 %<br>, 744 g/l |
|--------------------|--------------------|

## Industrial Emissions Directive (IED)

|                    |         |
|--------------------|---------|
| <b>VOC content</b> | 100 %   |
| <b>VOC content</b> | 744 g/l |

## Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

not listed

## Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

not listed

## Water Framework Directive (WFD)

not listed

## Regulation on the marketing and use of explosives precursors

not listed

## Regulation on drug precursors

not listed

## Regulation on substances that deplete the ozone layer (ODS)

not listed

## Regulation concerning the export and import of hazardous chemicals (PIC)

not listed

## Regulation on persistent organic pollutants (POP)

not listed

## Other information

Directive 94/33/EC on the protection of young people at work. Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

## National inventories

| Country | Inventory  | 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 |

# Safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH)



**n-Undecan ≥ 95%, for synthesis**

article number: **8781**

| Country | Inventory | Status              |
|---------|-----------|---------------------|
| 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 (PICCS)       |
| 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.

## SECTION 16: Other information

### Indication of changes (revised safety data sheet)

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

Restructuring: section 9, section 14

| Section | Former entry (text/value) | Actual entry (text/value)  | Safety-relevant |
|---------|---------------------------|--|-----------------|
| 2.1     |                           | Classification according to Regulation (EC) No 1272/2008 (CLP):<br>change in the listing (table) | yes             |
| 2.1     |                           | Supplemental hazard information:<br>change in the listing (table)                                | yes             |
| 2.2     |                           | Pictograms:<br>change in the listing (table)   | yes             |
| 2.2     |                           | Precautionary statements - response:<br>change in the listing (table)                            | yes             |
| 2.2     |                           | Precautionary statements - storage:<br>change in the listing (table)                             | yes             |
| 2.2     |                           | Precautionary statements - disposal  | yes             |
| 2.2     |                           | Precautionary statements - disposal:<br>change in the listing (table)                            | yes             |
| 2.2     |                           | Supplemental hazard information  | yes             |
| 2.2     |                           | Supplemental hazard information:<br>change in the listing (table)                                | yes             |
| 2.2     |                           | Labelling of packages where the contents do not exceed 125 ml:<br>change in the listing (table)  | yes             |

# Safety data sheet

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article number: **8781**

| Section | Former entry (text/value)                             | Actual entry (text/value)   | Safety-relevant |
|---------|---|---|-----------------|
| 2.2     |   | Labelling of packages where the contents do not exceed 125 ml:<br>change in the listing (table)                           | yes             |
| 2.3     | Other hazards:<br>There is no additional information. | Other hazards:<br>This material is combustible, but will not ignite readily.  | yes             |
| 2.3     |   | Results of PBT and vPvB assessment:<br>According to the results of its assessment, this substance is not a PBT or a vPvB. | yes             |

## 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 relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)   |
| ADR/RID/ADN | Agreements concerning the International Carriage of Dangerous Goods by Road/Rail/Inland Waterways (ADR/RID/ADN)   |
| 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  |
| DGR         | Dangerous Goods Regulations (see IATA/DGR)  |
| EC No       | The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)                                     |
| EINECS      | European Inventory of Existing Commercial Chemical Substances   |
| EL50        | Effective Loading 50 %: the EL50 corresponds to the loading rate required to produce a response in 50% of the test organisms  |
| 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   |
| ICAO-TI     | Technical instructions for the safe transport of dangerous goods by air   |
| IMDG        | International Maritime Dangerous Goods Code   |
| IMDG-Code   | International Maritime Dangerous Goods Code   |
| LD50        | Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval  |
| LEL         | Lower explosion limit (LEL)   |
| LL50        | Lethal Loading 50 %: the LL50 corresponds to the loading rate causing 50 % lethality  |
| NLP         | No-Longer Polymer   |

# Safety data sheet

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| Abbr. | Descriptions of used abbreviations  |
|-------|---|
| PBT   | Persistent, Bioaccumulative and Toxic   |
| PNEC  | Predicted No-Effect Concentration   |
| 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) |
| SVHC  | Substance of Very High Concern  |
| UEL   | Upper explosion limit (UEL)   |
| VOC   | Volatile Organic Compounds  |
| vPvB  | Very Persistent and very Bioaccumulative  |

## Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.  
Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU.

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

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

| Code | Text  |
|------|---|
| H304 | May be fatal if swallowed and enters airways. |

## Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.