

Safety Data Sheet

according to Regulation (EC) No 1907/2006

n-Dodecane pure

Revision date: 08.03.2023

Product code: 26698

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

1.1. Product identifier

n-Dodecane pure

Substance name: dodecane
REACH Registration Number: 01-2119486573-28-XXXX
CAS No: 112-40-3
EC No: 203-967-9

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

Use of the substance/mixture

Laboratory chemicals
Industrial uses: Uses of substances as such or in preparations at industrial sites
Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Uses advised against

Do not use for private purposes (household).

1.3. Details of the supplier of the safety data sheet

Company name: AnalytiChem GmbH
Street: Stempelstraße 6
Place: D-47167 Duisburg
Telephone: 0203/5194-0
e-mail: info@analytichem.de
Contact person: Abteilung Produktsicherheit
e-mail: produktsicherheit@analytichem.de
Internet: www.analytichem.de
Responsible Department: Abteilung Produktsicherheit

Telefax: 0203/5194-290

Telephone: 0203/5194-107/117

1.4. Emergency telephone number:

For Hazardous Materials [or Dangerous Goods] Incidents Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 Outside USA and Canada: +1 703-741-5970 (collect calls accepted)

Further Information

No data available

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Asp. Tox. 1; H304

Full text of hazard statements: see SECTION 16.

2.2. Label elements

Regulation (EC) No 1272/2008

Signal word: Danger

Pictograms:



Hazard statements

H304 May be fatal if swallowed and enters airways.

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Precautionary statements

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P331 Do NOT induce vomiting.
P405 Store locked up.

Special labelling of certain mixtures

EUH066 Repeated exposure may cause skin dryness or cracking.

2.3. Other hazards

No data available

SECTION 3: Composition/information on ingredients

3.1. Substances

Sum formula: C₁₂H₂₆
Molecular weight: 170,34 g/mol

Hazardous components

CAS No	Chemical name	Quantity
	EC No	
	Index No	
	REACH No	
	Classification (Regulation (EC) No 1272/2008)	
112-40-3	dodecane	100 %
	203-967-9	
	01-2119486573-28-XXXX	
	Asp. Tox. 1; H304 EUH066	

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
112-40-3	203-967-9	dodecane	100 %
		dermal: LD50 = > 5000 mg/kg; oral: LD50 = > 15000 mg/kg	

Further Information

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of = 0.1 % (w/w).

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

No data available

After inhalation

Provide fresh air.
Call a doctor if you feel unwell.

After contact with skin

After contact with skin, wash immediately with plenty of water and soap.
Take off immediately all contaminated clothing and wash it before reuse.

After contact with eyes

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.
Remove contact lenses, if present and easy to do. Continue rinsing.

After ingestion

Do NOT induce vomiting.
Observe risk of aspiration if vomiting occurs.

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Call a physician immediately.

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

Irritant
Cough
Dyspnoea
Headache
Dizziness

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

No data available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Carbon dioxide (CO₂)
Foam
Extinguishing powder

Unsuitable extinguishing media

no restriction

5.2. Special hazards arising from the substance or mixture

Combustible liquids
Hazardous combustion products
In case of fire may be liberated: Carbon dioxide (CO₂) Carbon monoxide
In case of warming:
Vapours are heavier than air, spread along floors and form explosive mixtures with air.
Heating causes rise in pressure with risk of bursting.

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.
In case of fire and/or explosion do not breathe fumes.
Avoid contact with skin, eyes and clothes.

Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.
Move undamaged containers from immediate hazard area if it can be done safely.
Use water spray jet to protect personnel and to cool endangered containers.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Provide adequate ventilation.
Use personal protection equipment.
Avoid contact with skin, eyes and clothes.
Remove persons to safety.
Emergency procedures
Do not breathe dust/fume/gas/mist/vapours/spray.

For emergency responders

Precautionary statements For emergency responders : Personal protection equipment: see section 8

6.2. Environmental precautions

Do not allow to enter into surface water or drains.
The vapour of the product is heavier than air and may accumulate below ground level, in pits, channels and basements in higher concentration.
Danger of explosion

6.3. Methods and material for containment and cleaning up

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For containment

- Cover drains.
- Prevent spread over a wide area (e.g. by containment or oil barriers).
- Collect in closed and suitable containers for disposal.
- Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

For cleaning up

- Clean contaminated articles and floor according to the environmental legislation.

Other information

- Provide adequate ventilation.
- Do not breathe dust/fume/gas/mist/vapours/spray.
- Wear breathing apparatus if exposed to vapours/dusts/aerosols.

6.4. Reference to other sections

- Safe handling: see section 7
- Personal protection equipment: see section 8
- Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

- Read label before use. Handle and open container with care.
- When using do not eat, drink, smoke, sniff. Keep container tightly closed.
- Use personal protection equipment.
- Do not breathe vapour/aerosol.
- Provide adequate ventilation.

Advice on protection against fire and explosion

- Take action to prevent static discharges. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Advice on general occupational hygiene

- Keep away from food, drink and animal feedingstuffs.
- Wash hands and face before breaks and after work and take a shower if necessary.
- When using do not eat or drink.
- Avoid: aerosol or mist formation Do not breathe vapour/aerosol.

Further information on handling

- Take off immediately all contaminated clothing and wash it before reuse.
- Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. If handled uncovered, arrangements with local exhaust ventilation have to be used.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

- Keep container tightly closed in a cool, well-ventilated place.
- Store in a cool dry place.
- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Further information on storage conditions

- Protect from sunlight.
- storage temperature +15°C - +25°C

7.3. Specific end use(s)

- Laboratory chemicals

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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PNEC values

CAS No	Substance	Value
Environmental compartment		
112-40-3	dodecane	
Freshwater		0,00096 mg/l
Freshwater (intermittent releases)		0,0037 mg/l
Marine water		0,00093 mg/l
Freshwater sediment		2 mg/kg
Marine sediment		2 mg/kg
Micro-organisms in sewage treatment plants (STP)		0,014 mg/l
Soil		0,81 mg/kg

8.2. Exposure controls

Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment.

If handled uncovered, arrangements with local exhaust ventilation have to be used.

Individual protection measures, such as personal protective equipment

Eye/face protection

goggles
Face protection umbrella

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. 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.

Protective gloves are recommended Company KCL GmbH, D-36124 Eichenzell, email: vertrieb@kcl.de With specification (test according to EN374):

By long-term hand contact

Trade name/designation KCL 730 Camatril® Velours
Suitable material: NBR (Nitrile rubber) 0,4 mm
Wearing time with permanent contact: > 480 min

By short-term hand contact

Trade name/designation KCL 720 Camapren®
Suitable material: CR (polychloroprene, chloroprene rubber) 0,65 mm
Wearing time with occasional contact (splashes): > 60 min

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet (>, <) supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Skin protection

Take off immediately all contaminated clothing and wash it before reuse.
Wear suitable protective clothing. Take off immediately all contaminated clothing.
Wash hands and face before breaks and after work and take a shower if necessary.

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Respiratory protection

Respiratory protection necessary at: aerosol or mist formation

Environmental exposure controls

Do not allow to enter into surface water or drains.

Due to danger of explosion, prevent leakage of vapours into cellars, flues and ditches.

Danger of explosion

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	colourless
Odour:	like: Petrol
Odour threshold:	No data available
Melting point/freezing point:	-9,6 °C
Boiling point or initial boiling point and boiling range:	215-217 °C
Flammability:	No data available
Lower explosion limits:	0,6 vol. %
Upper explosion limits:	40 vol. %
Flash point:	70 °C
Auto-ignition temperature:	200 °C
Decomposition temperature:	No data available
pH-Value:	No data available
Water solubility: (at 25 °C)	practically insoluble
Solubility in other solvents	No data available
Partition coefficient n-octanol/water:	No data available
Vapour pressure: (at 20 °C)	1,3 hPa
Vapour pressure:	No data available
Density:	0,75 g/cm ³
Bulk density:	No data available
Relative vapour density:	No data available

9.2. Other information

Information with regard to physical hazard classes

Explosive properties

In case of warming:

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

Sustaining combustion:

Sustaining combustion

Self-ignition temperature

Solid:

No data available

Gas:

No data available

Oxidizing properties

No data available

Other safety characteristics

Evaporation rate:

No data available

Solvent separation test:

No data available

Solvent content:

100%

Solid content:

No data available

Sublimation point:

No data available

Softening point:

No data available

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Pour point: No data available

No data available

Flow time:

No data available

Further Information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

In case of warming:

Vapours may form explosive mixtures with air.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Oxidising agent

10.4. Conditions to avoid

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

10.5. Incompatible materials

Plastic articles

10.6. Hazardous decomposition products

SECTION 5: Firefighting measures

Further information

No data available

SECTION 11: Toxicological information

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

Toxicokinetics, metabolism and distribution

No data available

Acute toxicity

Based on available data, the classification criteria are not met.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
112-40-3	dodecane				
	oral	LD50 > 15000 mg/kg	Rat	Study report (1977)	OECD Guideline 423
	dermal	LD50 > 5000 mg/kg	Rabbit	Study report (1993)	OECD Guideline 402

Irritation and corrosivity

Based on available data, the classification criteria are not met.

Sensitising effects

Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Repeated exposure may cause skin dryness or cracking.

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Aspiration hazard

May be fatal if swallowed and enters airways.

Specific effects in experiment on an animal

No data available

Additional information on tests

No data available

Practical experience

No data available

11.2. Information on other hazards

Other information

No data available

Further information

Irritant
Cough
Dyspnoea
Headache
Dizziness

SECTION 12: Ecological information

12.1. Toxicity

CAS No	Chemical name						
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method	
112-40-3	dodecane						
	Acute algae toxicity	ErC50 mg/l	57161	72 h	Skeletonema costatum	Study report (1997)	ISO 10253
	Acute crustacea toxicity	EC50 mg/l	ca. 0,2	48 h	Daphnia magna	Study report (1987)	other: As described in: The evaluation o
	Fish toxicity	NOEC mg/l	> 1000	28 d	Oncorhynchus mykiss	REACH Registration Dossier	The aquatic toxicity was estimated by a
	Crustacea toxicity	NOEC mg/l	> 1000	21 d	Daphnia magna	REACH Registration Dossier	The aquatic toxicity was estimated by a

12.2. Persistence and degradability

No data available

12.3. Bioaccumulative potential

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
112-40-3	dodecane	6,98

BCF

CAS No	Chemical name	BCF	Species	Source
112-40-3	dodecane	144,3	calculated	Other company data (

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

No data available

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12.6. Endocrine disrupting properties

This substance does not have endocrine disrupting properties with respect to non-target organisms.

12.7. Other adverse effects

Avoid release to the environment.

Further information

Do not allow to enter into surface water or drains.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

Send to a physico-chemical treatment facility under observation of official regulations.

Do not empty into drains.

Contaminated packaging

Handle contaminated packages in the same way as the substance itself.

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

SECTION 14: Transport information

Land transport (ADR/RID)

<u>14.1. UN number or ID number:</u>	No dangerous good in sense of this transport regulation.
<u>14.2. UN proper shipping name:</u>	No dangerous good in sense of this transport regulation.
<u>14.3. Transport hazard class(es):</u>	No dangerous good in sense of this transport regulation.
<u>14.4. Packing group:</u>	No dangerous good in sense of this transport regulation.

Inland waterways transport (ADN)

<u>14.1. UN number or ID number:</u>	No dangerous good in sense of this transport regulation.
<u>14.2. UN proper shipping name:</u>	No dangerous good in sense of this transport regulation.
<u>14.3. Transport hazard class(es):</u>	No dangerous good in sense of this transport regulation.
<u>14.4. Packing group:</u>	No dangerous good in sense of this transport regulation.

Marine transport (IMDG)

<u>14.1. UN number or ID number:</u>	No dangerous good in sense of this transport regulation.
<u>14.2. UN proper shipping name:</u>	No dangerous good in sense of this transport regulation.
<u>14.3. Transport hazard class(es):</u>	No dangerous good in sense of this transport regulation.
<u>14.4. Packing group:</u>	No dangerous good in sense of this transport regulation.

Air transport (ICAO-TI/IATA-DGR)

<u>14.1. UN number or ID number:</u>	No dangerous good in sense of this transport regulation.
<u>14.2. UN proper shipping name:</u>	No dangerous good in sense of this transport regulation.
<u>14.3. Transport hazard class(es):</u>	No dangerous good in sense of this transport regulation.
<u>14.4. Packing group:</u>	No dangerous good in sense of this transport regulation.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

No dangerous good in sense of this transport regulation.

14.7. Maritime transport in bulk according to IMO instruments

No dangerous good in sense of this transport regulation.

SECTION 15: Regulatory information

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

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EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3

Information according to 2012/18/EU
(SEVESO III):

P5c FLAMMABLE LIQUIDS

National regulatory information

Employment restrictions:

Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

Water hazard class (D):

1 - slightly hazardous to water

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 1,2,3,4,6,7,8,9,11,12,13,14.

Relevant H and EUH statements (number and full text)

H304 May be fatal if swallowed and enters airways.

EUH066 Repeated exposure may cause skin dryness or cracking.

Further Information

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. The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights.

The receiver of our product is singularly responsible for adhering to existing laws and regulations.