

Decahydronaphthalene (mixture of isomers) chemically pure

Revision date: 30.05.2022

Product code: 25333

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

1.1. Product identifier

Decahydronaphthalene (mixture of isomers) chemically pure

REACH Registration Number: 01-2119565127-37-XXXX
CAS No: 91-17-8
EC No: 202-046-9

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: Fa. Bernd Kraft GmbH
Street: Stempelstraße 6
Place: D-47167 Duisburg
Telephone: 0203/5194-0
e-mail: info@berndkraft.de
Contact person: Abteilung Produktsicherheit
e-mail: produktsicherheit@berndkraft.de
Internet: www.berndkraft.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

This product is a mixture. REACH Registration Number see section 3.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Flam. Liq. 3; H226
Acute Tox. 3; H331
Skin Corr. 1B; H314
Asp. Tox. 1; H304
Aquatic Chronic 2; H411

Full text of hazard statements: see SECTION 16.

2.2. Label elements

Regulation (EC) No 1272/2008

Hazard components for labelling
decahydronaphthalene

Signal word: Danger

Safety Data Sheet

according to Regulation (EC) No 1907/2006

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Pictograms:



Hazard statements

- H226 Flammable liquid and vapour.
- H331 Toxic if inhaled.
- H314 Causes severe skin burns and eye damage.
- H304 May be fatal if swallowed and enters airways.
- H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P260 Do not breathe dust/fume/gas/mist/vapours/spray.
- P273 Avoid release to the environment.
- P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
- P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P405 Store locked up.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.1. Substances

Chemical characterization

Mixtures

- Sum formula: C₁₀H₁₈
- Molecular weight: 138,25 g/mol

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
91-17-8	decahydronaphthalene			100 %
	202-046-9		01-2119565127-37-XXXX	
	Flam. Liq. 3, Acute Tox. 3, Skin Corr. 1B, Asp. Tox. 1, Aquatic Chronic 2; H226 H331 H314 H304 H411			

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	
91-17-8	202-046-9	decahydronaphthalene	100 %
		inhalation: LC50 = 710 mg/l (vapours); inhalation: ATE = 0,5 mg/l (dusts or mists); dermal: LD50 = 5200 mg/kg; oral: LD50 = 4170 mg/kg	

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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

First aider: Pay attention to self-protection!

After inhalation

Provide fresh air.

If breathing is irregular or stopped, administer artificial respiration.

Call a physician immediately.

After contact with skin

After contact with skin, wash immediately with polyethylene glycol, followed by plenty of water. Take off immediately all contaminated clothing and wash it before reuse. Medical treatment necessary.

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

Observe risk of aspiration if vomiting occurs. Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting. Adverse human health effects and symptoms: Gastric perforation. Call a physician immediately. Do not allow a neutralisation agent to be drunk.

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

Irritant, corrosive

Cough, Unconsciousness

Dizziness, Narcotic effects

Agitation, Risk of serious damage to eyes.

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

Flammable.

In case of warming: Vapours are heavier than air, spread along floors and form explosive mixtures with air.

Hazardous combustion products

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

Additional information

Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface

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water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

Keep away from sources of ignition - No smoking.

This material can be ignited by heat, sparks, flames, or other sources of ignition (e.g., static electricity, pilot lights, mechanical/electrical equipment, and electronic devices such as cell phones, computers, calculators, and pagers which have not been certified as intrinsically safe).

Take action to prevent static discharges.

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

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. Use extractor hood (laboratory).

Provide adequate ventilation.

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Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. Vapours can form explosive mixtures with air.

Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

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.
Store in a place accessible by authorized persons only.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaustion at critical locations. Keep in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Hints on joint storage

Do not store together with: Oxidising agent. Pyrophoric or self-heating substances.

Further information on storage conditions

Keep cool. Protect from sunlight.
storage temperature: +15°C - +25°C
Protect against: Light

7.3. Specific end use(s)

Laboratory chemicals

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
91-17-8	decahydronaphthalene			
Worker DNEL, long-term		inhalation	systemic	24 mg/m ³
Worker DNEL, acute		inhalation	systemic	24 mg/m ³
Worker DNEL, long-term		dermal	systemic	5,56 mg/kg bw/day
Worker DNEL, acute		dermal	systemic	5,56 mg/kg bw/day

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PNEC values

CAS No	Substance	Value
Environmental compartment		
91-17-8	decahydronaphthalene	
Freshwater		0 mg/l
Marine water		0 mg/l
Freshwater sediment		0,058 mg/kg
Marine sediment		0,011 mg/kg
Micro-organisms in sewage treatment plants (STP)		10 mg/l
Soil		0,012 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

Suitable eye protection: goggles.

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 730 Camatril® Velours

Suitable material: NBR (Nitrile rubber) 0,4 mm

Wearing time with occasional contact (splashes): > 480 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 fire resistant or flame retardant clothing.

Wash hands and face before breaks and after work and take a shower if necessary.

Draw up and observe skin protection programme.

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Respiratory protection

Respiratory protection necessary at: aerosol or mist formation
Filtering device with filter or ventilator filtering device of type: A

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: characteristic
Odour threshold: No data available

Changes in the physical state

Melting point/freezing point: -40 °C
Boiling point or initial boiling point and boiling range: 189-191 °C
Sublimation point: No data available
Softening point: No data available
Pour point: No data available
:
Flash point: 57 °C

Flammability

Solid/liquid: not applicable
Gas: not applicable

Explosive properties

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

Lower explosion limits: 0,7 vol. %
Upper explosion limits: 4,9 vol. %
Auto-ignition temperature: 255 °C

Self-ignition temperature

Solid: not applicable
Gas: not applicable

Decomposition temperature: No data available
pH-Value: No data available
Viscosity / dynamic: No data available
Viscosity / kinematic: No data available
Flow time: No data available
Water solubility: No

Solubility in other solvents

No data available

Partition coefficient n-octanol/water: No data available
Vapour pressure: 1,33 hPa
(at 20 °C)
Vapour pressure: No data available

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Density (at 20 °C): 0,88000 g/cm³
Bulk density: No data available
Relative vapour density: No data available

9.2. Other information

Information with regard to physical hazard classes

Sustaining combustion: No data available
Oxidizing properties
Not oxidising.

Other safety characteristics

Solvent separation test: No data available
Solvent content: No data available
Solid content: No data available
Evaporation rate: No data available

Further Information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

Flammable.
Vapours can form explosive mixtures with air.

10.2. Chemical stability

Protect against: Light
Formation of: Peroxides

10.3. Possibility of hazardous reactions

Oxidising agent

10.4. Conditions to avoid

Light
Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours can form explosive mixtures with air.

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

Peroxides

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

Toxic if inhaled.

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CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
91-17-8	decahydronaphthalene				
	oral	LD50 4170 mg/kg	Rat	Arch. Ind. Hyg. Occup. Med. 4, 119-122 (Smyth HF Jr, Carpenter CP
	dermal	LD50 5200 mg/kg	Rabbit	Arch. Ind. Hyg. Occup. Med. 4, 119-122 (Smyth HF Jr, Carpenter CP
	inhalation (4 h) vapour	LC50 710 mg/l	Rat	Acute Toxic Data 1, 215 (1978)	Acute inhalation toxicity similar to OEC
	inhalation dust/mist	ATE 0,5 mg/l			

Irritation and corrosivity

Causes severe skin burns and eye damage.

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

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

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

No data available

SECTION 12: Ecological information

12.1. Toxicity

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
91-17-8	decahydronaphthalene					
	Acute algae toxicity	ErC50 > 2,2 mg/l	72 h	Desmodesmus subspicatus	Study report (1992)	EU Method C.3
	Acute crustacea toxicity	EC50 0,286 mg/l	48 h	Daphnia magna	Study report (2015)	OECD Guideline 202
	Crustacea toxicity	NOEC 0,0567 mg/l	21 d	Daphnia magna	Study report (2018)	OECD Guideline 211

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12.2. Persistence and degradability

No data available

12.3. Bioaccumulative potential

No data available

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
91-17-8	decahydronaphthalene	4,2

BCF

CAS No	Chemical name	BCF	Species	Source
91-17-8	decahydronaphthalene	839 - 3050	Cyprinus carpio	Publication (1992)

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.

12.6. Endocrine disrupting properties

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

12.7. Other adverse effects

No data available

Further information

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

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

This material and its container must be disposed of as hazardous waste. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number:	UN 1147
14.2. UN proper shipping name:	DECAHYDRONAPHTHALENE
14.3. Transport hazard class(es):	3
14.4. Packing group:	III
Hazard label:	3
Classification code:	F1
Limited quantity:	5 L
Excepted quantity:	E1
Transport category:	3
Hazard No:	30
Tunnel restriction code:	D/E

Inland waterways transport (ADN)

14.1. UN number or ID number:	UN 1147
14.2. UN proper shipping name:	DECAHYDRONAPHTHALENES

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14.3. Transport hazard class(es): 3
14.4. Packing group: III
 Hazard label: 3
 Classification code: F1
 Limited quantity: 5 L
 Excepted quantity: E1

Marine transport (IMDG)

14.1. UN number or ID number: UN 1147
14.2. UN proper shipping name: DECAHYDRONAPHTHALENE
14.3. Transport hazard class(es): 3
14.4. Packing group: III
 Hazard label: 3
 Special Provisions: -
 Limited quantity: 5 L
 Excepted quantity: E1
 EmS: F-E, S-D

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number: UN 1147
14.2. UN proper shipping name: DECAHYDRONAPHTHALENE
14.3. Transport hazard class(es): 3
14.4. Packing group: III
 Hazard label: 3
 Limited quantity Passenger: 10 L
 Passenger LQ: Y344
 Excepted quantity: E1
 IATA-packing instructions - Passenger: 355
 IATA-max. quantity - Passenger: 60 L
 IATA-packing instructions - Cargo: 366
 IATA-max. quantity - Cargo: 220 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: Yes
 Danger releasing substance: decahydronaphthalene

14.6. Special precautions for user

Warning: Combustible liquid.

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

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

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 40

Information according to 2012/18/EU (SEVESO III): H2 ACUTE TOXIC

Additional information: P5c, E2

National regulatory information

Safety Data Sheet

according to Regulation (EC) No 1907/2006

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Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water hazard class (D): 2 - obviously hazardous to water

15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out.

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 2,3,4,5,6,7,8,9,10,11,12,13,14,15.

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route
(European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%

Relevant H and EUH statements (number and full text)

H226 Flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H314 Causes severe skin burns and eye damage.
H331 Toxic if inhaled.
H411 Toxic to aquatic life with long lasting effects.

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.