

Chemical Safety Data Sheet MSDS / SDS

Camphor

Revision Date:2026-03-21 Revision Number:1

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

Product identifier

Product name : Camphor
CBnumber : CB7159844
CAS : 76-22-2
EINECS Number : 200-945-0
Synonyms : Bornan-2-one;2-Bornanone

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

Relevant identified uses : For R&D use only. Not for medicinal, household or other use.
Uses advised against : none

Company Identification

Company : Chemicalbook
Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing
Telephone : 010-86108875

SECTION 2: Hazards identification

GHS Label elements, including precautionary statements

Symbol(GHS)



Signal word

Danger

Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continuerinsing.

Hazard statements

H411 Toxic to aquatic life with long lasting effects

H371 May cause damage to organs

H332 Harmful if inhaled

H318 Causes serious eye damage

H317 May cause an allergic skin reaction

H315 Causes skin irritation

H228 Flammable solid

SECTION 3: Composition/information on ingredients

Substance

Product name	: Camphor
Synonyms	: Bornan-2-one;2-Bornanone
CAS	: 76-22-2
EC number	: 200-945-0
MF	: C10H16O
MW	: 152.23

SECTION 4: First aid measures

General advice

Show this safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

In case of eye contact

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

If swallowed

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

Protection of first-aiders

For personal protection see section 8.

Notes to physician

No data available

SECTION 5: Firefighting measures

Suitable extinguishing media

Carbon dioxide (CO₂) Foam Dry powder

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

Specific hazards during fire fighting

Combustible. Vapours are heavier than air and may spread along floors. Forms explosive mixtures with air on intense heating. Development of hazardous combustion gases or vapours possible in the event of fire.

Hazardous combustion products

Carbon oxides

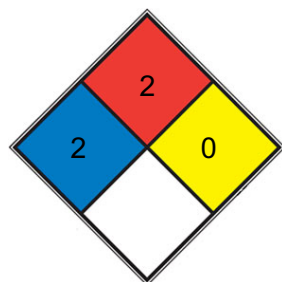
Specific extinguishing methods

Remove container from danger zone and cool with water. Prevent fire extinguishing water from contaminating surface water or the ground water system.

Special protective equipment for fire-fighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

NFPA 704



HEALTH 2 Intense or continued but not chronic exposure could cause temporary incapacitation or possible residual injury (e.g. [diethyl ether](#), ammonium phosphate, iodine)

FIRE 2 Must be moderately heated or exposed to relatively high ambient temperature before ignition can occur and multiple finely divided suspended solids that do not require heating before ignition can occur. Flash point between 37.8 and 93.3 °C (100 and 200 °F). (e.g. diesel fuel, [sulfur](#))

REACT 0 Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium, [N₂](#))

SPEC.
HAZ.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert. Advice for emergency responders: For

personal protection see section 8.

Environmental precautions

Do not let product enter drains. Risk of explosion.

Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

SECTION 7: Handling and storage

Handling

Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

Advice on safe handling

Work under hood. Do not inhale substance/mixture.

Avoidance of contact

no information available

Storage

Further information on storage conditions

Tightly closed. Keep away from heat and sources of ignition.

Storage class

4.1B, Flammable solid hazardous materials

Recommended storage temperature

Recommended storage temperature see product label.

SECTION 8: Exposure controls/personal protection

control parameter

Hazard composition and occupational exposure limits

Does not contain substances with occupational exposure limits.

Engineering measures

No data available

Personal protective equipment

Respiratory protection

required when dusts are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended Filter type

Filter A-(P2)

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Tightly fitting safety goggles

Skin and body protection

Flame retardant antistatic protective clothing.

Hand protection

Material

Nitrile rubber

Break through time

480 min

Glove thickness

0.11 mm

Protective index

Full contact

Manufacturer

KCL 741 L

Material

Nitrile rubber

Break through time

480 min

Glove thickness

0.11 mm

Protective index

Splash contact

Manufacturer

KCL 741 L

Remarks

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 EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D- 36124 Eichenzell, Internet: www.kcl.de).

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

SECTION 9: Physical and chemical properties

Information on basic physicochemical properties

powder

Color

white

Odor

characteristic odour

Odor Threshold

No data available

pH

No data available

Melting point/ range

175 - 177 °C

Method: lit.

Boiling point/boiling range

204 °C

Method: lit.

Flash point

64.4 °C

Method: closed cup

Evaporation rate

No data available

Flammability (solid, gas)

The substance or mixture is a flammable solid with the category 2.

Method: Flammability (solids)

Burning rate

No data available

Upper explosion limit / Upper flammability limit

Upper explosion limit

Lower explosion limit / Lower flammability limit

Lower explosion limit

Vapor pressure

0.87 hPa (25 °C)

Method: OECD Test Guideline 104

Relative vapor density

5.2 (vs air)

Relative density

0.992

Density

0.992 g/cm³ (25 °C)

Method: OECD Test Guideline 109

Water solubility

1.5373 g/l soluble (25 °C)

Method: OECD Test Guideline 105

Partition coefficient: n-octanol/water

log Pow: 2.414 (25 °C)

Method: OECD Test Guideline 107 Bioaccumulation is not expected.

Autoignition temperature

466 °C

Decomposition temperature

No data available

Viscosity, dynamic

No data available

Viscosity, kinematic

No data available

Flow time

No data available

Explosive properties

No data available

Oxidizing properties

none

Molecular weight

152.23 g/mol

Particle characteristics Particle size

No data available

Solubility

Soluble in acetone, ethanol, diethylether, chloroform and acetic acid.

Physical state

Solid

Henry's Law Constant

($\times 10^{-5}$ atmm³/mol): 3.00 at 20 °C (approximate - calculated from water solubility and vapor pressure)

SECTION 10: Stability and reactivity

Reactivity

Forms explosive mixtures with air on intense heating. A range from approx. 15 Kelvin below the flash point is to be rated as critical. The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

Possibility of hazardous reactions

Risk of ignition or formation of inflammable gases or vapours with: Strong oxidizing agents Ozone chromium(VI) oxide Exothermic reaction with: potassium permanganate

Conditions to avoid

Strong heating.

Incompatible materials

no information available

Hazardous decomposition products

In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - female - > 5,000 mg/kg (OECD Test Guideline 423)

Acute toxicity estimate Inhalation - 4 h - 2.5 mg/l - dust/mist (Expert judgement)

Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract

Inhalation: Irritating to respiratory system.

Dermal: No data available

Skin corrosion/irritation

Skin - human skin

Result: Skin irritation - 1 h (OECD Test Guideline 439)

Serious eye damage/eye irritation

Eyes - Bovine cornea

Result: Causes serious eye damage. - 4 h (OECD Test Guideline 437)

Respiratory or skin sensitization

Classified based on available data. For more details, see section 2

Germ cell mutagenicity

Test Type: Ames test

Test system: Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Test system: mouse lymphoma cells

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 476

Result: negative

Test Type: In vivo micronucleus test

Species: Mouse

Result: negative

Remarks: (ECHA)

Carcinogenicity

Classified based on available data. For more details, see section 2

Reproductive toxicity

Classified based on available data. For more details, see section 2

Specific target organ toxicity - single exposure

Inhalation - May cause damage to organs.

Specific target organ toxicity - repeated exposure

Classified based on available data. For more details, see section 2

Aspiration hazard

Classified based on available data. For more details, see section 2

11.2 Additional Information

Repeated dose toxicity - Rat - male and female - Oral - 91 d - No observed adverse effect level - 3.2 mg/kg

Remarks: Subchronic toxicity

Repeated dose toxicity - Rat - male and female - Inhalation - 28 d

Remarks: Subacute toxicity

Repeated dose toxicity - Rat - male and female - Skin contact - No observed adverse effect level - 250 mg/kg

Remarks: (ECHA)

RTECS: EX1225000

Confusion., Coma., Nausea, Dizziness, Headache

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12: Ecological information

Ecotoxicity

Components:

DL-Camphor:

Toxicity to fish

LC50 (Danio rerio (zebra fish)): 33.25 mg/l End point: mortality Exposure time: 96 h Test Type: semi-static test Analytical monitoring: yes

Method: OECD Test Guideline 203 GLP: yes

Toxicity to daphnia and other aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 4.23 mg/l Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 202 GLP: yes

Toxicity to algae/aquatic plants

EC50 (Pseudokirchneriella subcapitata (green algae)): 1.71 mg/l Exposure time: 72 h Test Type: static test Analytical monitoring: yes Method:

OECD Test Guideline 201 GLP: yes NOEC (Pseudokirchneriella subcapitata (green algae)): 0.032 mg/l Exposure time: 72 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 201 GLP: yes

Toxicity to microorganisms

EC50 (activated sludge): > 100 mg/l Exposure time: 3 h Test Type: static test Method: OECD Test Guideline 209 GLP: yes

Persistence and degradability

Components:

DL-Camphor:

Biodegradability

aerobic Inoculum: activated sludge Concentration: 25.8 mg/l Result: Readily biodegradable. Biodegradation: ca. 85 % Exposure time: 28 d

Method: OECD Test Guideline 301B GLP: yes

Bioaccumulative potential

Components:

DL-Camphor:

Bioaccumulation

Remarks: No data available

Partition coefficient: noctanol/water

log Pow: 2.414 (25 °C) Method: OECD Test Guideline 107 Remarks: Bioaccumulation is not expected.

Mobility in soil

Components:

DL-Camphor:

Stability in soil

Remarks: No data available

Other adverse effects

Components:

DL-Camphor:

Additional ecological information

No data available

SECTION 13: Disposal considerations

Disposal methods

Waste from residues

Offer surplus and non-recyclable solutions to a licensed disposal company.

SECTION 14: Transport information

International Regulations

IATA-DGR

UN/ID No. : UN 2717

Proper shipping name : Camphor

Class : 4.1

Packing group : III

Labels : Division 4.1 - Flammable solids

Packing instruction (cargo aircraft) : 449

Packing instruction (passenger aircraft) : 446

IMDG-Code

UN number : UN 2717

Proper shipping name : CAMPHOR

Class : 4.1

Packing group : III

Labels : 4.1

EmS Code : F-A, S-I

Marine pollutant : no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

JT/T 617

UN number : UN 2717

Proper shipping name : CAMPHOR

Class : 4.1

Packing group : III

Labels : 4.1

Environmentally hazardous : no

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15: Regulatory information

National regulatory information

Law on the Prevention and Control of Occupational Diseases

Regulations on Safety Management of Hazardous Chemicals

Catalogue of Hazardous Chemicals

Hazardous Chemicals for Priority Management

Not applicable under SAWS

Regulation of Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals

China Severely Restricted Toxic Chemicals for Import and Export

Not applicable

Regulation on the Administration of Precursor Chemicals

Catalogue and Classification of Precursor Chemicals

Not listed

SECTION 16: Other information

Full text of other abbreviations

ACGIH

USA. ACGIH Threshold Limit Values (TLV)

ACGIH / TWA

8-hour, time-weighted average

ACGIH / STEL AIC - Australian Invent Transport by Land of Bra bw - Body weight; CMR Standard of the German List (Canada); ECx - Conc associated with x%respo Chemical Substances (Jap response; ERG - Emerge GLP - Good Laboratory P cer; IATA - International Construction and Equipm Half maximal inhibitory c tion; IECSC - Inventory o tional Maritime Dangerou Industrial Safety and H Standardisation; KECL - K tration to 50 % of a test (Median Lethal Dose); MA lution from Ships; MERC of Dangerous Goods; n.o. - No Observed (Adverse) fect Level; NOELR - No Norm; NTP - National Toxi icals; OECD - Organisatio fice of Chemical Safety a and Toxic substance; PIC stances; (Q)SAR - (Quant (EC) No 1907/2006 of th Registration, Evaluation, Accelerating

Decompositi Chemical Substance Inve Thailand Existing Chemica States); UN - United Nat Transport of Dangerous WHMIS -

Workplace Hazar

Short-term exposure limit ry of Industrial Chemicals

ANTT - National Agency for il

ASTM - American Society for the Testing of Materials

- Carcinogen, Mutagen or Reproductive Toxicant

DIN nstitute for Standardisation

DSL - Domestic Substances ntration associated with x% response

ELx - Loading rate se

EmS - Emergency Schedule

ENCS - Existing and New n)

ErCx - Concentration associated with x% growth rate cy Response Guide

GHS - Globally Harmonised System

actice

IARC - International Agency for Research on Canir Transport Association

IBC - International Code for the nt of Ships carrying Dangerous Chemicals in Bulk

IC50 ncentration

ICAO - International Civil Aviation Organiza- Existing Chemical Substances in China

IMDG - Interna- Goods

IMO - International Maritime Organisation

ISHL alth Law (Japan)

ISO - International Organisation for rea Existing Chemicals Inventory

LC50 - Lethal Concenopulation

LD50 - Lethal Dose to 50% of a test population POL - International Convention for the Prevention of Pol- SUR - The Agreement for the Facilitation of the Transport . - Not Otherwise Specified

Nch - Chilean Norm

NO(A)EC ffect Concentration

NO(A)EL - No Observed (Adverse) Efbserveable Effect Loading Rate

NOM - Official Mexican ology Program

NZIoC - New Zealand Inventory of Chemfor Economic Co-operation and Development

OPPTS - Ofd Pollution Prevention

PBT - Persistent, Bioaccumulative S - Philippines Inventory of Chemicals and Chemical Subtative) Structure Activity Relationship

REACH - Regulation European Parliament and of the Council concerning the uthorisation and Restriction of Chemicals

SADT - Selfn Temperature

SDS - Safety Data Sheet

TCSI - Taiwan tory

TDG - Transportation of Dangerous Goods

TECI s Inventory

TSCA - Toxic Substances Control Act (United ons

UNRTDG - United Nations Recommendations on the oods

vPvB - Very Persistent and Very Bioaccumulative

ous Materials Information System

Disclaimer:

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.