# Chemical Safety Data Sheet MSDS / SDS

# N-DODECENE-1

Revision Date:2024-12-21 Revision Number:1

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

#### **Product identifier**

Product name	: N-DODECENE-1
CBnumber	: CB4875167
CAS	: 25378-22-7
EINECS Number	: 246-922-9
Synonyms	: N-Dodecene-1
Relevant identified uses of the s	ubstance 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

#### Classification of the substance or mixture

Not classified.

Label elements	
Pictogram(s)	
Signal word	No signal word
Hazard statement(s)	
none	
Precautionary statement(s)	
Prevention	
none	
Response	
none	
Storage	
none	
Disposal	

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#### Other hazards

no data available

### SECTION 3: Composition/information on ingredients

#### Substance

Product name	: N-DODECENE-1
Synonyms	: N-Dodecene-1
CAS	: 25378-22-7
EC number	: 246-922-9
MF	: C12H24
MW	: 168.319

### SECTION 4: First aid measures

#### Description of first aid measures

#### If inhaled

Fresh air, rest.

#### Following skin contact

Rinse and then wash skin with water and soap.

#### Following eye contact

First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

#### **Following ingestion**

Rinse mouth. Do NOT induce vomiting.

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

No inhalation hazard expected. Aspiration hazard if ingested. Minor skin and eye irritation. (USCG, 1999)

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

no data available

### **SECTION 5: Firefighting measures**

#### **Extinguishing media**

Foam, carbon dioxide, dry chemical. dodecene

#### **Specific Hazards Arising from the Chemical**

Excerpt from ERG Guide 128 [Flammable Liquids (Water-Immiscible)]: HIGHLY FLAMMABLE: Will be easily ignited by heat, sparks or flames.

Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will

spread along ground and collect in low or confined areas (sewers, basements, tanks). Vapor explosion hazard indoors, outdoors or in sewers. Those substances designated with a (P) may polymerize explosively when heated or involved in a fire. Runoff to sewer may create fire or explosion hazard. Containers may explode when heated. Many liquids are lighter than water. Substance may be transported hot. For hybrid vehicles, ERG Guide 147 (lithium ion batteries) or ERG Guide 138 (sodium batteries) should also be consulted. If molten aluminum is involved, refer to ERG Guide 169. (ERG, 2016)

#### Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

### SECTION 6: Accidental release measures

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

Avoid dust formation. Avoid breathing mist, gas or vapours. Avoid contacting with skin and eye. Use personal protective equipment. Wear chemical impermeable gloves. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

#### Environmental precautions

Do NOT let this chemical enter the environment. Collect leaking and spilled liquid in covered containers as far as possible.

#### Methods and materials for containment and cleaning up

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use sparkproof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

### SECTION 7: Handling and storage

#### Precautions for safe handling

Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

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

Separated from strong oxidants, halogens and inorganic acids.IN GENERAL, MATERIALS WHICH ARE TOXIC AS STORED OR WHICH CAN DECOMP INTO TOXIC COMPONENTS ... SHOULD BE STORED IN A COOL, WELL-VENTILATED PLACE, OUT OF DIRECT RAYS OF THE SUN, AWAY FROM AREAS OF HIGH FIRE HAZARD, & SHOULD BE PERIODICALLY INSPECTED ... INCOMPATIBLE MATERIALS SHOULD BE ISOLATED FROM EACH OTHER.

### SECTION 8: Exposure controls/personal protection

#### **Control parameters**

#### **Occupational Exposure limit values**

no data available

#### **Biological limit values**

no data available

#### **Exposure controls**

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the riskelimination area.

#### Individual protection measures

#### Eye/face protection

Wear tightly fitting safety goggles with side-shields conforming to EN 166(EU) or NIOSH (US).

#### **Skin protection**

Wear fire/flame resistant and impervious clothing. Handle with gloves. Gloves must be inspected prior to use. Wash and dry hands. The

selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

#### **Respiratory protection**

If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator.

#### Thermal hazards

no data available

# SECTION 9: Physical and chemical properties

#### Information on basic physicochemical properties

Physical state	1-dodecene is a clear colorless liquid with a mild, pleasnat odor. Insoluble in water and floats on
	water. Harmful or fatal by ingestion. Inhalation of vapors may irritate and damage lungs. High
	concentrations may have a narcotic effect.
Colour	Colorless liquid
Odour	MILD, PLEASANT
Melting point/freezing point	-35°C
Boiling point or initial boiling point and	213°C
boiling range	
Flammability	Combustible.
Lower and upper explosion	no data available
limit/flammability limit	
Flash point	77°C
Auto-ignition temperature	491° F (USCG, 1999)
Decomposition temperature	no data available
рН	no data available
Kinematic viscosity	1.72 sq mm/s @ 20 deg C
Solubility	Insoluble in water; sol in ethanol, ethyl ether, and acetone
Partition coefficient n-octanol/water	6.1
Vapour pressure	0.52 mm Hg (USCG, 1999)
Density and/or relative density	0.75
Relative vapour density	5.81 (AIR= 1)
Particle characteristics	no data available

# SECTION 10: Stability and reactivity

#### Reactivity

Reacts with strong oxidants, halogens and inorganic acids. Attacks rubber, paints and lining materials.

#### **Chemical stability**

no data available

#### Possibility of hazardous reactions

LOW, WHEN EXPOSED TO HEAT OR FLAME. /DODECENE/1-DODECENE may react vigorously with strong oxidizing agents. May react exothermically with reducing agents to release hydrogen gas. In the presence of various catalysts (such as acids) or initiators, may undergo exothermic addition polymerization reactions.

#### **Conditions to avoid**

no data available

#### Incompatible materials

Can react with oxidizing materials. dodecene

#### Hazardous decomposition products

no data available

### SECTION 11: Toxicological information

#### Acute toxicity

- Oral: no data available
- Inhalation: no data available
- Dermal: no data available

#### Skin corrosion/irritation

no data available

#### Serious eye damage/irritation

no data available

#### Respiratory or skin sensitization

no data available

#### Germ cell mutagenicity

no data available

#### Carcinogenicity

no data available

#### **Reproductive toxicity**

no data available

#### STOT-single exposure

no data available

#### STOT-repeated exposure

no data available

#### Aspiration hazard

no data available

### SECTION 12: Ecological information

#### Toxicity

Toxicity to fish: no data available Toxicity to daphnia and other aquatic invertebrates: no data available Toxicity to algae: no data available Toxicity to microorganisms: no data available

#### Persistence and degradability

Pure cultures of Cornebacterium sp(1), C. resinae(2,3) Micrococcus cericans(4) and yeast(5) were found to oxidize 1-dodecene. In pure culture tests, 10 of 34 microorganism strains were found to grow on 1-dodecene(6).

#### **Bioaccumulative potential**

An estimated BCF of 310 was calculated for 1-dodecene(SRC), using an estimated log Kow of 6.10(1,SRC) and a regression-derived equation(2). According to a classification scheme(3), this BCF suggests the potential for bioconcentration in aquatic organisms is high.

#### Mobility in soil

Using a structure estimation method based on molecular connectivity indices(1), the Koc for 1-dodecene can be estimated to be 5900(SRC). According to a classification scheme(2), this estimated Koc value suggests that 1-dodecene is expected to be immobile in soil(SRC).

#### Other adverse effects

no data available

### SECTION 13: Disposal considerations

#### **Disposal methods**

#### Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

#### Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

# SECTION 14: Transport information

#### **UN Number**

ADR/RID: no data available IMDG: no data available IATA: no data available

#### **UN Proper Shipping Name**

ADR/RID: no data available IMDG: no data available

IATA: no data available

#### Transport hazard class(es)

ADR/RID: no data available

IMDG: no data available

IATA: no data available

#### Packing group, if applicable

ADR/RID: no data available IMDG: no data available

IATA: no data available

#### **Environmental hazards**

ADR/RID: No

IMDG: No

IATA: No

#### Special precautions for user

no data available

#### Transport in bulk according to IMO instruments

no data available

### **SECTION 15: Regulatory information**

#### Safety, health and environmental regulations specific for the product in question

European Inventory of Existing Commercial Chemical Substances (EINECS)

Listed.

**EC Inventory** 

#### Listed.

United States Toxic Substances Control Act (TSCA) Inventory Listed. China Catalog of Hazardous chemicals 2015 Not Listed. New Zealand Inventory of Chemicals (NZIoC) Not Listed. PICCS Listed. Vietnam National Chemical Inventory Listed. IECSC Listed. Korea Existing Chemicals List (KECL) Listed.

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

#### Abbreviations and acronyms

CAS: Chemical Abstracts Service

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

IMDG: International Maritime Dangerous Goods

IATA: International Air Transportation Association

TWA: Time Weighted Average

STEL: Short term exposure limit

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

EC50: Effective Concentration 50%

#### References

IPCS - The International Chemical Safety Cards (ICSC), website: http://www.ilo.org/dyn/icsc/showcard.home

HSDB - Hazardous Substances Data Bank, website: https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm

IARC - International Agency for Research on Cancer, website: http://www.iarc.fr/

eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: http://www.echemportal.org/echemportal/index? pageID=0&request locale=en

CAMEO Chemicals, website: http://cameochemicals.noaa.gov/search/simple

ChemlDplus, website: http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp

ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: http://www.phmsa.dot.gov/hazmat/library/erg

Germany GESTIS-database on hazard substance, website: http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp

ECHA - European Chemicals Agency, website: https://echa.europa.eu/

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