

Material Safety Data Sheet**Grade** CYCLODODECANONEVersion 5
Release Date 2014/7/1
Revision Date**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING**

Trade Name CYCLODODECANONE
Abbreviation CODN

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2. HAZARDS IDENTIFICATION**GHS Classification**

Environmental Hazards H411 Hazardous to the aquatic environment (long-term hazard category 2)

Pictogram**Signal word****Hazard statement (code)** H411 Toxic to aquatic life with long lasting effects (H411)

Precautionary Statement P273 Avoid release to the environment.
 P391 Collect spillage.
 P501 Dispose of contents/container to in accordance with local/regional/regulation.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance /Nature Substance
Chemical Nature CYCLODODECANONE

Information on ingredients

| Component | CAS No. | REACH No. | METI |
|-----------------|----------|------------------|--------|
| CYCLODODECANONE | 830-13-7 | 01-2119474882-27 | 3-2379 |

Other information**4. FIRST AID MEASURES**

Description of first aid measures Pay attention to self-protection.
 Remove victims from hazardous area.
 Keep warm, position comfortably, and cover well.
 Do not leave affected persons unattended.

Inhalation In case of symptoms of irritation caused by vapours in thermal processing:
 Provide fresh air, seek medical advice if necessary.
 Following inhalation of product dust: See that there is fresh air.

Skin contact Wash off with plenty of water and soap.
 Following contact with hot product, cool quickly with cold water until pain ceases.
 Do not remove congealed product from the skin. Consult doctor immediately.
 In case of burns by molten product medical treatment is necessary.

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Eye contact With eye held open, thoroughly rinse immediately with plenty of water at least 10 minutes. If eye irritation persists, consult a specialist.

Ingestion: Is considered an unlikely route of exposure, further measures are not necessary.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media Water spray, foam, dry chemical powder or carbon dioxide.

Unsuitable extinguish media/methods high volume water jet

Special hazards arising from the substance or mixture
May be released in case of fire: carbon monoxide, carbon dioxide, organic product of decomposition.
Under certain fire conditions, traces of other toxic product may occur.

Additional Information Have ready/ wear respiratory protection equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
In case product dust is released : Dust mask

Environmental precautions Should not be released into the environment.

Methods and material for containment and cleaning up
Use mechanical handling equipment
Fill into marked, sealable containers.
To be disposed of in compliance with existing regulations.

Reference to other sections Wear personal protective equipment

7. HANDLING AND STORAGE

Precautions for safe handling
Avoid dust formation.
Provide for appropriate exhaust ventilation and dust collection at machinery.
In case of thermal processing, provide for extraction of the vapour or adequate ventilation.

Conditions for safe storage, including any incompatibilities

Advice on protection against fire and explosion
General rules of fire prevention should be observed.
If dusts are formed: Take precautionary measures against static charges, keep away from sources of ignition.

Storage
Keep containers tightly closed in a dry, cool and well-ventilated place.
Under inert gas (nitrogen).

Advice on common storage Observe prohibition against storing together!

Storage stability Stable under recommended storage conditions.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure controls

Engineering measures
In case of thermal processing, provide for extraction of the vapour or adequate ventilation.
In case of dust being formed, provide for adequate extraction.

Exposure controls
This substance is handled under Strictly Controlled Conditions in accordance with REACH regulation Article 17(3) for on-site isolated intermediates and, in case the substance is transported to other sites for further processing, the substance should be handled at these sites under the Strictly Controlled Conditions as specified in REACH regulation Article 18(4).

Personal protective equipment

Respiratory protection
Wear dust mask in the presence of dust.
Do not inhale vapours from hot product.
Should vapours inadvertently manage to permeate into the surrounding air during thermal processing, then gas masks fitted with filters designed to combat organic vapours (e.g. A 2) or breathing apparatus with an independent air supply are to be worn.

Hand protection
The following details refer to information provided by Kachele-Cama Latex GmbH, Am Kreuzacker-9, D - 36124 Eichenzell, www.kcl.de. which supplies the corresponding protective gloves.
Glove material Butoject(898)
Material thickness 0.7 mm
Break through time 480 min
Protective heat-insulating gloves are to be used during thermal processing.

Eye protection Safety glasses

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Hygiene measures Observe the rules usually applicable when handling chemicals.
Do not breathe dust.
Do not wear contaminated clothing.
Avoid contact with skin and eyes.
Smoking, eating and drinking should be prohibited in the application area.
Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES**Appearance**

Form crystals
Color colourless
physical state solid (20 °C)
liquid (100 °C)
Order of camphor
Odour threshold not determined

Information on basic physical and chemical properties

pH neutral
Melting point/range ca. 61°C
Boiling point/range 277°C
Flash point 118°C
Ignition temperature 280°C
Thermal decomposition No decomposition if stored and applied as directed.
Explosiveness Not explosive as defined by EU hazardous substance law.
If dusts develop, explosive dust/air mixtures may form.
Vapor pressure 0.71hPa (20°C)
Density 0.97g/cm³ (25°C)
Water solubility ca.26mg/l

Further information

Other information The range of values given complies with the variation range of the product group.
The specific physical chemical data can be available in the product information.

10. STABILITY AND REACTIVITY

Reactivity Under normal conditions: stable.
Chemical stability Stable under recommended storage conditions.
Possibility of hazardous reactions Risk of spontaneous ignition (above 120°C, in finely divided form, in the presence of atmospheric oxygen)
Conditions to avoid No specific hazards are known.
Incompatible materials None known
Hazardous decomposition products Decomposition products in combustion and thermal decomposition
Carbon monoxide Carbon monoxide organic products of decomposition

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity LD50 rat: >2 500 mg/kg
Acute inhalation toxicity No data available
Acute dermal toxicity No data available
Skin irritation Rabbit slightly irritating
Eye irritation Rabbit not irritating
Sensitization {Magnusson-Kligman test} guinea pig: Did not cause sensitization on laboratory animals.
Assessment of STOT single exposure The substance or mixture is not classified as specific target organ toxicant, single exposure.
Assessment of STOT repeated exposure No data available
Risk of aspiration toxicity No Aspiration toxicity classification
Carcinogenicity No data available
Mutagenicity Tests on bacterial or mammalian cell cultures did not show mutagenic effects.
Teratogenicity No data available
Toxicity to reproduction No data available

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| | |
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| Toxicity to fish | No data available |
| Toxicity in aquatic invertebrates | EC50 Daphnia magna: 2.5 mg/L/48h |
| Toxicity to algae | EC50 Scenedesmus subspicatus: 7.7 mg/L /72 h |
| Persistence and degradability | Exposure time 28day |
| Biodegradability | result: 93% readily biodegradable. |
| Bioaccumulation | Bioaccumulation is unlikely. |
| Mobility in soil | The soil mobility of the substance is significantly affected by adsorption to soil components. |
| Further Information | No further information available |

13. DISPOSAL CONSIDERATIONS

With respect to local regulations, e. g. dispose of to suitable waste incineration plant.

14. TRANSPORT INFORMATION

Land transport (ADR/RID):

UN: 3077
UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(cyclododecanone)
Class: 9
Packing Group: III
Environmental hazards: Yes
Special precautions for user: Yes
ADR: Tunnel Restriction Code: (E)

Sea transport (IMDG):

UN: 3077
UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(cyclododecanone)
Class: 9
Packing Group: III
Environmental hazards: Yes
Special precautions for user: No

Air transport (ICAO/IATA):

UN: 3077
UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(cyclododecanone)
Class: 9
Packing Group: III
Environmental hazards: Yes
Special precautions for user: Yes
IATA-C: ERG-Code 9L
IATA-P: ERG-Code 9L**15. REGULATORY INFORMATION****National legislation**

| | |
|------------------------|-------------------|
| Europe (EINECS/ELINCS) | listed/registered |
| USA (TSCA) | listed/registered |
| Australia (AICS) | listed/registered |
| Japan (MITI) | listed/registered |
| Philippines (PICCS) | listed/registered |
| China | listed/registered |
| New Zealand | listed/registered |

16. OTHER INFORMATION**Further information**

The information provided in the Safety Data Sheet is corrected to the best of our knowledge, information and belief at the date of publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.