

Chemical Safety Data Sheet MSDS / SDS

Dicyclohexylamine

Revision Date:2025-02-01 Revision Number:1

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

Product identifier

Product name : Dicyclohexylamine
CBnumber : CB6852609
CAS : 101-83-7
EINECS Number : 202-980-7
Synonyms : Dicyclohexylamine,DCHA

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 : 400-158-6606

SECTION 2: Hazards identification

GHS Label elements, including precautionary statements

Symbol(GHS)



Signal word

Danger

Precautionary statements

P501 Dispose of contents/container to.....

P405 Store locked up.

P391 Collect spillage. Hazardous to the aquatic environment

P308+P313 IF exposed or concerned: Get medical advice/attention.

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

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off Immediately all contaminated clothing. Rinse SKIN with water/shower.

P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

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

P273 Avoid release to the environment.

P270 Do not eat, drink or smoke when using this product.
P264 Wash skin thoroughly after handling.
P264 Wash hands thoroughly after handling.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P202 Do not handle until all safety precautions have been read and understood.
P201 Obtain special instructions before use.

Hazard statements

H410 Very toxic to aquatic life with long lasting effects
H400 Very toxic to aquatic life
H373 May cause damage to organs through prolonged or repeated exposure
H361 Suspected of damaging fertility or the unborn child
H314 Causes severe skin burns and eye damage
H302 Harmful if swallowed

SECTION 3: Composition/information on ingredients

Substance

| | |
|--------------|-------------------------------------|
| Product name | : Dicyclohexylamine |
| Synonyms | : Dicyclohexylamine,DCHA |
| CAS | : 101-83-7 |
| EC number | : 202-980-7 |
| MF | : C ₁₂ H ₂₃ N |
| MW | : 181.32 |

SECTION 4: First aid measures

Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

Special hazards arising from the substance or mixture

Carbon oxides, Nitrogen oxides (NO_x)

Advice for firefighters

No data available

Further information

No data available

NFPA 704



HEALTH 3 Short exposure could cause serious temporary or moderate residual injury (e.g. [liquid hydrogen](#), [sulfuric acid](#), [calcium hypochlorite](#), hexafluorosilicic acid)

FIRE 1 Materials that require considerable preheating, under all ambient temperature conditions, before ignition and combustion can occur. Includes some finely divided suspended solids that do not require heating before ignition can occur. Flash point at or above 93.3 °C (200 °F). (e.g. [mineral oil](#), ammonia)

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

For personal protection see section 8.

Environmental precautions

No data available

Methods and materials for containment and cleaning up

No data available

Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

Precautions for safe handling

For precautions see section 2.2.

Conditions for safe storage, including any incompatibilities

Store under inert gas.

Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

control parameter

Hazard composition and occupational exposure limits

Does not contain substances with occupational exposure limits.

Exposure controls

Personal protective equipment

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0,4 mm Break through time: 480 min

Material tested: Camatril? (KCL 730 / Aldrich Z677442, Size M)

Splash contact Material: Nitrile rubber

Minimum layer thickness: 0,2 mm Break through time: 40 min

Material tested: Dermatril? P (KCL 743 / Aldrich Z677388, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Control of environmental exposure

Prevent product from entering drains.

SECTION 9: Physical and chemical properties

Information on basic physicochemical properties

| | |
|---|--------------------------------------|
| Appearance | liquid |
| Odour | No data available |
| Odour Threshold | No data available |
| pH | 11 at 1 g/l at 20 °C |
| Melting point/freezing point | Melting point/range: -2 °C - lit. |
| Initial boiling point and boiling range | 117 - 120 °C at 13 hPa 256 °C - lit. |
| Flash point | 96 °C - closed cup |
| Evaporation rate | No data available |
| Flammability (solid, gas) | No data available |

| | |
|--|-------------|
| Upper/lower flammability or explosive limits | 0.8-4.6%(V) |
|--|-------------|

| | |
|-----------------|-------------------|
| Vapour pressure | 16 hPa at 37,7 °C |
|-----------------|-------------------|

| | |
|----------------|------|
| Vapour density | 7,26 |
|----------------|------|

| | |
|------------------|----------------------------------|
| Relative density | 0,912 g/cm ³ at 20 °C |
|------------------|----------------------------------|

| | |
|------------------|------------------|
| Water solubility | 0,8 g/l at 25 °C |
|------------------|------------------|

| | |
|--|------------------------|
| Partition coefficient: n-octanol/water | log Pow: -0,4 at 25 °C |
|--|------------------------|

| | |
|--------------------------|--------|
| Autoignition temperature | 255 °C |
|--------------------------|--------|

| | |
|---------------------------|-------------------|
| Decomposition temperature | No data available |
|---------------------------|-------------------|

| | |
|-----------|-------------------|
| Viscosity | No data available |
|-----------|-------------------|

| | |
|----------------------|-------------------|
| Explosive properties | No data available |
|----------------------|-------------------|

| | |
|----------------------|-------------------|
| Oxidizing properties | No data available |
|----------------------|-------------------|

Other safety information

Relative vapour density

7,26

SECTION 10: Stability and reactivity

Reactivity

No data available

Chemical stability

No data available

Possibility of hazardous reactions

No data available

Conditions to avoid

No data available

Incompatible materials

Strong oxidizing agents

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NO_x)

Other decomposition products - No data available In the event of fire: see section 5

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - male - 200 mg/kg

LC50 Inhalation - Rat - male - 6 h - > 1,4 mg/l

LD50 Dermal - Rabbit - male and female - 200 - 316 mg/kg

Skin corrosion/irritation

Skin - Rabbit

Result: Causes burns. - 24 h

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Severe eye irritation

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

Ames test

S. typhimurium Result: negative

Mutagenicity (micronucleus test) Mouse - male

Result: negative

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Additional Information

Repeated dose toxicity - Rat - male and female - Oral - No observed adverse effect level - 40 mg/kg

RTECS: HY4025000

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

SECTION 12: Ecological information

Toxicity

Toxicity to fish

semi-static test LC50 - *Oryzias latipes* - 12 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates

(OECD Test Guideline 203)

Immobilization EC50 - *Daphnia magna* (Water flea) - 8 mg/l - 48 h (OECD Test Guideline 202)

Toxicity to algae

EC50 - *Desmodesmus subspicatus* (green algae) - 3,3 mg/l - 72 h

Persistence and degradability

Biodegradability aerobic - Exposure time 14 d

Result: 76,9 % - Readily biodegradable. (OECD Test Guideline 301C)

Bioaccumulative potential

No data available

Mobility in soil

No data available

Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Other adverse effects

SECTION 13: Disposal considerations

Waste treatment methods

Product

No data available

Waste Disposal

Incineration; incinerator equipped with a scrubber or thermal unit to reduce nitrogen oxides emissions.

SECTION 14: Transport information

UN number

ADR/RID: 2565 IMDG: 2565 IATA: 2565

UN proper shipping name

ADR/RID: DICYCLOHEXYLAMINE IMDG: DICYCLOHEXYLAMINE

IATA: Dicyclohexylamine

| | | |
|------|---|-----------|
| 14.3 | Transport hazard class(es) | |
| | ADR/RID: 8 IMDG: 8 | IATA: 8 |
| 14.4 | Packaging group | |
| | ADR/RID: III IMDG: III | IATA: III |
| 14.5 | Environmental hazards | |
| | ADR/RID: yes IMDG Marine pollutant: yes | IATA: no |
| 14.6 | Special precautions for user | |
| | No data available | |

SECTION 15: Regulatory information

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

Regulations on the Safety Management of Hazardous Chemicals

China Catalog of Hazardous chemicals 2015: Listed. website: <https://www.mem.gov.cn/>

Measures for Environmental Management of New Chemical Substances

Philippines Inventory of Chemicals and Chemical Substances (PICCS): Listed. website: <https://emb.gov.ph/>

New Zealand Inventory of Chemicals (NZIoC): Listed. website: <https://www.epa.govt.nz/>

EC Inventory: Listed.

Vietnam National Chemical Inventory: Listed. website: <https://chemicaldata.gov.vn/>

Korea Existing Chemicals List (KECL): Listed. website: <http://ncis.nier.go.kr>

European Inventory of Existing Commercial Chemical Substances (EINECS): Listed. website: <https://echa.europa.eu/>

United States Toxic Substances Control Act (TSCA) Inventory: Listed. website: <https://www.epa.gov/>

Chinese Chemical Inventory of Existing Chemical Substances (China IECSC): Listed. website: <https://www.mee.gov.cn/>

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

【1】 CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>

【2】 ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>

【3】 ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

【4】 eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website:

http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en

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

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

【7】 HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>

【8】 IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>

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

【10】 Sigma-Aldrich, website: <https://www.sigmaaldrich.com/>

Other Information

The symptoms of lung oedema often do not become manifest until a few hours have passed and they are aggravated by physical effort. Rest and medical observation is therefore essential. Immediate administration of an appropriate inhalation therapy by a doctor or a person authorized by him/her, should be considered.

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.