CBnumber

## Chemical Safety Data Sheet MSDS / SDS

## Cyanoacetic acid

Revision Date: 2025-04-19 Revision Number: 1

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

# Product identifier Product name : Cyanoacetic acid

CAS : 372-09-8 EINECS Number : 206-743-9

Synonyms : cyanoacetic acid,2-cyanoacetic acid

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

: CB8217349

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

P234 Keep only in original container.

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P264 Wash hands thoroughly after handling.

P264 Wash skin thouroughly after handling.

P270 Do not eat, drink or smoke when using this product.

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

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

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

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

Continuerinsing.

P310 Immediately call a POISON CENTER or doctor/physician.

P390 Absorb spillage to prevent material damage.

P405 Store locked up.

P406 Store in corrosive resistant/... container with a resistant inner liner.

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

#### **Hazard statements**

H290 May be corrosive to metals

H302 Harmful if swallowed

H314 Causes severe skin burns and eye damage

H318 Causes serious eye damage

H332 Harmful if inhaled

H402 Harmful to aquatic life

H412 Harmful to aquatic life with long lasting effects

## SECTION 3: Composition/information on ingredients

#### **Substance**

Product name : Cyanoacetic acid

Synonyms : cyanoacetic acid,2-cyanoacetic acid

CAS : 372-09-8
EC number : 206-743-9
MF : C3H3NO2
MW : 85.06

#### SECTION 4: First aid measures

#### Description of first aid measures

#### General advice

Consult a physician. Show this material safety data sheet to the doctor in attendance.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

#### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

#### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. 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 2.2) and/or in section 11

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

## **SECTION 5: Firefighting measures**

#### **Extinguishing media**

#### Suitable extinguishing media

Dry powder Dry sand

#### Special hazards arising from the substance or mixture

Carbon oxides, Nitrogen oxides (NOx)

#### Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

#### **Further information**

No data available

#### **NFPA 704**

3 0

|   | HEALTH        | 3 | Short exposure could cause serious temporary or moderate residual injury (e.g. <u>liquid hydrogen</u> , <u>sulfuric acid</u> , <u>calcium</u> <u>hypochlorite</u> , 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.<br>HAZ. |   |  |

## SECTION 6: Accidental release measures

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

Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

For personal protection see section 8.

#### **Environmental precautions**

Do not let product enter drains.

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

Pick up and arrange disposal without creating dust. Sweep up and shovel. Do not flush with water. Keep in suitable, closed containers for disposal.

#### Reference to other sections

For disposal see section 13.

### SECTION 7: Handling and storage

#### Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

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

Keep container tightly closed in a dry and well-ventilated place. Store in cool place. Never allow product to get in contact with water during storage. Do not store near acids.

#### 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**

#### Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

#### Personal protective equipment

Eye/face protection

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

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: 0,11 mm Break through time: 480 min

Material tested:Dermatril? (KCL 740 / Aldrich Z677272, Size M)

Splash contact Material: Nitrile rubber

Minimum layer thickness: 0,11 mm Break through time: 480 min Material tested:Dermatril? (KCL 740 / Aldrich Z677272, 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 EC 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.

**Body Protection** 

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full- face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Control of environmental exposure

Do not let product enter drains.

## SECTION 9: Physical and chemical properties

#### Information on basic physicochemical properties

| Appearance                              | light yellow crystalline               |
|---|--|
| Odour                                   | No data available                      |
| Odour Threshold                         | No data available                      |
| рН                                      | 2                                      |
| Melting point/freezing point            | Melting point/range: 64 - 70 °C - lit. |
| Initial boiling point and boiling range | 108 °C at 0,2 hPa - lit.               |
| Flash point                             | 107 °C - closed cup                    |
| Evaporation rate                        | No data available                      |
| Flammability (solid, gas)               | No data available                      |
| Upper/lower flammability or explosive   | No data available                      |
| limits                                  |  |
| Vapour pressure                         | 0,1 hPa at 100 °C                      |
| Vapour density                          | No data available                      |
| Relative density                        | No data available                      |
| Water solubility                        | soluble                                |
| Partition coefficient: n-octanol/water  | No data available                      |
| Autoignition temperature                | No data available                      |
| Decomposition temperature               | 166 °C -                               |
| Viscosity                               | No data available                      |
| Explosive properties                    | No data available                      |
| Oxidizing properties                    | No data available                      |

#### Other safety information

No data available

## SECTION 10: Stability and reactivity

#### Reactivity

Contact with acids liberates toxic gas.

#### **Chemical stability**

Stable under recommended storage conditions.

#### Possibility of hazardous reactions

No data available

#### Conditions to avoid

Avoid moisture.

#### Incompatible materials

acids, Bases, Strong oxidizing agents, Strong reducing agents

#### Hazardous decomposition products

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

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 - 1.500 mg/kg

Remarks: Behavioral:Change in motor activity (specific assay). Lungs, Thorax, or Respiration:Dyspnea. Skin and Appendages: Other: Hair.

LC50 Inhalation - Rat - 4 h - 1,9 mg/l (OECD Test Guideline 403)

#### Skin corrosion/irritation

No data available

#### Serious eye damage/eye irritation

No data available

#### Respiratory or skin sensitization

No data available

#### Germ cell mutagenicity

No data available

#### Carcinogenicity

IARC: No ingredient 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** 

RTECS: AG3675000

Cough, Shortness of breath, Headache, Nausea, Vomiting

**Toxicity** 

LD50 orally in Rabbit: 1500 mg/kg LD50 dermal Rabbit > 2000 mg/kg

## **SECTION 12: Ecological information**

#### **Toxicity**

No data available

#### Persistence and degradability

No data available

#### 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

No data available

## SECTION 13: Disposal considerations

#### Waste treatment methods

#### **Product**

Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle Chemical Book

uncleaned containers like the product itself.

#### Contaminated packaging

Dispose of as unused product.

## **SECTION 14: Transport information**

#### **UN** number

ADR/RID: 3261 IMDG: 3261 IATA: 3261

#### **UN proper shipping name**

ADR/RID: CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. (cyanoacetic acid) IMDG: CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S.

(cyanoacetic acid)

IATA: Corrosive solid, acidic, organic, n.o.s. (cyanoacetic acid)

#### Transport hazard class(es)

ADR/RID: 8 IMDG: 8 IATA: 8

#### **Packaging group**

ADR/RID: II IMDG: II IATA: II

#### **Environmental hazards**

ADR/RID: no IMDG Marine pollutant: no IATA: no

#### 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

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

EC Inventory:Listed.

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

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

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

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

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

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

#### SECTION 16: Other information

#### Abbreviations and acronyms

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

CAS: Chemical Abstracts Service

EC50: Effective Concentration 50%

IATA: International Air Transportation Association

IMDG: International Maritime Dangerous Goods

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

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

STEL: Short term exposure limit TWA: Time Weighted Average

#### References

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

[2] ChemlDplus, 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/

#### 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.