

Safety Data Sheet

according to Regulation (EC) No 1907/2006 (REACH)
Classifications according to Regulation (EC) No 1272/2008.
Printdate 02 Jun 2023

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product name:

Cyanamide

1.1. Catalog No.:

676898

1.2. Relevant identified uses of the substance or mixture

Identified: Laboratory chemical
uses: R&D

1.3. Uses advised against:

HPC Standards GmbH
Am Wieseneck 7

04451 Cunnersdorf
Deutschland

Tel. +49 34291 3372-36
Fax. +49 34291 3372-39
contact@hpc-standards.com

1.4. Emergency telephone number

HPC Standards Tel. +49 34291 3372-36
This number is only available during office hours.

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008
Acute toxicity, Oral (Category 3), H301
Acute toxicity, Dermal (Category 3), H311
Skin corrosion (Category 1B), H314
Skin sensitisation (Category 1), H317
Reproductive toxicity (Category 2), H361fd
Specific target organ toxicity - repeated exposure (Category 2), H373
Chronic aquatic toxicity (Category 3), H412

2.2. Label elements

2.2.1. Pictogram



2.2.2.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram Signal word Danger Hazard statement(s)

H301 + H311 Toxic if swallowed or in contact with skin

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.

H373 May cause damage to organs through prolonged or repeated exposure.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statement(s)

P201 Obtain special instructions before use.

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

P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician. Rinse mouth.

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

P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.

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

Supplemental Hazard

Statements

none

2.3 Other hazards

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.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Synonyms : Hydrogen cyanamide

Carbodiimide

Formula : CH₂N₂

Molecular weight : 42,04 g/mol

CAS-No. : 420-04-2

EC-No. : 206-992-3

Index-No. : 615-013-00-2

Hazardous ingredients according to Regulation (EC) No 1272/2008

Component Classification Concentration

Cyanamide

CAS-No.

EC-No.

Index-No.

420-04-2

206-992-3

615-013-00-2

Acute Tox. 3; 1B; Skin Sens.

1; Repr. 2; STOT RE 2;

Aquatic Chronic 3; H301,

H311, H314, H317, H361,

H373, H412

<= 100 %

3.1.1. Formula

CH₂N₂

3.1.2. Molecular Weight (g/mol)

42.04

3.1.3. CAS-No.

420-04-2

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice

Consult a physician. Show this 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. Take victim immediately to hospital. 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.

4.2 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

4.3 Indication of any immediate medical attention and special treatment needed

No data available

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Carbon oxides, Nitrogen oxides (NOx)

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

No data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.
For personal protection see section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

7. HANDLING AND STORAGE

7.1 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.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Recommended storage temperature 2 - 8 °C

Moisture sensitive.

Storage class (TRGS 510): Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects

7.3 Specific end use(s)

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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

8.2 Exposure controls

Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

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 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

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

- a) Appearance Form: crystalline
Colour: white
 - b) Odour No data available
 - c) Odour Threshold No data available
 - d) pH No data available
 - e) Melting point/freezing point
Melting point/range: 45 - 46 °C - lit.
 - f) Initial boiling point and boiling range
83 °C at 0,7 hPa - lit.
 - g) Flash point 141 °C - closed cup
 - h) Evaporation rate No data available
 - i) Flammability (solid, gas) No data available
 - j) Upper/lower flammability or explosive limits
No data available
 - k) Vapour pressure 0,00500 hPa at 20 °C
 - l) Vapour density No data available
 - m) Relative density 1,282 g/cm³ at 20 °C
 - n) Water solubility soluble
 - o) Partition coefficient: noctanol/water
log Pow: -0,719
 - p) Auto-ignition temperature
No data available
 - q) Decomposition temperature
No data available
 - r) Viscosity No data available
 - s) Explosive properties No data available
 - t) Oxidizing properties No data available
- ### 9.2 Other safety information
- No data available

10. STABILITY AND REACTIVITY

- 10.1 Reactivity
No data available
 - 10.2 Chemical stability
Stable under recommended storage conditions.
 - 10.3 Possibility of hazardous reactions
No data available
 - 10.4 Conditions to avoid
Contact with acids liberates very toxic gas. Avoid moisture.
 - 10.5 Incompatible materials
Strong oxidizing agents, Strong reducing agents, Bases, acids, Iron and iron salts., Steel (all types and surface treatments), Brass, Lead
 - 10.6 Hazardous decomposition products
Other decomposition products - No data available
- In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

- 11.1 Information on toxicological effects
Acute toxicity
LD50 Oral - Rat - 142 mg/kg

LC50 Inhalation - Rat - 4 h - > 2 mg/l
(OECD Test Guideline 403)
LD50 Dermal - Rabbit - 848 mg/kg
Skin corrosion/irritation
Skin - Rabbit
Result: Causes burns.
(OECD Test Guideline 404)
Serious eye damage/eye irritation
Risk of serious damage to eyes. Expert judgement
Respiratory or skin sensitisation
Maximisation Test (GPMT) - Guinea pig
May cause sensitisation by skin contact.
Germ cell mutagenicity
In vitro tests did not show mutagenic effects In vivo tests did not show mutagenic effects
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
Suspected of damaging the unborn child.
Reproductive toxicity - Rat - Oral
Paternal Effects: Testes, epididymis, sperm duct. Paternal Effects: Prostate, seminal vesicle, Cowper's gland, accessory glands. Effects on Fertility: Male fertility index (e.g., # males impregnating females per # males exposed to fertile nonpregnant females).
Reproductive toxicity - Rat - Oral
Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants). Effects on Newborn: Live birth index (# fetuses per litter; measured after birth). Reproductive toxicity - Rat - Oral
Effects on Newborn: Live birth index (# fetuses per litter; measured after birth). Effects on Newborn: Growth statistics (e.g., reduced weight gain). Effects on Newborn: Delayed effects.
Suspected of damaging fertility.
Specific target organ toxicity - single exposure
The substance or mixture is not classified as specific target organ toxicant, single exposure.
Specific target organ toxicity - repeated exposure
May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard
No data available
Additional Information
RTECS: GS5950000
Exposure to and/or consumption of alcohol may increase toxic effects., Causes severe corneal edema.
Temporary blindness has been reported., Symptoms may be delayed., Headache, Dizziness, Lowered blood pressure, Salivation, Ataxia., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. ECOLOGICAL INFORMATION

12.1 Toxicity
Toxicity to fish LC50 - *Oncorhynchus mykiss* (rainbow trout) - 90 mg/l - 96 h
NOEC - *Oncorhynchus mykiss* (rainbow trout) - 3,7 mg/l - 21 d
Toxicity to daphnia and other aquatic invertebrates
NOEC - *Daphnia magna* (Water flea) - 0,1044 mg/l - 21 d
Toxicity to algae ErC50 - *Selenastrum capricornutum* (green algae) - 13,5 mg/l - 90 h
12.2 Persistence and degradability
Biodegradability Result: - Readily biodegradable
(OECD Test Guideline 301B)
Remarks: No data available
12.3 Bioaccumulative potential
No data available
12.4 Mobility in soil
Not expected to adsorb on soil.
12.5 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.
12.6 Other adverse effects
Harmful to aquatic life with long lasting effects.
No data available
Stability in water pH < 4
Remarks: Hydrolyses readily.

13. DISPOSAL CONSIDERATIONS

13.1 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.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

14.1 UN number

ADR/RID: 2923 IMDG: 2923 IATA: 2923

14.2 UN proper shipping name

ADR/RID: CORROSIVE SOLID, TOXIC, N.O.S. (Cyanamide)

IMDG: CORROSIVE SOLID, TOXIC, N.O.S. (Cyanamide)

IATA: Corrosive solid, toxic, n.o.s. (Cyanamide)

14.3 Transport hazard class(es)

ADR/RID: 8 (6.1) IMDG: 8 (6.1) IATA: 8 (6.1)

14.4 Packaging group

ADR/RID: III IMDG: III IATA: III 14.5 Environmental hazards

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

14.6 Special precautions for user

No data available

15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 453/2010.

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

Cyanamide CAS-No.: 420-04-2

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals

ANNEX I, PART 1: List of chemicals subject to export notification procedure

Cyanamide CAS-No.: 420-04-2

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals

Chemical qualifying for PIC notification.

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

16. OTHER INFORMATION

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. For lab use only!