

## Safety Data Sheet

according to Regulation (EC) No 1907/2006 (REACH)  
Classifications according to Regulation (EC) No 1272/2008.  
Printdate 30 May 2023

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

### 1.1. Product name:

Pentachlorobenzonitrile

### 1.1. Catalog No.:

684979

### 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

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### 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  
Flam. Sol. 2 H228 Flammable solid.  
Aquatic Acute 1 H400 Very toxic to aquatic life.  
Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.  
Acute Tox. 4 H302 Harmful if swallowed.

### 2.2. Label elements

#### 2.2.1. Pictogram



#### 2.2.2.

- 2.2 Label elements
- Labelling according to Regulation (EC) No 1272/2008  
The substance is classified and labelled according to the CLP regulation

- Signal word Warning
- Hazard statements
- H228 Flammable solid.
- H302 Harmful if swallowed.
- H410 Very toxic to aquatic life with long lasting effects.
- Precautionary statements
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P240 Ground and bond container and receiving equipment.
- P241 Use explosion-proof [electrical/ventilating/lighting] equipment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
- P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- 2.3 Other hazards
- Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

- 3.1 Chemical characterisation: Substances
- CAS No. Description
- 20925-85-3 Pentachlorobenzonitrile
- Identification number(s) None
- EC number: 620-151-1
- RTECS: -

#### 3.1.1. Formula

C7Cl5N

#### 3.1.2. Molecular Weight (g/mol)

275.35

#### 3.1.3. CAS-No.

20925-85-3

#### 4. FIRST AID MEASURES

· 4.1 Description of first aid measures

· General information:

Symptoms of poisoning may occur even after several hours; therefore medical observation for at least 48 hours after the accident is recommended.

· After inhalation: Supply fresh air; consult doctor in case of complaints.

· After skin contact: Immediately wash with water and soap and rinse thoroughly.

· After eye contact: Rinse opened eye for several minutes under running water.

· After swallowing:

Rinse mouth. Do not induce vomiting.

Seek medical treatment.

· 4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.

· 4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

#### 5. FIRE-FIGHTING MEASURES

· 5.1 Extinguishing media

· Suitable extinguishing agents: Use fire extinguishing methods suitable for surrounding conditions.

· 5.2 Special hazards arising from the substance or mixture

Formation of toxic gases is possible during heating or in case of fire.

· 5.3 Advice for firefighters

· Protective equipment: Wear self-contained respiratory protective device.

#### 6. ACCIDENTAL RELEASE MEASURES

· 6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

· 6.2 Environmental precautions:

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/ surface or ground water.

· 6.3 Methods and material for containment and cleaning up: Ensure adequate ventilation.

· 6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

#### 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Handling is performed in a well ventilated place. Wear suitable protective equipment. Prevent dispersion of dust. Wash hands and face thoroughly after handling. Use a local exhaust if dust or aerosol will be generated. Avoid contact with skin, eyes and clothing.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed. Store in a cool and dark place. Store locked up. Store away from incompatible materials such as oxidizing agents.

### 7.3 Specific end use(s)

No further relevant information available.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- 8.1 Control parameters
- Additional information about design of technical facilities: No further data; see item 7.
- Ingredients with limit values that require monitoring at the workplace: Not required.
- Additional information: Lists used were valid at the time of SDS preparation.
- 8.2 Exposure controls
- Personal protective equipment:
- General protective and hygienic measures: Wash hands before breaks and at the end of work.
- Respiratory protection:  
Not required.  
Use suitable respiratory protective device in case of insufficient ventilation.
- Protection of hands:  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374
- Material of gloves Fluorocarbon rubber (Viton)
- Penetration time of glove material  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- Eye protection: Safety glasses

## 9. PHYSICAL AND CHEMICAL PROPERTIES

- 9.1 Information on basic physical and chemical properties
- General Information
- Appearance:  
Form: Solid  
Colour: Light yellow
- Odour: Odourless
- Odour threshold: Not determined.
- pH-value: Not applicable.
- Change in condition  
Melting point/freezing point: 214-216 °C  
Initial boiling point and boiling range: Not determined.
- Flash point: Not applicable.
- Flammability (solid, gas): Not determined.
- Ignition temperature: Not determined
- Decomposition temperature: Not determined.
- Auto-ignition temperature: Not determined.
- Explosive properties: Not determined.
- Explosion limits:  
Lower: Not determined.  
Upper: Not determined.
- Vapour pressure: Not applicable.
- Density: Not determined.
- Relative density Not determined.
- Vapour density Not applicable.
- Evaporation rate Not applicable.
- Solubility in / Miscibility with Chloroform (Slightly), Hexane (Slightly, Heated)
- water: Not determined.
- Partition coefficient: n-octanol/water: Not determined.
- Viscosity:

Dynamic: Not applicable.  
Kinematic: Not applicable.

· 9.2 Other information No further relevant information available.

## 10. STABILITY AND REACTIVITY

### · 10.1 Reactivity

Stable under normal conditions.

No further relevant information available.

### · 10.2 Chemical stability Stable under normal conditions.

· Thermal decomposition / conditions to be avoided:

Formation of toxic gases is possible during heating or in case of fire.

### · 10.3 Possibility of hazardous reactions No dangerous reactions known.

### · 10.4 Conditions to avoid

Sources of ignition

Heat.

### · 10.5 Incompatible materials: Strong oxidizing agents.

### · 10.6 Hazardous decomposition products:

Formation of toxic gases is possible during heating or in case of fire.

## 11. TOXICOLOGICAL INFORMATION

### · 11.1 Information on toxicological effects

#### · Acute toxicity

Harmful if swallowed.

#### · Primary irritant effect:

· Skin corrosion/irritation Based on available data, the classification criteria are not met.

· Serious eye damage/irritation Based on available data, the classification criteria are not met.

· Respiratory or skin sensitisation Based on available data, the classification criteria are not met.

#### · Additional toxicological information:

· CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

· Germ cell mutagenicity Based on available data, the classification criteria are not met.

· Carcinogenicity Based on available data, the classification criteria are not met.

· Reproductive toxicity Based on available data, the classification criteria are not met.

· STOT-single exposure Based on available data, the classification criteria are not met.

· STOT-repeated exposure Based on available data, the classification criteria are not met.

· Aspiration hazard Based on available data, the classification criteria are not met.

## 12. ECOLOGICAL INFORMATION

### · 12.1 Toxicity

· Aquatic toxicity: No further relevant information available.

· 12.2 Persistence and degradability No further relevant information available.

· 12.3 Bioaccumulative potential No further relevant information available.

· 12.4 Mobility in soil No further relevant information available.

#### · Ecotoxicological effects:

· Remark: Very toxic for fish

#### · Additional ecological information:

#### · General notes:

Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.  
Danger to drinking water if even extremely small quantities leak into the ground.  
Also poisonous for fish and plankton in water bodies.

Very toxic for aquatic organisms

- 12.5 Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable.
- 12.6 Other adverse effects No further relevant information available.

### 13. DISPOSAL CONSIDERATIONS

- 13.1 Waste treatment methods
- Recommendation

Must not be disposed of together with household garbage. Do not allow product to reach sewage system

- Uncleaned packaging:
- Recommendation: Dispose of in accordance with national regulations.

### 14. TRANSPORT INFORMATION

- 14.1 UN-Number
- ADR, IMDG, IATA UN1325
- ADR 1 3 2 5 F L A M M A B L E S O L I D , O R G A N I C , N . O . S .  
(Pentachlorobenzonitrile), ENVIRONMENTALLY HAZARDOUS
- IMDG F L A M M A B L E S O L I D , O R G A N I C , N . O . S .  
(Pentachlorobenzonitrile), MARINE POLLUTANT
- IATA F L A M M A B L E S O L I D , O R G A N I C , N . O . S .  
(Pentachlorobenzonitrile)
- 14.3 Transport hazard class(es)
- ADR, IMDG
- Class 4.1 Flammable solids, self-reactive substances and solid desensitised explosives.
- Label 4.1
- IATA
- Class 4.1 Flammable solids, self-reactive substances and solid desensitised explosives.
- Label 4.1
- 14.4 Packing group
- ADR, IMDG, IATA III
- 14.5 Environmental hazards: Environmentally hazardous substance, solid; Marine Pollutant
- Marine pollutant: Symbol (fish and tree)
- Special marking (ADR): Symbol (fish and tree)
- 14.6 Special precautions for user Warning: Flammable solids, self-reactive substances and solid desensitised explosives.
- Hazard identification number (Kemler code): 40
- EMS Number: F-A,S-G
- Stowage Category B
- 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code Not applicable.
- Transport/Additional information:
- ADR
- Limited quantities (LQ) 5 kg
- Excepted quantities (EQ) Code: E1
- Maximum net quantity per inner packaging: 30 g
- Maximum net quantity per outer packaging: 1000 g
- Transport category 3
- Tunnel restriction code E
- UN "Model Regulation": UN 1325 FLAMMABLE SOLID, ORGANIC, N.O.S.  
( P E N T A C H L O R O B E N Z O N I T R I L E ) , 4 . 1 , I I I ,

ENVIRONMENTALLY HAZARDOUS

## 15. REGULATORY INFORMATION

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- Directive 2012/18/EU
- Named dangerous substances - ANNEX I Substance is not listed.
- Seveso category E1 Hazardous to the Aquatic Environment
- Qualifying quantity (tonnes) for the application of lower-tier requirements 100 t
- Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t
- 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been 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!