

Safety Data Sheet

according to Regulation (EC) No 1907/2006 (REACH)
Classifications according to Regulation (EC) No 1272/2008.
Printdate 16 Aug 2022

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

1.1. Product name:

1,2,5,6,9,10-Hexabromocyclododecane

1.1. Catalog No.:

676923

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
Reproductive toxicity (Category 2), H361
Effects on or via lactation, H362
Acute aquatic toxicity (Category 1), H400
Chronic aquatic toxicity (Category 1), H410

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 Warning

Hazard statement(s)

H361 Suspected of damaging fertility or the unborn child.

H362 May cause harm to breast-fed children H410 Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P201 Obtain special instructions before use.

P260 Do not breathe dust or mist.

P263 Avoid contact during pregnancy/ while nursing.

P273 Avoid release to the environment.

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

P391 Collect spillage.

Supplemental Hazard**Statements**

none

2.3 Other hazards

PBT substance

This substance/mixture contains components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB).

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 SubstancesFormula : C₁₂H₁₈Br₆

Molecular weight : 641,73 g/mol

CAS-No. : 3194-55-6

EC-No. : 221-695-9

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

Component Classification Concentration

1,2,5,6,9,10-Hexabromocyclododecane Included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH)

CAS-No.

EC-No.

3194-55-6

221-695-9

Repr. 2; Lact. ; Aquatic Acute

1; Aquatic Chronic 1; H361,

H362, H400, H410

M-Factor - Aquatic Acute: 100

<= 100 %

3.1.1. FormulaC₁₂H₁₈Br₆**3.1.2. Molecular Weight (g/mol)**

641.70

3.1.3. CAS-No.

3194-55-6

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

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

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, Hydrogen bromide gas

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

Use personal protective equipment. 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. Avoid exposure - obtain special instructions before use.

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.

Storage class (TRGS 510): Non Combustible Solids

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

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

Safety glasses with side-shields conforming to EN166 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

Impervious clothing, 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: powder

Colour: beige

b) Odour odourless

c) Odour Threshold No data available

d) pH No data available

e) Melting point/freezing

point

Melting point/range: 188 °C

f) Initial boiling point and

boiling range

> 190 °C

g) Flash point No data available

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 No data available
l) Vapour density No data available
m) Relative density No data available
n) Water solubility slightly soluble
o) Partition coefficient: noctanol/
water
log Pow: 5,62
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
No data available
10.5 Incompatible materials
Strong oxidizing agents
10.6 Hazardous decomposition products
In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects
Acute toxicity
LD50 Oral - Rat - > 20.000 mg/kg
Skin corrosion/irritation
No data available
Serious eye damage/eye irritation
No data available
Respiratory or skin sensitisation
Germ cell mutagenicity
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
RTECS: Not available
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) - 0,003 mg/l - 96 h
(OECD Test Guideline 203)

Toxicity to daphnia and
other aquatic
invertebrates

EC50 - Daphnia (water flea) - > 3,2 mg/l - 48 h

Toxicity to algae EC50 - Algae - 0,009 mg/l - 72 h

12.2 Persistence and degradability

Biodegradability Result: - Not readily biodegradable.
(OECD Test Guideline 301)

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

PBT substance

This substance/mixture contains components considered to be either persistent, bioaccumulative and
toxic (PBT), or very persistent and very bioaccumulative (vPvB).

12.6 Other adverse effects

Very toxic to aquatic life with long lasting effects

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: 3077 IMDG: 3077 IATA: 3077

14.2 UN proper shipping name

ADR/RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (1,2,5,6,9,10-
Hexabromocyclododecane)

IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (1,2,5,6,9,10-
Hexabromocyclododecane)

IATA: Environmentally hazardous substance, solid, n.o.s. (1,2,5,6,9,10-Hexabromocyclododecane)

14.3 Transport hazard class(es)

ADR/RID: 9 IMDG: 9 IATA: 9

14.4 Packaging group

ADR/RID: III IMDG: III IATA: III

14.5 Environmental hazards

ADR/RID: yes IMDG Marine pollutant: yes IATA: yes

14.6 Special precautions for user

Further information

EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination
packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids

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

Authorisations and/or restrictions on use

1,2,5,6,9,10-

Hexabromocyclododecane

CAS-No.: 3194-55-6

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).

Persistent, bioaccumulative and toxic (article 57d)

ED/67/2008

1,2,5,6,9,10-

Hexabromocyclododecane

CAS-No.: 3194-55-6

REACH - List of substances subject to authorisation (Annex XIV)

PBT

Sunset Date: 21.08.2015

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!