

SECTION 1: Identification of the substance / mixture and of the company / undertaking**1.1 Product identifiers**

Product name (±)-gamma-Hexabromocyclododecane
Product number 14700-0359-100AC5
REACH No. A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

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

Identified specific analytics
uses

1.3 Details of the supplier of the safety data sheet

Company NEOCHEMA GmbH
Uwe-Zeidler-Ring 10
55294 Bodenheim, Germany
Telephone +49 6135 933199 0
Fax +49 6135 933199 19
E-Mail info@neochema.com

1.4 Emergency telephone number

Emergency Phone +49 6135 933199 0
This number is only reachable during office hours (Mo – Fr, 08:00 AM – 4:00 PM CET).

SECTION 2: Hazards identification**2.1 Classification according to Regulation (EC) No 1272/2008**

Flam. liq. (category 2), H225
Eye irrit. (category 2), H319
STOT SE (category 3), H336
Aquatic chronic (category 2), H411
For the full text of the H-Statements mentioned in this Section, see Section 2.2.

2.2 Labelling according Regulation (EC) No 1272/2008**Pictogram**

Signal word **Danger**

Hazard statements

H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H411 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.
P233 Keep container tightly closed.
P273 Avoid release to the environment.
P280 Wear protective gloves / protective clothing / eye protection / face pro
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.
P370 + P378 In case of fire: Use carbondioxid, sand or extinguishing powder to extinguis

Supplemental Hazard Statements (EU)

EUH 066 – Repeated exposure may cause skin dryness or cracking.

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.

SECTION 3: Composition/information on ingredients

3.1 Substances

This product is a mixture.

3.2 Mixtures

Ingredient: Acetone; CAS-No.: 67-64-1; EG-No.: 200-662-2; REACH-No.: 01-2119471330-49-XXXX; Clasification: H225, H319, H336; Flam. Liq 2; Eye Irrit. 2; STOT SE 3; Concentration: $\geq 90 - \leq 100$ %

Ingredient: (±)-gamma-Hexabromocyclododecane; CAS-No.: 134237-52-8; EG-No.: k.A.; REACH-No.: k.A.; Clasification: H361, H362, H400, H410; Repr. 2; Lact.; Aquatic Acute 1; Aquatic Chronic 1; Concentration: $< 0,1$ %

For the full text of the H-Statements mentioned in this Section, see Section 16.

Substances listed on the 'Candidate List of Substances of Very High Concern (SVHC) for authorisation' of the European Chemical Agency (ECHA), are not intentional ingredient of this product. It is not to be expected that those substances are in quantity of $\geq 0,1$ % in this product.

SECTION 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. 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

SECTION 5: Firefighting 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

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. For personal protection see section 8.tt 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

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing or collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local regulations (see section 13).

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage**7.1 Precautions for safe handling**

Avoid exposure. Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Storage class (TRGS 510): Flammable liquids.

7.3 Specific end uses

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

SECTION 8: Exposure controls / personal protection**8.1 Control parameters**

Ingredient: Acetone; CAS-No.: 67-64-1; TWA :500 ppm, 1200 mg/m³; AGW:500 ppm, 1200 mg/m³

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**

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 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 EU Directive 89/686/EEC and the standard EN 374 derived from it.

splash contact

material: butyl-rubber

minimum layer thickness: 0,7 mm

break through time: > 5 min

Body Protection

Impervious clothing, Flame retardant antistatic protective 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 respirator with multi-purpose combination (US) or type ABEK (EN 14387) 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.

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties**

These information refer to the main component and are literature values.

- | | |
|-------------------|-----------|
| a) Physical state | liquid |
| b) Color | colorless |

c) Odor	pungent, slightly aromatic
d) Melting point/freezing point	-94 °C
e) Initial boiling point and boiling range	56 °C
f) Flammability	No Data available
g) Upper/lower flammability or explosive limits	upper: 13 %(V) ; lower: 2 %(V)
h) Flash point	-17 °C
i) Autoignition temperature	465 °C
j) Decomposition temperature	distillable without decomposition at normal pressure
k) pH	5-6 at 395 g/l at 20 °C
l) Viscosity	No Data available
m) Water solubility	soluble in any ratio
n) Partition coefficient: n-octanol/water	No Data available
o) Vapor pressure	245,3 hPa at 20 °C
p) Density Relative density	0,79 g/cm ³ at 20 °C
q) Relative vapor density	No Data available
r) Particle characteristics	No Data available

9.2 Other safety information

No data available.

SECTION 10: Stability and reactivity

Theses information refer to the main component.

10.1 Reactivity

Vapours can form an explosive mixture with air.

10.2 Chemical stability

The product is chemically stable under normal ambient conditions (room temperature).

10.3 Possibility of hazardous reactions

Risk of ignition or formation of flammable gases or vapors with: chromic sulfuric acid, chromyl chloride, ethanolamine, fluorine, strong oxidizing agents, strong reducing agents, nitric acid, chromium (VI) oxide; risk of explosion with: non-metal oxide halides, halogen-halogen compounds, chloroform, nitrating acid, nitrosyl compounds, hydrogen peroxide, halogen oxides, organic nitro compounds, peroxy compounds; exothermic reaction with: bromine, alkali metals, alkali hydroxides, halogenated hydrocarbons, sulfur dichloride, phosphorus oxychloride

10.4 Conditions to avoid

warming

10.5 Incompatible materials

Rubber, various plastics

10.6 Hazardous decomposition products

In case of fire: see Chapter 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

No data available for the product.

Acute toxicity

The mixture is not classified.

Skin corrosion / irritation

The mixture is not classified.

Serious eye damage / eye irritation

The mixture causes serious eye irritation. The classification results from specific concentration limits.

Respiratory or skin sensitisation

The mixture is not classified.

Germ cell mutagenicity

The mixture is not classified.

Carcinogenicity

The mixture is not classified.

Reproductive toxicity

The mixture is not classified.

Specific target organ toxicity – single exposure

The mixture is not classified.

Specific target organ toxicity – repeated exposure

The mixture may cause drowsiness or dizziness. The classification results from specific concentration limits.

Aspiration hazard

The mixture is not classified.

SECTION 12: Ecological information**12.1 Toxicity**

Ingredient: (±)-gamma-Hexabromocyclododecane; CAS-No.: 134237-52-8; LC/EC(50) (rainbow trout – 96 h): 0,003 mg/L; (literature); NOEC(50): No data available.

12.2 Persistence and degradability

No data available.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

No data available.

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

No data available

SECTION 13: Disposal considerations**13.1 Waste treatment methods****Product**

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information**14.1 UN number**

ADR/RID: 1090

IMDG: 1090

IATA: 1090

14.2 UN proper shipping name

ADR/RID: Acetone

IMDG: Acetone

IATA: Acetone

14.3 Transport hazard classes

ADR/RID: 3

IMDG: 3

IATA: 3

14.4 Packaging group

ADR/RID: II

IMDG: II

IATA: II

14.5 Environmental hazards

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

14.6 Special precautions for user

Tunnel restriction code (D/E)

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out.

SECTION 16: Other information

Further information

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Full text of H-Statements referred to under section 3:

H225 - Highly flammable liquid and vapour.

H319 - Causes serious eye irritation.

H336 - May cause drowsiness or dizziness.

H361 - Suspected of damaging fertility or the unborn child.

H362 - May cause harm to breast-fed children.

H400 - Very toxic to aquatic life.

H410 - Very toxic to aquatic life with long lasting effects.