

## Safety Data Sheet

according to Regulation (EC) No 1907/2006 (REACH)  
Classifications according to Regulation (EC) No 1272/2008.  
Printdate 12 Feb 2024

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

### 1.1. Product name:

gamma-HCH

### 1.1. Catalog No.:

673954

### 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, Inhalation (Category 4), H332

Acute toxicity, Dermal (Category 4), H312

Specific target organ toxicity - repeated exposure (Category 2), H373

Effects on or via lactation, H362

Acute aquatic toxicity (Category 1), H400

Chronic aquatic toxicity (Category 1), H410 Classification according to EU Directives 67/548/EEC or 1999/45/EC

T Toxic R25

Xn Harmful R20/21, R48/22

R64

N Dangerous for the

environment

R50/53

### 2.2. Label elements

#### 2.2.1. Pictogram



### 2.2.2.

Signal word Danger  
Hazard statement(s)  
H301 Toxic if swallowed.  
H312 Harmful in contact with skin.  
H332 Harmful if inhaled.  
H362 May cause harm to breast-fed children.  
H373 May cause damage to organs through prolonged or repeated exposure.  
H410 Very toxic to aquatic life with long lasting effects.  
Precautionary statement(s)  
P263 Avoid contact during pregnancy/ while nursing.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/ protective clothing.  
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/  
physician.  
P501 Dispose of contents/ container to an approved waste disposal plant.  
Supplemental Hazard  
Statements  
none  
2.3 Other hazards - none

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances  
Synonyms : 1?,2?,3?,4?,5?,6?-Hexachlorocyclohexane  
?-BHC  
Lindane  
Formula : C<sub>6</sub>H<sub>6</sub>Cl<sub>6</sub>  
Molecular Weight : 290,83 g/mol  
CAS-No. : 58-89-9  
EC-No. : 200-401-2  
Index-No. : 602-043-00-6  
Hazardous ingredients according to Regulation (EC) No 1272/2008  
Component Classification Concentration  
?-1,2,3,4,5,6-Hexachlorocyclohexane  
CAS-No.  
EC-No.  
Index-No.  
58-89-9  
200-401-2  
602-043-00-6  
Acute Tox. 3; Acute Tox. 4;  
Lact. ; STOT RE 2; Aquatic  
Acute 1; Aquatic Chronic 1;  
H301, H312 + H332, H362,  
H373, H410  
<= 100 %

### 3.1.1. Formula

C<sub>6</sub>H<sub>6</sub>Cl<sub>6</sub>

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

290.79

### 3.1.3. CAS-No.

58-89-9

## 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. Take victim immediately to hospital. 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 chloride gas

### 5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting 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. 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.

### 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: solid
  - b) Odour no data available
  - c) Odour Threshold no data available
  - d) pH no data available
  - e) Melting point/freezing point  
Melting point/range: 113 - 115 °C - lit.
  - f) Initial boiling point and boiling range  
no data available
  - 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 1,85 g/cm<sup>3</sup>
  - n) Water solubility 8,35 g/l at 25 °C
  - o) Partition coefficient: noctanol/  
water  
POW: 3,5 at 22 °C
  - 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  
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 - 88,0 mg/kg  
LC50 Inhalation - rat - 4 h - 1.560 mg/m<sup>3</sup>  
Skin corrosion/irritation

Skin - rabbit  
Result: No skin irritation  
Serious eye damage/eye irritation  
Eyes - rabbit  
Result: No eye irritation  
Respiratory or skin sensitisation  
Will not occur  
Germ cell mutagenicity  
no data available  
Carcinogenicity  
IARC: 2B - Group 2B: Possibly carcinogenic to humans (?-1,2,3,4,5,6-Hexachlorocyclohexane)  
Reproductive toxicity  
Effects on or via lactation  
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  
Neurotoxic effects., Cyanosis, Headache, Nausea, Incoordination., Tremors, Vomiting, Dizziness,  
Seizures., Unconsciousness  
Reproductive system. - Irregularities - Based on Human Evidence

## 12. ECOLOGICAL INFORMATION

12.1 Toxicity  
Toxicity to fish LC50 - Cyprinus carpio (Carp) - 0,2 mg/l - 96,0 h  
LC50 - Cyprinodon variegatus (sheepshead minnow) - 0,9 - 1,3 mg/l - 96,0 h  
LC50 - Oncorhynchus mykiss (rainbow trout) - 0,03 - 0,28 mg/l - 48,0 h  
NOEC - Oncorhynchus mykiss (rainbow trout) - 0,056 mg/l - 3,0 d  
LC50 - Oncorhynchus mykiss (rainbow trout) - 0,038 mg/l - 96,0 h  
LOEC - Oncorhynchus mykiss (rainbow trout) - 0,1 mg/l - 3,0 d  
Toxicity to daphnia and  
other aquatic  
invertebrates  
EC50 - Daphnia magna (Water flea) - 0,80 - 6,50 mg/l - 48 h  
LOEC - Daphnia - 0,021 mg/l - 7 d  
Toxicity to algae EC50 - Algae - 4,00 mg/l - 72 h  
12.2 Persistence and degradability  
no data available  
12.3 Bioaccumulative potential  
Bioaccumulation Pimephales promelas (fathead minnow) - 304 d  
- 0,0091 mg/l  
Bioconcentration factor (BCF): 674  
12.4 Mobility in soil  
no data available  
12.5 Results of PBT and vPvB assessment  
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted  
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: 2811 IMDG: 2811 IATA: 2811  
14.2 UN proper shipping name  
ADR/RID: TOXIC SOLID, ORGANIC, N.O.S. (?-1,2,3,4,5,6-Hexachlorocyclohexane)  
IMDG: TOXIC SOLID, ORGANIC, N.O.S. (?-1,2,3,4,5,6-Hexachlorocyclohexane)  
IATA: Toxic solid, organic, n.o.s. (?-1,2,3,4,5,6-Hexachlorocyclohexane)  
14.3 Transport hazard class(es)  
ADR/RID: 6.1 IMDG: 6.1 IATA: 6.1  
14.4 Packaging group  
ADR/RID: III IMDG: III IATA: III  
14.5 Environmental hazards  
ADR/RID: yes IMDG Marine pollutant: yes 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. 1907/2006.  
15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture  
no data available  
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!