

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifiers

Product name 1,2,5,6,9,10-Hexabromocyclododecane  
Product Number 14700-0355-100CY5  
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 uses specific analytics

### 1.3 Details of the supplier of the safety data sheet

NEOCHEMA GmbH  
Company Am Kümmerling 37a  
55294 Bodenheim,  
Telephone +49 6135-8166  
Fax +49 6135-8168  
E-mail address [info@neochema.com](mailto:info@neochema.com)

### 1.4 Emergency telephone number

Emergency Phone # +49 6135-8166  
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;  
skin irrit. (category 2), H315;  
Asp. tox. (category 1), H304;  
STOT SE (category 3), H336;  
Aquatic acute (category 1), H400;  
Aquatic chronic (category 1), H410;

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.  
H304 May be fatal if swallowed and enters airways.  
H315 Causes skin irritation.  
H336 May cause drowsiness or dizziness.  
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.  
P233 Keep container tightly closed.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P301 + 310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.  
P302 + P350 IF ON SKIN: Wash with plenty of water.  
P370 + P378 In case of fire: Use carbondioxid, sand or extinguishing powder to extinguish.

#### Supplemental Hazard Statements (EU)

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.

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**SECTION 3: Composition/information on ingredients****3.1 Substances**

This product is a mixture.

**3.2 Mixtures**

Ingredient: Cyclohexane; CAS-No.: 110-82-7; EG-No.: 203-806-2; REACH-No.: 01-2119463273-41-XXXX; Classification: H225, H304, H315, H336, H410; Flam. Liq 2; Asp. Tox. 1; Skin Irrit. 2; STOT SE 3; Aquatic Chronic 1; Concentration:  $\geq 90 - \leq 100$  %

Ingredient: 1,2,5,6,9,10-Hexabromocyclododecane; CAS-No.: 3194-55-6; EG-No.: 221-695-9; REACH-No.: k.A.; Classification: H361, H362, H410; Repr. 2; Lact.; Aquatic Chronic 1; Concentration:  $< 0,1$  %

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

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**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

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**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.

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**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.

**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. 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. 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: Cyclohexane; CAS-No.: 110-82-7; TWA: 200 ppm, 700 mg/m<sup>3</sup>; AGW: 200 ppm, 700 mg/m<sup>3</sup>

### 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.

##### 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

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

a) Appearance	liquid
b) Odour	charakteristisch
c) Odour Threshold	No data available
d) pH	No data available
e) Melting point	4 - 7 °C
f) Initial boiling point	80,7 °C
g) Flash point	-18 °C - closed cup
h) Evaporation rate	No data available
i) Flammability	No data available
j) Explosive limits	Lower explosion limit: 1 %(V) Upper explosion limit: 9 %(V)
k) Vapour pressure	102,7 hPa at 20,0 °C
l) Vapour density	No data available
m) Relative density	0,78 g/cm <sup>3</sup>
n) Water solubility	No data available
o) Partition coefficient	log Pow: 3,44 (n-Octanol/Water)
p) Auto-ignition temperature	260 °C

<b>q) Decomposition temperature</b>	No data available
<b>r) Viscosity</b>	No data available
<b>s) Explosive properties</b>	No data available
<b>t) Oxidizing properties</b>	No data available

## 9.2 Other safety information

No data available

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## SECTION 10: Stability and reactivity

Theses information refer to the main component.

### 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

Heat, flames and sparks.

### 10.5 Incompatible materials

Strong oxidizing agents

### 10.6 Hazardous decomposition products

In the event of fire: see section 5

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## 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 causes skin irritation. The classification results from specific concentration limits.

#### Serious eye damage/eye irritation

The mixture is not classified.

#### 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 may be fatal if swallowed and enters airways. The classification results from specific concentration limits.

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## SECTION 12: Ecological information

### 12.1 Toxicity

Ingredient: Cyclohexane; CAS-No.: 110-82-7; LC/EC(50) (large water flea - 48 h): 0,9 mg/L; (literature); NOEC(50): No data available.

Ingredient: 1,2,5,6,9,10-Hexabromocyclododecane; CAS-No.: 3194-55-6; 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

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### 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.

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### SECTION 14: Transport information

#### 14.1 UN number

ADR/RID: 1145

IMDG: 1145

IATA: 1145

#### 14.2 UN proper shipping name

ADR/RID: CYCLOHEXANE

IMDG: CYCLOHEXANE

IATA: Cyclohexane

#### 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

No data available

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### 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.

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### 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.

H304 May be fatal if swallowed and enters airways.

H315 Causes skin irritation.

H336 May cause drowsiness or dizziness.

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.