

# SAFETY DATA SHEET

## 1. PRODUCT

### 1.1 Product identifiers

Name: Hexachloroethane

CAS-No.: 67-72-1

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

Identified uses : Laboratory chemicals, Synthesis of substances

## 2. HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

#### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Skin irritation (Category 2), H315

Eye irritation (Category 2A), H319

Carcinogenicity (Category 2), H351


Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

Acute aquatic toxicity (Category 1), H400

Chronic aquatic toxicity (Category 1), H410

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

### 2.2 GHS Label elements, including precautionary statements

Pictogram	
Signal word	Warning
Hazard statement(s)	H315 Causes skin irritation. H319 Causes serious eye irritation. H335 May cause respiratory irritation. H351 Suspected of causing cancer. H410 Very toxic to aquatic life with long lasting effects.
Precautionary statement(s)	P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. P264 Wash skin thoroughly after handling. P271 Use only outdoors or in a well-ventilated area. P273 Avoid release to the environment. P280 Wear eye protection/ face protection. P280 Wear protective gloves. P281 Use personal protective equipment as required. P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P304 + P340 + P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308 + P313 IF exposed or concerned: Get medical advice/ attention. P332 + P313 If skin irritation occurs: Get medical advice/ attention. P337 + P313 If eye irritation persists: Get medical advice/ attention. P362 Take off contaminated clothing and wash before reuse. P391 Collect spillage. P403 + P233 Store in a well-ventilated place. Keep container tightly closed. P405 Store locked up. P501 Dispose of contents/ container to an approved waste disposal plant.

### 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

No data available

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1 Substances

Synonyms:	Perchloroethane
Formula:	C <sub>2</sub> Cl <sub>6</sub>
Molecular weight:	236.74 g/mol
CAS-No.:	67-72-1
EC-No.:	200-666-4

#### Hazardous components

Component	Classification	Concentration
Hexachloroethane	Skin Irrit. 2; Eye Irrit. 2A; Carc. 2; STOT SE 3; Aquatic Acute 1; Aquatic Chronic 1; H315, H319, H335, H351, H410	<= 100 %

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

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### 4. FIRST AID MEASURES

#### 4.1 Description of first aid measures

<b>General advice</b>
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
<b>If inhaled</b>
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
<b>In case of skin contact</b>
Wash off with soap and plenty of water. Consult a physician.
<b>In case of eye contact</b>
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
<b>If swallowed</b>
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

#### 4.2 Indication of any immediate medical attention and special treatment needed

No data available

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### 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

No data available

#### 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

#### 5.4 Further information

No data available

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## 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.

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## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs.

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

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

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

#### Components with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
Hexachloroethane	67-72-1	TWA	1.000000 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Liver damage		
		Kidney damage Confirmed animal carcinogen with unknown relevance to humans Danger of cutaneous absorption		
		TWA 1.000000 ppm 10.000000 mg/m3 USA. NIOSH Recommended Exposure Limits		
		Potential Occupational Carcinogen See Appendix C See Appendix A Potential for dermal absorption		
		TWA	1.000000 ppm 10.000000 mg/m3	USA. Occupational Exposure Limits (OSHA) -Table Z-1 Limits for Air Contaminants
		Skin designation The value in mg/m3 is approximate.		
		PEL	1 ppm 10 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
		Skin		

## 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. Full contact Material: Nitrile rubber Minimum layer thickness: 0.11 mm Break through time: 480 min Material tested: Dermatrill® (KCL 740 / Aldrich Z677272, Size M) Splash contact Material: Nitrile rubber Minimum layer thickness: 0.11 mm Break through time: 480 min Material tested: Dermatrill® (KCL 740 / Aldrich Z677272, Size M) data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374 If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.
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

Appearance	Form: crystalline Colour: white
Odour	No data available
Odour Threshold	No data available
pH	No data available
Melting point/freezing point	Melting point/range: 183 - 185 °C (361 - 365 °F)
Initial boiling point and boiling range	No data available
Flash point	No data available
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper/lower flammability or explosive limits	No data available
Vapour pressure	0.5 hPa (0.4 mmHg) at 20.0 °C (68.0 °F)
Vapour density	No data available
Relative density	2.091 g/mL at 25 °C (77 °F)
Water solubility	No data available
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	No data available
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, Strong bases

### 10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen chloride gas

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 - Guinea pig - 4,970 mg/kg

TDLo Oral - Rat - female - 5,500 mg/kg

TDLo Oral - Rat - 6,944 mg/kg

Remarks: Liver:Changes in liver weight. Kidney, Ureter, Bladder:Changes in tubules (including acute renal failure, acute tubular necrosis). Kidney, Ureter, Bladder:Other changes.

TDLo Oral - Rat - 48,750 mg/kg

Remarks: Brain and Coverings:Other degenerative changes. Liver:Changes in liver weight. Kidney, Ureter, Bladder:Other changes.

TDLo Oral - Rabbit - 12,000 mg/kg

Remarks: Liver:Other changes. Kidney, Ureter, Bladder:Other changes. Nutritional and Gross Metabolic:Weight loss or decreased weight gain.

Inhalation: Behavioral:Muscle weakness.

LD50 Dermal - Rabbit - 32,000 mg/kg

LD50 Intraperitoneal - Mouse - 4,500 mg/kg

LDLO Intraperitoneal - Rat - 2,900 mg/kg

LDLO Intravenous - Dog - 325 mg/kg

#### Skin corrosion/irritation

No data available

#### Serious eye damage/eye irritation

No data available

#### Respiratory or skin sensitisation

No data available

#### Germ cell mutagenicity

Hamster - ovary

Sister chromatid exchange

#### Carcinogenicity

This product is or contains a component that has been reported to be possibly carcinogenic based on its IARC, ACGIH, NTP, or EPA classification.

Limited evidence of carcinogenicity in animal studies

IARC: 2B - Group 2B: Possibly carcinogenic to humans (Hexachloroethane)

NTP: Reasonably anticipated to be a human carcinogen (Hexachloroethane)

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

<b>Reproductive toxicity</b>
No data available No data available
<b>Specific target organ toxicity -single exposure</b>
No data available
<b>Specific target organ toxicity -repeated exposure</b>
No data available
<b>Aspiration hazard</b>
No data available
<b>Additional Information</b>
RTECS: KI4025000 To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Kidney -

## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

Toxicity to fish	NOEC - Cyprinodon variegatus (sheepshead minnow) - 1 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates	LC50 - Daphnia magna (Water flea) - 1.36 mg/l - 48 h
Toxicity to algae	No data available
Toxicity to bacteria	No data available

### 12.2 Persistence and degradability

Biodegradability	Result: - Not biodegradable (OECD Test Guideline 301)
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### 12.3 Bioaccumulative potential

Bioaccumulation	Lepomis macrochirus (Bluegill) - 28 d - 0.00617 mg/l Bioconcentration factor (BCF): 139
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### 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

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Very toxic to aquatic life with long lasting effects.

No data available

## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

<b>Product</b>
Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
<b>Contaminated packaging</b>
Dispose of as unused product.

## 14. TRANSPORT INFORMATION

DOT (US)

UN number: 3077 Class: 9 Packing group: III

Proper shipping name: Environmentally hazardous substances, solid, n.o.s. (Hexachloroethane)

Reportable Quantity (RQ): 100 lbs

Poison Inhalation Hazard: No

### IMDG

UN number: 3077 Class: 9 Packing group: III EMS-No: F-A, S-F

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Hexachloroethane)

Marine pollutant:yes

### IATA

UN number: 3077 Class: 9 Packing group: III

Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (Hexachloroethane)

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.

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## 15. REGULATORY INFORMATION

### SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

### SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

Component	CAS-No.	Revision Date
Hexachloroethane	67-72-1	2007-07-01

### SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard

### Massachusetts Right To Know Components

Component	CAS-No.	Revision Date
Hexachloroethane	67-72-1	2007-07-01

### Pennsylvania Right To Know Components

Component	CAS-No.	Revision Date
Hexachloroethane	67-72-1	2007-07-01

### New Jersey Right To Know Components

Component	CAS-No.	Revision Date
Hexachloroethane	67-72-1	2007-07-01

### California Prop. 65 Components

WARNING! This product contains a chemical known to the State of California to cause cancer.

Component	CAS-No.	Revision Date
Hexachloroethane	67-72-1	2007-09-28

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## 16. OTHER INFORMATION

### Full text of H-Statements referred to under sections 2 and 3.

Aquatic Acute Acute aquatic toxicity

Aquatic Chronic Chronic aquatic toxicity

Carc. Carcinogenicity

Eye Irrit. Eye irritation

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

H351 Suspected of causing cancer.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

**HMIS Rating**

Health hazard: 2

Chronic Health Hazard: \*

Flammability: 0

Physical Hazard 0

**NFPA Rating**

Health hazard: 2

Fire Hazard: 0

Reactivity Hazard: 0

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