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

Catalogue Number	CS-T-39057
Product Name	Perchlorocyclopentadiene
CAS No.	77-47-4
Category	Pesticide Standards
Synonyms	perchlorocyclopenta-1,3-diene
Brand	Clearsynth Labs Ltd.
Identified uses	Laboratory Chemicals
Uses advised against	Not available
Company	Clearsynth Labs Ltd. Mumbai, India
Emergency Phone #	+91-22-245045900
REACH No.	Not available

SECTION 2: Hazards identification

Disclaimer: This is sample MSDS. Please email **sales@clearsynth.com** for more details.

2.1 Classification of the substance or mixture-Regulation (EC) No 1272/2008:

Skin irritation (Category 2)
Serious eye damage/eye irritation (Category 2)
Acute toxicity (Category 4)

2.2 Label Elements

Signal Word: Warning

Hazard Statement(s)

Code	Statement
H302	Harmful if swallowed.
H311	Not available

H314	Not available
H330	Not available
H400	Not available
H410	Not available
H310+H330	Not available
H310	Not available
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H336	Not available
H370	Not available
H372	Not available
H373	Not available
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H371	Not available

Precautionary Statement(s)

Code	Statement
P260	Not available
P262	Not available
P264	Wash hands thoroughly after handling.
P270	Not available
P271	Use only outdoors or in a well-ventilated area.
P273	Not available
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P284	Not available
P301+P317	Not available
P301+P330+P331	Not available
P302+P352	IF ON SKIN: Wash with plenty of water and soap.
P302+P361+P354	Not available

P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P354+P338	Not available
P316	Not available
P320	Not available
P321	Specific treatment (see … on this label).
P330	Not available
P361+P364	Not available
P363	Not available
P391	Not available
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulatio
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264+P265	Not available
P272	Not available
P317	Not available
P333+P317	Not available
P362+P364	Take off contaminated clothing and wash it before reuse.
P308+P316	Not available
P319	Get medical help if you feel unwell.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if presen
P332+P317	If skin irritation occurs: Get medical help.
P337+P317	If eye irritation persists: Get medical help.

SECTION 3: Composition / information on ingredients

3.1 Substance

Component : Perchlorocyclopentadiene
CAS Number : 77-47-4
Molecular Formula : C5Cl6
Molecular Weight : 272.76
Parent Chemical : -
Synonyms : perchlorocyclopenta-1,3-diene

Concentration : Not available

SECTION 4: First aid measures

SECTION 4: First-aid measures

4.1 Description of first aid measures
- General advice: Remove contaminated clothing and shoes. Seek medical attention if symptoms persist or develop.
- Inhalation: Move person to fresh air. Keep at rest. If breathing is difficult, seek medical attention.
- Skin contact: Wash with plenty of soap and water. Seek medical attention if irritation occurs.
- Eye contact: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek medical attention.
- Ingestion: Rinse mouth. Do not induce vomiting unless directed by medical personnel. Seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed
- Not available.

4.3 Indication of any immediate medical attention and special treatment needed
- Treat symptomatically. No data available.

SECTION 5: Firefighting measures

SECTION 5: Fire-fighting measures

5.1 Extinguishing media
- Suitable extinguishing media: Use extinguishing measures appropriate to surrounding fire (e.g., water spray, alcohol-resistant foam, dry chemical, carbon dioxide).
- Unsuitable extinguishing media: Not available.

5.2 Special hazards arising from the substance or mixture
- May produce hazardous decomposition products under fire conditions.
- Hazardous combustion products: Not available.

5.3 Advice for firefighters
- Wear self-contained breathing apparatus (SCBA) and full protective gear.
- Cool containers with water spray if exposed to fire.
- Prevent fire-fighting water from entering drains or waterways.

SECTION 6: Accidental release measures

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
- Evacuate unnecessary personnel.
- Avoid breathing vapors/mists/dust.
- Use appropriate personal protective equipment (see Section 8).
- Ensure adequate ventilation.

6.2 Environmental precautions
- Avoid release to the environment.
- Prevent entry into drains, sewers, and waterways.

6.3 Methods and material for containment and cleaning up
- Contain spill. Absorb with inert material (e.g., sand, earth, vermiculite).
- Collect in suitable, labeled containers for disposal.
- Clean contaminated area with appropriate methods; avoid generating dust/aerosols.

6.4 Reference to other sections
- See Section 8 for exposure controls/personal protection and Section 13 for disposal considerations.

SECTION-7: Handling and storage

SECTION 7: Handling and storage

7.1 Precautions for safe handling
- Handle in accordance with good industrial hygiene and safety practice.
- Avoid contact with skin and eyes.
- Avoid breathing vapors/mists/dust.
- Use only with adequate ventilation.
- Keep container tightly closed when not in use.

7.2 Conditions for safe storage, including any incompatibilities
- Store in a cool, dry, well-ventilated place.
- Protect from heat and sources of ignition.
- Keep away from incompatible materials: Not available.

7.3 Specific end use(s)
- Pesticide standard / laboratory use. No further information available.

SECTION 8: Exposure controls / personal protection

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
- Occupational exposure limits: Not available.
- Biological limit values: Not available.

8.2 Exposure controls
- Engineering controls: Provide local exhaust ventilation or general dilution ventilation to maintain exposure below applicable limits (if established).
- Personal protective equipment (PPE):
- Eye/face protection: Safety glasses with side shields or chemical splash goggles.
- Skin protection: Protective gloves and protective clothing suitable for chemical handling.
- Respiratory protection: Use appropriate respirator if ventilation is inadequate or if exposure limits may be exceeded.
- Hygiene measures: Wash hands after handling. Remove contaminated clothing and wash before reuse.
- Environmental exposure controls: Avoid release to the environment; use appropriate containment.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Test	Result
Appearance	No data available
IR spectrum	No data available
pH	No data available
Solubility	No data available

Property	Value
a) Physical State	No data available
b) Color	No data available
c) Odor	No data available
d) pH	No data available
e) Vapour Pressure	No data available
f) Viscosity	No data available
g) Initial Boiling Point and boiling range	No data available
h) Melting Point / Freezing Point	No data available
i) Auto Ignition Temperature	No data available
j) Flash Point	No data available
k) Explosion Limit, Lower	No data available
l) Explosion Limit, Upper	No data available
m) Decomposition Temperature	No data available
n) Loss on Drying	No data available
o) Relative Density	No data available
p) Solubility (in DMSO)	No data available
q) Oxidizing Properties	No data available

SECTION 10: Stability and reactivity

SECTION 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
- Heat, flames, sparks, and other ignition sources. Other conditions: Not available.

10.5 Incompatible materials
- Not available.

10.6 Hazardous decomposition products
- Not available.

SECTION 11: Toxicological information

11.1 Information on toxicological effects
- Acute toxicity: Patients exposed to HCCPD may get a sore throat or have shortness of breath and chest discomfort. Bleeding, swelling, and fluid buildup can occur in the lungs. The linings of the respiratory passages and the lungs are very susceptible to damage from low concentrations of HCCPD following inhalation exposure. Inflammation of the tissues can be followed by necrosis, exfoliation, and hemorrhage. Tissue repair is often fibrous in appearance. Long-term exposure to very low levels of HCCPD can produce granular yellow-brown pigmentation of the epithelium of the nose, trachea, larynx, and lungs. High acute oral doses of HCCPD are associated with liver necrosis and tissue degeneration. The kidneys also appear to be a target tissue for HCCPD toxicity. Degenerative lesions in the tubules can result from small oral doses. (L437) LC50 (rat) = 1.6 ppm/4h
- Skin corrosion/irritation: No data available.
- Serious eye damage/eye irritation: /HUMAN EXPOSURE STUDIES/ ...The health effects of hexachlorocyclopentadiene exposure in 145 sewage treatment plant workers /was evaluated/. The workers were exposed when a large volume of the chemical was dumped into a municipal sewage system. Fifty-nine percent of the workers noted eye irritation, and 27% had throat irritation. Medical examination of 41 employees 3 days after this plant was closed showed proteinuria and elevation of serum lactic dehydrogenase levels. The failure of reported, permanent ill effects in humans may be due to the intermittent or rather brief exposure and to the highly irritating nature of the compound, which makes prolonged exposure intolerable. /LABORATORY ANIMALS: Acute Exposure/ .../Hexachlorocyclopentadiene/ (HEX) /was tested/ for eye irritation by instilling 0.1 mL HEX into the eyes of New Zealand white rabbits for 5 min or 24 hr before washing. All the rabbits died on or before the ninth day of the observation period. ...HEX /was reported/ to be a primary skin irritant in rabbits (strain unspecified) at a dose level of 250 mg/kg, and ...a dermal irritant because of the edema that appeared after application of 0.5 mL HEX. In this study, intense discoloration of the skin was noted. ...Monkeys (strain unspecified) were also tested, and discoloration of the skin was noted even at low doses (0.05 mL of 10% HEX).
- Respiratory or skin sensitization: No data available.
- Germ cell mutagenicity: No data available.
- Carcinogenicity: Cancer Classification: Group D Not Classifiable as to Human Carcinogenicity CLASSIFICATION: D; not classifiable as to human carcinogenicity. BASIS FOR CLASSIFICATION: Inadequate data in humans and no data in animals concerning carcinogenicity of hexachlorocyclopentadiene. HUMAN CARCINOGENICITY DATA: Inadequate.
- Reproductive toxicity: /LABORATORY ANIMALS: Acute Exposure/ A dose of 877 mg/kg administered in 5% peanut oil killed all of 3 exposed rabbits while a dose of 579 mg/kg killed only 1 and all survived a dose of 392 mg/kg. On the other hand, several rabbits (exact number not identified) did not survive 13 days of treatment (during

pregnancy) with 75 mg/kg/day HCCPD in cottonseed oil.
- STOT-single exposure: No data available.
- STOT-repeated exposure: Patients exposed to HCCPD may get a sore throat or have shortness of breath and chest discomfort. Bleeding, swelling, and fluid buildup can occur in the lungs. The linings of the respiratory passages and the lungs are very susceptible to damage from low concentrations of HCCPD following inhalation exposure. Inflammation of the tissues can be followed by necrosis, exfoliation, and hemorrhage. Tissue repair is often fibrous in appearance. Long-term exposure to very low levels of HCCPD can produce granular yellow-brown pigmentation of the epithelium of the nose, trachea, larynx, and lungs. High acute oral doses of HCCPD are associated with liver necrosis and tissue degeneration. The kidneys also appear to be a target tissue for HCCPD toxicity. Degenerative lesions in the tubules can result from small oral doses. (L437)
- Aspiration hazard: No data available.

Likely routes of exposure
- Inhalation of mist is highly irritating to mucous membranes, causing lacrimation, sneezing & salivation. Contact with eye causes severe irritation. Liquid is extremely irritating to skin ...

Symptoms related to the physical, chemical and toxicological characteristics
- HCCPD may interact with the microsomes that binds to secretory molecules and changes their ability to be transported from the cell. It can be postulated, that some of its toxic properties are a consequence of its reactivity in Diels-Alder reactions where a conjugated diene combines with a substituted or unsubstituted alkene (a dienophile) in a cycloaddition reaction. Biological tissues contain a large number of potential reactants for cycloaddition reactions. HCCPD can also undergo addition and substitution reactions or be oxidized by way of the mixed function oxidase system. Effects of HCCPD on the brain may also be a reflection of the reaction of either HCCPD or a metabolite with brain lipids. The effects of HCCPD on the adrenal glands may be a reflection of its ability to combine with the unsaturated carbons in sterols produced by this gland. The hydroxyl functional group of a sterol is on a carbon adjacent to the double bond and can activate that bond to cycloaddition reactions. Such reactions would require exposure to large doses of HCCPD so that reactive material would reach the adrenal gland. HCCPD is excreted in urine and feces. (L437)

SECTION 12: Ecological information

SECTION 12: Ecological information

12.1 Toxicity
- 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
- Not available.

12.6 Endocrine disrupting properties
- No data available.

12.7 Other adverse effects
- No data available.

SECTION 13: Disposal considerations

SECTION 13: Disposal considerations

13.1 Waste treatment methods
- Dispose of contents/container in accordance with local/regional/national/international regulations.
- Do not discharge to drains or the environment.
- Incineration or disposal via licensed chemical waste contractor may be appropriate.
- Waste code: Not available.

SECTION 14: Transport information

SECTION 14: Transport information

- UN number: Not available.
- UN proper shipping name: Not available.
- Transport hazard class(es): Not available.
- Packing group: Not available.
- Environmental hazards: Not available.
- Special precautions for user: Not available.
- Transport in bulk according to IMO instruments: Not available.

SECTION 15: Regulatory information

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- Regulatory listings (e.g., GHS/CLP, TSCA, REACH, DSL, AICS, IECSC, EINECS/ELINCS, etc.): Not available.

15.2 Chemical safety assessment
- No data available.

SECTION 16: Other information

SECTION 16: Other information

- Product name: Perchlorocyclopentadiene
- CAS No.: 77-47-4
- Catalog No.: CS-T-39057
- Synonyms: perchlorocyclopenta-1,3-diene
- Supplier: Clearsynth Labs Ltd., Mumbai, India
- Emergency phone: +91-22-245045900

Disclaimer
- The information provided is believed to be accurate based on available data; however, no warranty is expressed or implied. Users must determine suitability for their particular application and comply with all applicable laws and

regulations.

Revision information
- Revision date: Not available.
- Version: Not available.

DISCLAIMER

This MSDS is system-generated. Please verify and confirm all data, statements, and values with the Support Team before use or distribution.