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

1.1 Product identifier
Name of Substance: Hexachlorocyclopentadiene

<table>
<thead>
<tr>
<th>Index number (CLP Annex VI):</th>
<th>602-078-00-7</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC number:</td>
<td>201-029-3</td>
</tr>
<tr>
<td>EC name:</td>
<td>Hexachlorocyclopentadiene</td>
</tr>
<tr>
<td>CAS number:</td>
<td>77-47-4</td>
</tr>
<tr>
<td>Pre-Registration number</td>
<td>05-2116474854-32-0000</td>
</tr>
</tbody>
</table>

Other means of identification:
1,2,3,4,5,5-Hexachloro-1,3-cyclopentadiene; HCCP, HCCPD, Hex, PCL Hexachlorocyclopentadiene.

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

1.2.1 Relevant identified uses
Agricultural industry: Intermediate for pesticides and fungicides.
Industrial applications: used as an intermediate in the manufacture of flame retardants such as Dechlorane Plus and chlorendic anhydride and/or chlorendic acid; and, to a lesser extent, an intermediate in the production of a specialty coating.

Uses considered in Exposure Scenarios, see:
EU RISK ASSESSMENT - HEXACHLOROCYCLOPENTADIENE [77-47-4], 2007.

1.2.2 Uses advised against
Not available.

1.3 Details of the supplier of the safety data sheet
Velsicol Chemical Ireland Limited
Regus House
Harcourt Centre
Harcourt Road
Dublin 2
Republic of Ireland
Phone: 353 1 477 3143
Fax: 353 1 402 9587
Email: sfriedman@velsicol.com

1.4 Emergency telephone number
Outside the continental U.S.A. call CHEMTREC +1 703 527 3887 (24 hours)
In the continental U.S.A. call CHEMTREC 1 800 424 9300 (24 hours)

SECTION 2: Hazards Identification

2.1 Classification of the substance or mixture

2.1.1 Classification according to Regulation (EC) No 1272/2008 [CLP]

<table>
<thead>
<tr>
<th>Hazard classes and Hazard categories</th>
<th>Hazard Statements</th>
<th>Classification procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Toxicity. 2*</td>
<td>H330</td>
<td>On basis of test data</td>
</tr>
<tr>
<td>Acute Toxicity. 3*</td>
<td>H311</td>
<td>On basis of test data</td>
</tr>
<tr>
<td>Acute Toxicity. 4*</td>
<td>H302</td>
<td>On basis of test data</td>
</tr>
</tbody>
</table>
Skin Corr. 1B    H314    On basis of test data  
Aquatic Acute 1     H400    On basis of test data  
Aquatic Chronic 1   H410    On basis of test data

* Minimum classification. See section 11 for details.

Precautionary statements:
P260: Do not breathe dust/fume/gas/mist/vapours/spray.
P264: Wash ... thoroughly after handling.
P270: Do no eat, drink or smoke when using this product.
P271: Use only outdoors or in a well-ventilated area.
P273: Avoid release to the environment.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P284: Wear respiratory protection.
P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P301+P330+P331: IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P302+P352: IF ON SKIN: Wash with plenty of soap and water.
P303+P361+P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing.
Rinse skin with water/shower.
P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for 
breathing.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact 
elenses, if present and easy to do. Continue rinsing.
P310: Immediately call a POISON CENTER or doctor/physician.
P312: Call a POISON CENTER or doctor/physician if you feel unwell.
P320/321/322: Specific treatment is urgent (see … on this label).
P361: Remove/Take off immediately all contaminated clothing.
P363: Wash contaminated clothing before reuse.
P391: Collect spillage.
P405: Store locked up.
P501: Dispose of contents/container in accordance with local/regional/national/international regulation.

2.1.2 Classification according to Directive 67/548/EEC
Xn; R22 - Harmful if swallowed.
C; R34 - Causes burns.
T; R24 - Toxic in contact with skin.
T+; R26 - Very toxic by inhalation.
N; R50/53- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic
environment.

2.1.3 Additional information:
Full text of R-, H-, P- and EUH-phrases: see section 16.

2.2 Label elements

2.2.1 Labeling according to Regulation (EC) No 1272/2008 [CLP/GHS]
Hazard pictograms:

Signal word: Danger
Hazard statements:
H330: Fatal if inhaled
H311: Toxic in contact with skin.
H302: Harmful if swallowed.
H314: Causes severe skin burns and eye damage
H400: Very toxic to aquatic life.
H410: Very toxic to aquatic life with long lasting effects

Precautionary statements:
P260: Do not breathe dust/fume/gas/mist/vapours/spray.
P270: Do not eat, drink or smoke when using this product.
P271: Use only outdoors or in a well-ventilated area.
P273: Avoid release to the environment.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P284: Wear respiratory protection.

2.2.2 Labeling according to Directive 67/548/EEC
Symbol: T+; N
Indications of danger: Very Toxic to human health and Very toxic to aquatic life
Risk phrases: R22-24-26-34-50/53

2.2.3 Additional information:
Full text of R-, H- and EUH-phrases: see section 16.

2.3 Other hazards
None known

SECTION 3: Composition/information on ingredients:

<table>
<thead>
<tr>
<th>Substances</th>
<th>Product identifier type in accordance with Regulation (EC) No 1272/2008</th>
<th>Identifier number</th>
<th>Identifier name</th>
<th>Weight % Content (or range)</th>
<th>EC Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexachlorocyclopentadiene</td>
<td>602-078-00-7</td>
<td>Hexachlorocyclopentadiene</td>
<td>≥ 98.5</td>
<td>201-029-3</td>
<td></td>
</tr>
</tbody>
</table>

3.2 Mixtures
Not applicable

SECTION 4: First Aid Measures

4.1 Description of first aid measures

4.1.1 General information:
May be fatal if inhaled. Harmful if swallowed or absorbed through skin. Corrosive to eyes and skin. Liquid or spray mist may produce tissue damage particularly on mucous membranes of eyes, mouth and respiratory tract. May cause allergic skin reaction in susceptible individuals.

4.1.2 Following inhalation:
POISON. Get medical attention. Call a Poison Control Centre. Remove to fresh air. If breathing is difficult, give artificial respiration. If breathing is difficult, give oxygen.

4.1.3 Following skin contact:
Immediately flush with plenty of water for 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Destroy contaminated shoes.
4.1.4 Following eye contact:
Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek medical attention immediately.

4.1.5 Following ingestion:
DO NOT induce vomiting. Have conscious person drink several glasses of water or milk. Seek immediate medical attention. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

4.1.6 Self-protection of the first aider:
Wear protective gloves/protective clothing/eye protection/face protection. Do not get in eyes, on skin, or on clothing. Contaminated work clothing should not be allowed out of the workplace. Get medical attention immediately.

4.1.7 Notes for the doctor:
Not available.

4.2 Most important symptoms and effects, both acute and delayed
Highly toxic, may be fatal if inhaled, swallowed or absorbed through skin. Avoid any skin contact. Effects of contact or inhalation may be delayed. This substance may be harmful to the kidney, lungs, nervous system and liver based on animal data. Repeated or prolonged contact with spray mist may produce chronic eye irritation, severe skin irritation and respiratory tract irritation leading to frequent attacks of bronchial infection

4.3 Indication of any immediate medical attention and special treatments needed
Seek medical attention immediately.

SECTION 5: Fire fighting Measures

5.1 Extinguishing media
Suitable extinguishing media: Small fires: Dry chemical, CO2 or water spray. Large fires: Water spray, fog or regular foam.

Unsuitable extinguishing media: do not use straight streams

5.2 Special hazards arising from the substance or mixture
Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes. Fire may produce irritating, corrosive and/or toxic gases. Containers may explode when heated. Toxic hydrogen chloride, chlorine, & phosgene gases may form in fires. Runoff from fire control or dilution water may be corrosive and/or toxic and cause pollution.

5.3 Advice for fire fighters
Wear positive pressure self-contained breathing apparatus (SCBA). Wear chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection. Structural fire fighter’s protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.

Move containers from fire area if you can do it without risk. Dike fire control water for later disposal; do not scatter the material.

Fire involving tanks or car/trailer loads: Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Do not get water inside containers. Cool containers with floating quantities of water until well after fire is out. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. ALWAYS stay away from tanks engulfed in fire. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.
6.1 Personal precautions, protective equipment and emergency procedures
Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Stop leak if you can do it without risk. Prevent entry into waterways, sewers, basements or confined areas. Cover with plastic sheet to prevent spreading. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. DO NOT GET WATER INSIDE CONTAINERS.

6.1.1. For non-emergency personnel
Wear positive pressure self-contained breathing apparatus (SCBA). Wear chemical protective clothing to prevent any contact of skin, eyes and personal clothing; evacuate the danger area or to consult an expert.

6.1.2. For emergency personnel
Wear positive pressure self-contained breathing apparatus (SCBA). Wear chemical protective clothing to prevent any contact of skin, eyes and personal clothing.

6.2 Environmental precautions
Do not allow to enter sewers and surface or ground water.
In case of spillage to water course or public sewers inform responsible authorities.

6.2 Methods and materials for containment and clearing up
Small Spill: Absorb with an inert material and put the spilled material in an appropriate waste disposal container.
Large Spill: Stop the leak if without risk. Absorb with DRY earth, sand or other non-combustible material. DO NOT touch spilled material. DO NOT get water in containers. Use water spray curtain to divert vapour drift. Use water spray to reduce vapours. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal.

6.4 References to other sections
See sections 8 and 13 for further advice.

SECTION 7: Handling and Storage

7.1 Precautions for safe handling
Protective measures: Do not handle until all safety precautions have been read and understood; Wear suitable protective clothing, gloves and eye/face protection.
Measures to prevent aerosol and dust generation: Provide ventilation to minimize exposure. Do not breathe dust/fumes/gas/mist/vapours/spray;
Measures to protect the environment: Avoid release to the environment.
Advice on general occupational hygiene: Do not get in eyes, on skin, or on clothing; Do not eat, drink and smoke in work areas; Work clothing that becomes wet or contaminated should be removed and replaced.

7.2 Conditions for safe storage, including any incompatibilities
Store in well ventilated area away from sources of heat and sunlight; Keep container tightly closed;
Specific incompatibilities: Keep away from moisture/water and sunlight.

7.3 Specific end use(s)
Ref: EU RISK ASSESSMENT - HEXACHLOROCYCLOPENTADIENE [77-47-4], 2007.

SECTION 8. Exposure Controls/Personal Protection

8.1 Control parameters
OELs – EU Occupational Exposure Limit values (TWA – value (8 hr)):
Country / Organisation | Level (mg/m³)
--- | ---
The Netherlands (Health Council of the Netherlands, 2003) | 0.01
Denmark (Arbejdstilsynet, 2002) | 0.1
Germany (TRGS, 2006), (Deutsche Forschungsgemeinschaft, 2005) | 0.2
American Conference of Governmental Industrial Hygienists (ACGIH, 2001) | 0.11
Occupational Safety and Health Administration, USA (OSHA, 1989) | 0.11
National Institute for Occupational Safety and Health, USA (NIOSH, 2005) | 0.11

Assuming a human body wt of 70 kg, the acceptable daily intake for Hexachlorocyclopentadiene is 0.00462 mg/day/Inhalation.

Acceptable Intake Chronic/Excursion Limit Recommendation: Threshold Limit Values (TLV) in worker exposure levels may exceed 3 times the TLV-TWA for no more than a total of 30 minutes during a work day, and under no circumstances should they exceed 5 times the TLV-TWA, provided that the TLV-TWA is not exceeded.

DN(M)ELs for workers: Not available
DN(M)ELs for the general population: Not available

8.2 Exposure controls
Ref: EU RISK ASSESSMENT - HEXACHLOROCYCLOPENTADIENE [77-47-4], 2007.

8.2.1 Appropriate engineering controls:
Eyewash fountains should be provided in areas where there is any possibility that workers could be exposed to the substance; this is irrespective of the recommendation involving the wearing of eye protection.

Local exhaust ventilation should be applied wherever there is an incidence of point source emissions or dispersion of regulated contaminants in the work area. Ventilation control of the contaminant as close to its point of generation is both the most economical and safest method to minimize personnel exposure to airborne contaminants.

8.2.2 Personal protective equipment:
Avoid breathing vapours. Keep upwind. ... Avoid bodily contact with the material. ... Do not handle broken packages unless wearing appropriate personal protective equipment. Wash away any material which may have contacted the body with copious amounts of water or soap and water. If contact with the material anticipated, wear appropriate chemical protective clothing. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Respiratory protection
Self-contained air-masks or full face canister gas masks of the acid gases and organic vapours type should be available at all times. Self-contained breathing apparatus face shield.

Hand Protection
Protective clothing, including rubber gloves & rubber shoes or boots. If gloves are damaged during use, remove immediately and wash hands before replacing with new gloves.

Eye and face protection
Self-contained air-masks or full face canister gas masks of the acid gases and organic vapours type.

Skin protection
Wear appropriate personal protective clothing to prevent skin contact. These should be changed after use or if contaminated.

8.2.3 Environmental exposure controls:
Avoid release to the environment.

SECTION 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties
Appearance: Pale yellow liquid. (Dense, oily)
Odour: Pungent (strong)
Odour threshold: 0.15 ppm
pH: Not available
Freezing point: 10°C (50°F)
Boiling point: 239°C (462.2°F)
Flashpoint: Not applicable
Evaporation rate: Not available
Flammability: Not flammable
Vapour pressure: 0.060 mm of Hg (@ 25°C)
Vapour density 9.42 (Air = 1)
Relative density 1.7019 (Water = 1)
Particle size distribution: Not applicable
Solubility in water: Very slightly soluble in cold water, hot water. 1.8 mg/l @ 22°C
Solubility in other solvents: Soluble in all proportions in acetone, carbon tetrachloride, methanol and hexane.
Surface tension: 37.5 dynes/cm = 0.0375 N/m @ 20 °C
Partition coefficient: log Kow = 5.04
Auto ignition temperature: Not available
Decomposition temperature: Not available
Viscosity: Not available
Explosive properties: Not considered to be explosive
Oxidising properties: In the presence of moisture, it will corrode iron & other metals.
Dissociation Constant: Not available
Molecular Weight: 272.77

9.2 Other information
Henry's Law constant = 2.7X10^{-2} atm-cu m/mol at °C

SECTION 10: Stability and Reactivity

10.1 Reactivity
The product is stable. No hazardous reaction when handled and stored according to provisions.

10.2 Chemical stability
Reacts slowly with water to form hydrochloric acid.

10.3 Possibility of hazardous reactions
Will corrode iron & most metals in presence of moisture. Explosive hydrogen gas may collect in enclosed spaces in the presence of moisture.

10.4 Conditions to avoid
Avoid water, direct Sun light.

10.5 Incompatible materials
Slightly reactive to reactive with reducing agents, alkalis. Very slightly to slightly reactive with organic materials, moisture.
10.6 Hazardous decomposition products
When heated to decomposition it emits toxic fumes of hydrogen chloride.

SECTION 11: Toxicological Information

11.1 Information on toxicological effects
HCCP has not been registered under REACH registration.
Ref: EU RISK ASSESSMENT - HEXACHLOROCYCLOPENTADIENE [77-47-4], 2007.

(a) Acute toxicity
Practical experience / human evidence: not available
Animal data:

<table>
<thead>
<tr>
<th>Acute Toxicity</th>
<th>Effect Dos /Concentration</th>
<th>Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Oral Toxicity</td>
<td>LD50: 630 mg/kg bw (male)</td>
<td>Rat</td>
</tr>
<tr>
<td></td>
<td>LD50: 530 mg/kg bw (female)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LD50: 584 mg/kg bw (male/female)</td>
<td></td>
</tr>
<tr>
<td>Acute dermal toxicity</td>
<td>LD50: 200 mg/kg bw</td>
<td>Rabbit</td>
</tr>
<tr>
<td>Acute inhalation toxicity</td>
<td>LC50: 0.041 mg/l, 4-hr</td>
<td>Rat</td>
</tr>
</tbody>
</table>

Classification (* Minimum classification):
Inhalation: Acute Toxicity 2*, H330: Fatal if inhaled.
Dermal: Acute Toxicity 3 *, H311: Toxic in contact with skin.
Oral: Acute Toxicity 4 *, H302: Harmful if swallowed.

(b) Skin corrosion/irritation
Classification: Skin Corrosive 1B, H314: Causes severe skin burns and eye damage.

(c) Serious eye damage/irritation
Classification: Skin Corrosive 1B, H314: Causes severe skin burns and eye damage.

(d) Respiratory/skin sensitisation
Classification: See Acute Toxicity.

(e) Germ cell mutagenicity
Based on the data available, it appears that HCCP is not a bacterial mutagen and does not induce
gene mutations in mammalian cells in vitro. No genetic effects were observed in in vivo studies.
Classification: Not classified.

(f) Carcinogenicity
Based on the results in genotoxicity tests, the carcinogenicity tests with rats and mice, and the available
epidemiological studies it is concluded that HCCP is of no concern with respect to carcinogenic activity.
Classification: Not classified.

(g) Reproductive toxicity
Adverse effects on sexual function and fertility:
Inhalation: NOAEC = 6.34 mg/m³ for rats and mice.
Oral: NOAEL = 150 mg/kg bw for rats and 300 mg/kg bw for mice.
Dermal: No data are available.
Adverse effects on developmental toxicity:
Inhalation: No data are available.
Oral: NOAEL for maternal and developmental toxicity is concluded to be 25 mg/kg bw/day (rabbits).
Dermal: No data are available

**Classification:** Not classified.

(h) **STOT-single exposure**
Not available.

(i) **STOT-repeated exposure**

**Practical experience / human evidence:** not available

**Animal data:**

<table>
<thead>
<tr>
<th>Toxicological endpoint</th>
<th>Inhalation (N(L)OAEC)</th>
<th>Oral (N(L)OAEL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repeated dose toxicity (local)</td>
<td>1.25 mg/m³ (subacute NOAEC in rats)</td>
<td>10 mg/kg bw (semichronic NOAEL in rats)</td>
</tr>
<tr>
<td></td>
<td>0.45 mg/m³ (semichronic NOAEC in mice)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.11 mg/m³ (chronic LOAEC in rats and mice)</td>
<td></td>
</tr>
<tr>
<td>Repeated dose toxicity (systemic)</td>
<td>1.25 mg/m³ (subacute NOAEC in rats)</td>
<td>10 mg/kg bw (semichronic NOAEL in rats)</td>
</tr>
<tr>
<td></td>
<td>0.45 mg/m³ (semichronic NOAEC in mice)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.11 mg/m³ (chronic NOAEC in mice)</td>
<td></td>
</tr>
</tbody>
</table>

**Repeated dose toxicity:** dermal, No suitable dermal repeated dose toxicity studies are available.

**Classification:** Not classified

(j) **Aspiration hazard**
Not available

**SECTION 12: Ecological Information**

12.1. **Toxicity**

**Acute (short-term) toxicity:** Highly toxic

Fish: LC50 (96h) for freshwater fish: 0.13 mg/L (bluegill) to 0.18 mg/L (fathead minnow)

Water flea (*Daphnia magna*): EC50/LC50 (48h) for freshwater invertebrates: 0.039 mg/L

Algae/aquatic plants (*Selenastrum capricornutum*): LC50 (96h) for 0.19 mg/l

**Chronic (long-term) toxicity:** Not available

**Predicted No Effect Concentration (PNEC)**

<table>
<thead>
<tr>
<th>Fresh water</th>
<th>Sediment (fresh water)</th>
<th>Soil (Terrestrial)</th>
<th>STP (sewage treatment plant)</th>
<th>Oral (mammals)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.0 x 10⁻³ mg/l</td>
<td>2.81 μg/kg ww</td>
<td>2.26 μg/kg dw.</td>
<td>10 mg/l</td>
<td>0.74 mg/kg food</td>
</tr>
</tbody>
</table>

**Classification:**

Aquatic Acute 1, H400: Very toxic to aquatic life.

Aquatic Chronic 1, H410: Very toxic to aquatic life with long lasting effects.

12.2 **Persistence and degradability**

On the basis of the available data on aquatic biodegradation, HCCP is considered to be inherently biodegradable, not fulfilling specific criteria. Half-life in water (photolysis) is 1.03 minutes.

12.3 **Bioaccumulative potential**

Actual determinations indicate that HCCP does not seem to accumulate to a great extent mainly because it is metabolized rapidly. US-EPA concluded to use the bioconcentration factors (BCF) of <11 and adjusted it for lipid content. The weighted average BCF for the edible portion of freshwater and estuarine aquatic organisms was calculated and found to be 4.34 (Agency for Toxic Substances and Disease Registry (ATSDR), 1999).
12.4 Mobility in soil
If released to soil, HCCP will be immobilized by strong adsorption to organic matter. Significant losses on soil surfaces may occur via photolysis. Volatilization from soil surfaces is expected to be of minor importance. In moist soil, HCCP will be subject to chemical hydrolysis (half-life 2.5 d at 22 °C) and biodegradation under aerobic and anaerobic conditions (HSDS 2001).

12.5 Results of PBT and vPvB assessment
Overall, HCCP does not meet the PBT criteria.

12.6 Other adverse effects
No information available.

12.7 Additional information
No information available.

SECTION 13: Disposal Considerations

13.1 Waste treatment methods
Recommendable Treatment and Disposable Methods: Incineration. Incinerate after mixing with another combustible fuel. Care must be exercised to assure complete combustion to prevent the formation of phosgene. Consult your local or regional authorities for disposal options.

SECTION 14: Transport Information

<table>
<thead>
<tr>
<th>Transport</th>
<th>Proper Shipping Name</th>
<th>Hazard Class</th>
<th>UN ID#</th>
<th>Packing group</th>
<th>Required Label</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICAO/IATA (Air)</td>
<td>Hexachlorocyclopentadiene</td>
<td>6.1</td>
<td>UN2646</td>
<td>I</td>
<td>Forbidden by air (Passenger or Cargo)</td>
</tr>
<tr>
<td>IMO/IMDG (Sea)</td>
<td>Hexachlorocyclopentadiene</td>
<td>6.1</td>
<td>UN2646</td>
<td>I</td>
<td>Poison</td>
</tr>
<tr>
<td>TDG (Canada)</td>
<td>Hexachlorocyclopentadiene</td>
<td>6.1, 9.2</td>
<td>UN2646</td>
<td>I</td>
<td></td>
</tr>
<tr>
<td>DOT (USA)</td>
<td>Hexachlorocyclopentadiene</td>
<td>6.1</td>
<td>UN2646</td>
<td>I</td>
<td>Poison</td>
</tr>
</tbody>
</table>

ADR CLASS 6.1: Organic substance with a flash point of 23°C or over or non-flammable organic substances.

STCC Number: 49 330 15; Hexachlorocyclopentadiene

Customs Classification: International HTS# 2903.19.10

SECTION 15: Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1 EU regulations
European Inventory of Existing Commercial chemical Substances (EINECS): listed
Export and Import of Dangerous Chemicals (Regulation (EC) No 689/2008) Information: Not listed
HPV-LPV (High and Low Production Volume) Information: LPV Chemical

15.1.2 National regulations (Germany)
Ordinance on Classification of Water-Endangering Substances. The substance has been assigned WGK Class: 3 (very water endangering) through “self-classification” by chemical companies pursuant to criteria of the Verband Chemischer Industry (VCI).

15.2 Chemical Safety Assessment
HCCP has not been registered under REACH.
SECTION 16: Other Information

16.1 Indication of changes
This is the first SDS to comply Commission Regulation (EU) No 453/2010
Version 1, 5 June 2012
Version 2, 7 June 2017, re-formatted Header/Footer
Version 3, 12 June 2017, updated Section 12 for Half-life in water (photolysis) and soil (hydrolysis).

16.2 Abbreviations and acronyms:
See context.

16.3 Key literature references and sources for data
-REGISTRY Database, Chemical Abstract Service
-CHEMLIST Database, Chemical Abstract Service
-Registry of Toxic Effects of Chemical Substances (RTECS)
-Hazardous Substance Data Bank (HSDB), National library of Medicine, #4011
-ICRMS European Database, Ariel Research Corporation
-ICRMS Inventories Database, Ariel Research Corporation
-EU RISK ASSESSMENT - HEXACHLOROCYCLOPENTADIENE [77-47-4], 2007

16.4 Classification for mixtures and used evaluation method according to regulation (EC) 1207/2008 [CLP]: Not a mixture.

16.5 Relevant R-, H-, P- and EUH-phrases (number and full text):

<table>
<thead>
<tr>
<th>Regulation (EU) No 1272/2008 (CLP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classification</td>
</tr>
<tr>
<td>(*) Minimum classification:</td>
</tr>
<tr>
<td>Acute Toxicity 2 *</td>
</tr>
<tr>
<td>Acute Toxicity 3 *</td>
</tr>
<tr>
<td>Acute Toxicity 4 *</td>
</tr>
<tr>
<td>Skin Corrosive 1B</td>
</tr>
<tr>
<td>Aquatic Acute 1</td>
</tr>
<tr>
<td>Aquatic Chronic 1</td>
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</tbody>
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GHS Pictograms:
- GHS06 : Skull and Crossbones
- GHS05 : Environment
- GHS09 : Corrosion

Precautionary statements
- P260: Do not breathe dust/fume/gas/mist/vapours/spray.
- P264: Wash … thoroughly after handling.
- P270: Do not eat, drink or smoke when using this product.
- P271: Use only outdoors or in a well-ventilated area.
- P273: Avoid release to the environment.
- P280: Wear protective gloves/protective clothing/eye protection/face protection.
- P284: Wear respiratory protection.
- P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
- P301+P330+P331: IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
- P302+P352: IF ON SKIN: Wash with plenty of soap and water.
- P303+P361+P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P310: Immediately call a POISON CENTER or doctor/physician.
P312: Call a POISON CENTER or doctor/physician if you feel unwell.
P320/321/322: Specific treatment is urgent (see … on this label).
P361: Remove/Take off immediately all contaminated clothing.
P363: Wash contaminated clothing before reuse.
P391: Collect spillage.
P405: Store locked up.
P501: Dispose of contents/container in accordance with local/regional/national/international regulation.

<table>
<thead>
<tr>
<th>Directive 67/548/EEC (DSD)</th>
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<tr>
<td>Risk Phases:</td>
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<tr>
<td>R22 – Harmful if swallowed.</td>
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<tr>
<td>R24 – Toxic in contact with skin.</td>
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<tr>
<td>R26 – Very toxic by inhalation.</td>
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<tr>
<td>R34 – Causes burns.</td>
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<tr>
<td>R50/53 – Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.</td>
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<th>Safety Statements:</th>
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<tr>
<td>S25 – Avoid contact with eyes.</td>
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<tr>
<td>S39 – Wear eye / face protection.</td>
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<tr>
<td>S45 – In case of accident or if you feel unwell, seek medical advice immediately.</td>
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<tr>
<td>S53 – Avoid exposure – obtain special instructions before use.</td>
</tr>
<tr>
<td>S60 – This material and its container must be disposed of as hazardous waste.</td>
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<tr>
<td>S61 – Avoid release to the environment. Refer to special instructions / safety data sheet.</td>
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</tbody>
</table>

16.6 Training advice:
See EU RISK ASSESSMENT - HEXACHLOROCYCLOPENTADIENE [77-47-4], 2007.

16.7 Further information: Notice to Reader
To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Annex to extended safety data sheet (eSDS)

Exposure Scenario, please reference:
EU RISK ASSESSMENT - HEXACHLOROCYCLOPENTADIENE [77-47-4], 2007.