



PyroVex[®] SG

Safety Data Sheet

Version: 3.0 / EN
Revision date: 6 February, 2018

SECTION 1: Identification

1.1 Product identifier

Trade name: **PyroVex[®] SG**
Grades 515, 25 and 35

Chemical Name and Synonyms:

1,4,7,10-Dimethanodibenzo(a,e)cyclooctene,1,2,3,4,7,8,9,10,13,13,14,14-dodecachloro-1,4,4a,5,6,6a,7,10,10a,11,12,12a-dodecahydro-;
1,6,7,8,9,14,15,16,17,17,18,18-dodecachloropentacyclo[12.2.1.16,9.02,13.05,10]octadeca-7,15-diene;
DECHLORINE; Dechlorane Plus; CFR;
Bis(hexachlorocyclopentadieno)cyclooctane.

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

1.2.1 Relevant identified uses:

A flame retardant for plastics, thermoplastic polymers.

1.2.2 Recommended restrictions on use:

Professional users only.

1.3 Details of the supplier of the safety data sheet

Velsicol Chemical LLC

10400 W. Higgins Road
Rosemont, Illinois 60018 USA
Phone: (847) 813-7888
Fax: (847) 768-3227
Email: customerservice@velsicol.com

1.4 Emergency telephone number

Outside the continental U.S.A. call CHEMTREC 1-800-424-9300 (24 hours)
In the continental U.S.A. call CHEMTREC 1-800-424-9300 (24 hours)

SECTION 2: Hazard(s) identification

2.1 Hazard classification and Hazard statement(s)

This substance is not classified as hazardous substance.

This substance should be handled as if it were a PBT/vPvB.

Inhalation dust of this substance by humans may cause irritation of the respiratory tract. Exposure to high concentrations of dust may reduce lung function.

2.2 Precautionary statements: Avoid breathing dust. Avoid exposure to the environment.

2.3 Signal Word: None

2.4 Pictograms: No Pictogram

2.5 Other hazards: None known



SECTION 3: Composition/information on ingredients:

3.1 Substances

| Chemical Name | CAS number | % by Weight |
|---|------------|-------------|
| 1,4,7,10-Dimethanodibenzo(a,e)cyclooctene,1,2,3,4,7,8,9,10,13,13,14,14-dodecachloro-1,4,4a,5,6,6a,7,10,10a,11,12,12a-dodecahydro- | 13560-89-9 | >99 |

3.2 Impurities and stabilizing additives

No information available

SECTION 4: First-aid measures

4.1 Description of first aid measures

4.1.1 General information

Inhalation and eyes/skin contact are expected to be the primary routes of occupational exposure.

4.1.2 Following inhalation

Immediately leave the contaminated area; take deep breaths of fresh air. If symptoms of overexposure occur, get medical attention.

4.1.3 Following skin contact

Wash contaminated areas with soap and water. If irritation occurs, get medical attention.

4.1.4 Following eye contact

First check the victim for contact lenses and remove if present. Flush victim's eyes with water or normal saline solution for at least 15 minutes. If irritation occurs, get medical attention.

4.1.5 Following ingestion

No effects expected. If large amounts are ingested, get medical attention.

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.

4.1.7 Notes for the doctor

No information available

4.2 Most important symptoms and effects, both acute and delayed

See the labelling (see section 2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatments needed

No information available

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Flammability Properties: Non-flammable.

Suitable extinguishing media: Use extinguishing agents appropriate for surrounding fire.

Unsuitable extinguishing media: DO NOT use water jet.



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5.2 Special hazards arising from the substance or mixture

When heated to decomposition, may release poisonous and corrosive fumes of HCl.
Dust formation.

Avoiding exposure to the environment.

5.3 Advice for fire fighters

Move container from fire area if it can be done without risk. Avoid inhalation of material or combustion by-products. Wear NIOSH approved positive-pressure self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of this safety data sheet) to prevent possible contamination of skin, eyes and personal clothing.
Avoid dust formation. Avoid breathing dust.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Avoiding exposure to the environment.

6.3 Methods and materials for containment and cleaning up

Sweep up and shovel. Keep in suitable, closed containers for disposal or possible re-use. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete. Dispose of contents/container in accordance with local/regional/national/international regulation.

6.4 References to other sections

See sections 7, 8 and 13 for further advice.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid breathing dust. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. Use in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. Wear self-contained breathing apparatus (MSHA-NIOSH approved) in confined areas. Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound.

7.2 Conditions for safe storage, including any incompatibilities

Keep in a dry location in a tightly sealed container. Avoiding exposure to the environment.

Specific incompatibilities: No known.

7.3 Specific end uses(s):

Raw industrial material.

SECTION 8. Exposure controls/personal protection

8.1 Control parameters

3 mg/m³ TWA 8 hour(s) (respirable particulate) (internal Occupational Exposure Limit)

5 mg/m³ OSHA TWA (respirable dust fraction)

15 mg/m³ OSHA TWA (total dust)

10 mg/m³ ACGIH TWA (inhalable particulate)

3 mg/m³ ACGIH TWA (respirable particulate)

8.2 Exposure controls



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8.2.1 Appropriate engineering controls:

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels of dust low. Ensure that eyewash station and safety shower is proximal to the work-station location.

8.2.2 Personal protective measures:

Handle in accordance with good industrial hygiene and safety practice. Remove all contaminated clothing. Wash hands before breaks and at the end of work.

Respiratory protection

A NIOSH approved respirator with N95 (dust, fume, mist) filters may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits, or when symptoms have been observed that are indicative of overexposure. A half face piece air-purifying respirator may be used in concentrations up to 10X the acceptable exposure level and a full face piece air-purifying respirator may be used in concentrations up to 50X the acceptable exposure level. Supplied air should be used when the level is expected to be above 50X the acceptable level, or when there is a potential for uncontrolled release.

Body Protection

Protective clothing, including gloves to provide an impervious barrier to prevent dermal exposure to the dust of this substance. Wear impervious clothing and boots. Use vacuum to remove dust from clothing.

Eye and face protection

Safety glasses with side-shields.

Skin protection

Gloves must be inspected prior to use. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

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: White powder

Odor: Odorless

Odor threshold: No information available

pH: 6 -8

Boiling point (average): no data available

Melting point/freezing point (average): 662 °F (350 °C) (decomposes)

Flashpoint: No information available

Evaporation rate: No information available

Flammability (solid): Not flammable

Vapor pressure: 0.006 mm Hg at 200°C

Vapor density: no data available

Specific Gravity: 1.8 g/cm³

Solubility in water: insoluble

Solubility in other solvents: 470mg/L at 25°C in n-octanol

Surface tension: no data available

Partition coefficient: no data available



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Auto ignition temperature: no data available
Decomposition temperature: 662 °F (350 °C)
Viscosity: Not applicable
Volatility: 0.12% Max.
Explosive properties: no data available
Oxidizing properties: no data available
Dissociation Constant: no data available
Molecular Weight: 653.70

9.2 Other information:
No information available.

SECTION 10: Stability and reactivity

- 10.1 Reactivity**
No hazardous reaction when handled and stored according to provisions.
- 10.2 Chemical stability**
This substance is stable under recommended storage conditions.
- 10.3 Others**
Possibility of hazardous reactions
No hazardous reactions expected under normal conditions of use.
- Conditions to avoid**
Avoid excessive heat and contact with incompatible materials.
- Incompatible materials**
Oxidizing materials.
- Hazardous decomposition products**
Carbon oxides, Hydrogen chloride gas. In the event of fire: see section 5
- Polymerization:**
Will not polymerize

SECTION 11: Toxicological information

- 11.1 Information on toxicological effects**
Velsicol Chemical LLC has not conducted toxicity tests on this substance. However, toxicity data are available for this or similar substances.
- (a) Acute toxicity**
Rat LD50 (oral) 25 g/kg; Rabbit LD50 (dermal) 8 g/kg/bw; Rat LC0 (inhalation) 2250 mg/m³/4H
- This material is believed to be acutely non-toxic by inhalation, dermal exposure, and ingestion. No effects were noted in acute toxicity testing in animals.
- (b) Skin corrosion/irritation**
Not classified.
- (c) Serious eye damage/irritation**
Not classified.



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- (d) **Respiratory/skin sensitisation**
Not classified
 - (e) **Germ cell mutagenicity**
Not classified
 - (f) **Carcinogenicity**
No data available
 - (g) **Reproductive toxicity**
Not classified
 - (h) **STOT-single exposure**
There were no noted effects in a 4-hour inhalation test, nor during the 14 day post treatment observation period.
Not classified: Table A 8.1, Federal Register /Vol. 77, No. 58 /Monday, March 26, 2012 /Rules and Regulations
 - (i) **STOT-repeated exposure**
One sub-chronic inhalation study included inhalation exposure for six hours a day for 28 days at concentrations up to 1534 mg/m³ demonstrated increased liver weights in all exposed animals. In this study there was an increase in pulmonary weights in some of the test animals.
Not classified: Table A 9.2, Federal Register /Vol. 77, No. 58 /Monday, March 26, 2012 /Rules and Regulations
 - (j) **Aspiration hazard**
No data available
- 11.2 Additional Information**
Not available

SECTION 12: Ecological information

- 12.1. Toxicity**
Velsicol Chemical LLC has not conducted toxicity tests on this substance. However, some data are available on the components of this material.
Fish Toxicity: LC50 Bluegill sunfish: >100 mg/L (96 hr)
- 12.2 Persistence and degradability**
This material is believed to persist in the environment.
Under test conditions no biodegradation observed (ECHA Registration Dossier)
- 12.3 Bioaccumulative potential**
This material is at least partially bioaccumulative in the environment.
No relevant bioconcentration during 96 hours of exposure in fish (ECHA Registration Dossier)
- 12.4 Mobility in soil**
No data available
- 12.5 Results of PBT and vPvB assessment**
This substance should be handled as if it were a PBT/vPvB
- 12.6 Other adverse effects**
Not available.



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SECTION 13: Disposal considerations

13.1. Waste treatment methods

Recycle to process, if possible. Dispose of contents/container in accordance with local/regional/national/international regulation.

Avoid release to the environment.

SECTION 14: Transport information

This substance is not under control of ADR, IMDG, IATA and DOT(US)

SECTION 15: Regulatory information

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

This product is listed in the following Inventories:

United States - TSCA Inventory

Australia - Inventory of Chemical Substances (AICS)

Canada - Domestic Substances List (DSL)

China - Inventory of Existing Chemical Substances (IECSC)

EU - European Inventory of Existing Commercial Chemical Substances (EINECS #: 236-948-9)

REACH - Annex XIV (Authorisation List): Not listed (no authorisations proposed)

REACH - Annex XVII (Restrictions): Not Listed (no restrictions proposed)

REACH - SVHC Candidate List: Substance included on the Candidate List as of 15/01/2018. Reason for inclusion:
vPvB (Article 57e)

Japan - Inventory of Existing & New Chemical Substances (METI #: 4-296),

Korea - Existing and Evaluated Chemical Substances (KE-12810)

New Zealand - New Zealand Inventory of Chemicals (NZIoC),

Philippines - Inventory of Chemicals and Chemical Substances (PICCS)

15.2 U.S. REGULATIONS

OSHA REGULATORY STATUS:

Not classified

CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES (40 CFR 302.4):

Not regulated.

SARA EHS Chemical (40 CFR 355.30)

Not regulated

EPCRA SECTIONS 311/312 HAZARD CATEGORIES (40 CFR 370.10):

Not regulated

EPCRA SECTION 313 (40 CFR 372.65):

Not regulated.

OSHA PROCESS SAFETY (PSM) (29 CFR 1910.119):

Not regulated

15.3 Chemical Safety Assessment

EU REACH registered: Registration for 100-1000 tonne/year, # 01-2119978271-33-0000



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SECTION 16: Other information

16.1 Indication of changes

v1: This is the first SDS under OSHA Hazard Communication Standard (HCS) (29 CFR 1910.1200(g))

v2: update section 12.

V3: Added PBT/vPvB related information.

16.2 Key literature references and sources for data

Hazardous Substances Databank (HSDB #: 7450)

Hazard Communication Standard (HCS) (29 CFR 1910.1200(g)) and Appendix C, D

ECHA website: <http://echa.europa.eu/>

<http://www.chemsafetypro.com/>

Manufacture SDS.

16.3 Training advice:

In accordance with Hazard Communication Standard (HCS) (29 CFR 1910.1200(g))

16.4 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.