



## PyroVex<sup>®</sup> B-110

### SECTION 1: Identification

#### 1.1 Product identifier

**Trade Name:** PyroVex<sup>®</sup> B-110

**Chemical Name:** Tetrabromophthalic anhydride

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

##### 1.2.1 Relevant identified uses:

A reactive flame retardant in unsaturated polyester and epoxy resin formulations. An intermediate in the manufacture of other flame retardants, such as diallyl tetrabromophthalate and tetrabromophthalate polyol esters.

##### 1.2.2 Uses advised against:

No specific uses advised against have been identified.

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

##### **Velsicol Chemical LLC.**

10400 W. Higgins Road, Suite 303

Rosemont, Illinois 60018 USA

Phone: (224) 612-5930

Fax: (224) 612-5931

[www.velsicol.com](http://www.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 703-527-3887 (24 hours)

### SECTION 2: Hazards Identification

#### 2.1 Hazard classification and Hazard statement(s):

Eye Irritation 2: Causes skin irritation

Skin Irritation 2: May cause an allergic skin reaction

Target Organ Toxicity - Single Exposure 3: May cause respiratory irritation

#### 2.2 Precautionary statements:

Avoid breathing dust/fume/gas/mist/vapours/spray.

Wash ... thoroughly after handling.

Use only outdoors or in a well-ventilated area.

Contaminated work clothing should not be allowed out of the workplace.

Wear protective gloves/protective clothing/eye protection/face protection.

IF ON SKIN: Wash with plenty of soap and water.

Specific treatment (see Section 4 on this label).

If skin irritation occurs: Get medical advice/attention.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Take off contaminated clothing and wash before reuse.

Wash contaminated clothing before reuse.

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

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**2.3 Signal Word:** Warning

**2.4 Pictograms:**



**2.5 Other hazards:**  
No data available

**2.6 Additional Information:**  
No data available

### SECTION 3: Composition/information on ingredients:

**3.1 Substances:**

Chemical Name	Common name and synonyms	CAS number	% by Weight
Tetrabromophthalic anhydride	1,3-Isobenzofurandione, 4,5,6,7-tetrabromo-; 4,5,6,7-Tetrabromo-1,3-isobenzofurandione; Phthalic anhydride, tetrabromo-; TBPA	632-79-1	>99

**Formula:** C<sub>8</sub>Br<sub>4</sub>O<sub>3</sub>

**3.2 Impurities and stabilizing additives:**  
No data available

### SECTION 4: First-Aid Measures

**4.1 Description of first aid measures**

**4.1.1 General information:**

This chemical is an irritant of the skin, eyes and respiratory tract.

**4.1.2 Following inhalation:**

Immediately leave the contaminated area; take deep breaths of fresh air. If symptoms (such as wheezing, coughing, shortness of breath, or burning in the mouth, throat, or chest) develop, call a physician and be prepared to transport the victim to a hospital. Provide proper respiratory protection to rescuers entering an unknown atmosphere. Whenever possible, Self-Contained Breathing Apparatus (SCBA) should be used; if not available, use a level of protection greater than or equal to that advised under Respirator Recommendation.

**4.1.3 Following skin contact:**

Immediately wash skin with plenty of water while removing contaminated clothing and shoes. Gently wash all affected skin areas thoroughly with soap and water. If symptoms such as redness or irritation develop, IMMEDIATELY call a physician and be prepared to transport the victim to a hospital for treatment. Wash clothing before reuse.

**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 20 to 30 minutes while simultaneously calling a hospital or poison control centre. Do not put any ointments, oils, or medication in the victim's eyes without specific instructions from a physician. IMMEDIATELY transport the victim after flushing eyes to a hospital even if no symptoms (such as redness or irritation) develop.



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### 4.1.5 Following ingestion:

DO NOT INDUCE VOMITING. If the victim is conscious and not convulsing, give 1 or 2 glasses of water to dilute the chemical and IMMEDIATELY call a hospital or poison control center. Be prepared to transport the victim to a hospital if advised by a physician. If the victim is convulsing or unconscious, do not give anything by mouth, ensure that the victim's airway is open and lay the victim on his/her side with the head lower than the body. DO NOT INDUCE VOMITING. IMMEDIATELY transport the victim to a hospital.

### 4.1.6 Self-protection of the first aider:

Wear protective gloves/protective clothing/eye protection. Do not get in eyes, on skin, or on clothing.

### 4.1.7 Notes for the doctor:

Not available

### 4.2 Most important symptoms and effects, both acute and delayed

Symptoms of exposure to this compound may include coughing, sneezing, respiratory system irritation, dermatitis and eye irritation.

### 4.3 Indication of any immediate medical attention and special treatments needed

Not available.

## SECTION 5: Fire-Fighting Measures

### 5.1 Extinguishing media

- Flammability Properties: When melted, is combustible.
- Flash Point: Not available.
- Suitable extinguishing media: Dry chemical, carbon dioxide or Halon extinguisher.
- Unsuitable extinguishing media: DO NOT use water jet.

### 5.2 Special hazards arising from the substance or mixture

Combustion products include toxic carbon oxides (CO,CO<sub>2</sub>), halogenated compounds.  
WARNING: Highly toxic HBr gas is produced during combustion.

### 5.3 Advice for fire fighters

Firefighters and others who may be exposed to products of combustion should wear full firefighting turnout gear and self-contained breathing apparatus (MSHA-NIOSH approved).

## 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 the safety data sheet) to prevent any contamination of skin, eyes and personal clothing; provision of sufficient ventilation.

### 6.2 Environmental precautions

Do not let this chemical enter the environment.

### 6.3 Methods and materials for containment and clearing up

In case of a spill and/or a leak, always shut off any sources of ignition, ventilate the area, and exercise caution. Use a shovel to put the material into a convenient waste disposal container. Use absorbent paper dampened with acetone to pick up any remaining material. Seal your contaminated clothing and the adsorbent paper in a vapor-tight plastic bag for eventual disposal. Solvent wash all contaminated surfaces with acetone followed by washing with a strong soap and water solution. Consult federal, state, and/or local authorities for assistance on disposal.



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- 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**  
Handle with caution and minimize exposure. Keep away from heat and sources of ignition and moistures. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation. Do not breathe gas, fumes, vapor or spray. Wear suitable protective clothing. Use with adequate ventilation.
- 7.2 Conditions for safe storage, including any incompatibilities**  
Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible compounds such as oxidizing agents. Keep away from sources of ignition and moistures.
- Specific incompatibilities:** Keep away from sources of ignition and moistures.
- 7.3 Specific end uses(s):** No information available.

### SECTION 8. Exposure Controls/Personal Protection

- 8.1 Control parameters**  
Exposure to this substance is possible during its manufacture, processing, use, and disposal.
- Exposure limits:** No data available
- 8.2 Exposure controls**  
Ventilation must be adequate to maintain the ambient workplace atmosphere.
- 8.2.1 Appropriate engineering controls:**  
Provide ventilation if necessary to minimize exposure. If practical use local mechanical exhaust ventilation at sources of air contamination such as open process equipment. Ensure that eyewash station and safety shower is proximal to the work-station location.
- 8.2.2 Personal protective measures:**  
Remove all contaminated clothing. Wash hands before breaks and at the end of work.
- Respiratory protection**  
Be sure to use a MSHA/NIOSH approved respirator or equivalent equipped with an organic vapor/acid gas cartridge (specific for organic vapors, HCl, acid gas and SO<sub>2</sub>) with a dust/mist filter.
- Hand Protection**  
Wear suitable gloves resistant to chemical penetration. If gloves are damaged during use, remove immediately and wash hands before replacing with new gloves.
- Eye and face protection**  
Safety goggles should be worn when handling this substance.
- Skin protection**  
Wear protective gloves/clothing. Boots.
- 8.2.3 Environmental exposure controls:**  
Avoid release to the environment.



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### SECTION 9: Physical and Chemical Properties

#### 9.1 Information on basic physical and chemical properties

**Form:** Crystalline solid or needles

**Color:** Pale yellow

**Odor:** Faint pungent

**Odor threshold:** Not known

**pH:** No data available

**Melting point:** 279.5-280.5°C

**Boiling point:** No data available

**Flashpoint:** No data available

**Evaporation rate:** No data available

**Flammability:** Not expected to be flammable.

**Vapor pressure:** 0.11 mm Hg @ 180°C

**Vapor density:** No data available

**Specific Gravity:** 2.87g/ml

**Particle size distribution:** Not applicable

**Solubility in water:** Insoluble

**Solubility in other solvents:** Slightly Soluble in Benzene and DMSO.

**Surface tension:** No data available

**Partition coefficient:** Not available

**Auto ignition temperature:** No data available

**Decomposition temperature:** Not available

**Viscosity:** Not available

**Explosive properties:** No data available

**Oxidizing properties:** No data available

**Dissociation Constant:** No data available

**Molecular Weight:** 463.72

#### 9.2 Other information:

No data available

### SECTION 10: Stability and Reactivity

#### 10.1 Reactivity

Not a reactive substance and no reactive hazards are expected.

No hazardous reaction when handled and stored according to provisions.

#### 10.2 Chemical stability

Hydrolysed to tribromophthalic acid on exposure to moist air or water.

This material is stable if stored under proper conditions. (See Section 7 for instructions)

#### 10.3 Others

##### Possibility of hazardous reactions

No hazardous reactions expected under normal conditions of use.

##### Conditions to avoid:

Ignition and moistures.

##### Incompatible materials:

Incompatible with oxidizing agents.

##### Hazardous decomposition products:

Hydrobromic acid, bromine and oxides of carbon.

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**SECTION 11: Toxicological Information**

**11.1 Information on toxicological effects**

**Acute toxicity**

This substance is not classified as acute toxic for all exposure route listed below:

Acute Toxicity	Effect Dos /Concentration
Acute Oral Toxicity	LD50: >10,000 mg/kg bw (rat), practically nontoxic
Acute dermal toxicity	LD50: >10,000 mg/kg bw (Rabbit), practically nontoxic
Acute inhalation toxicity	LD50: >10.92 mg/m <sup>3</sup> /4H (Rat), practically nontoxic

**Skin corrosion/irritation:** Causes skin irritation. May cause an allergic skin reaction

**Serious eye damage/irritation:** eye irritation

**Respiratory/skin sensitisation:** May cause respiratory irritation

**Germ cell mutagenicity:** Not classified

**Carcinogenicity:** Not classified

**Reproductive toxicity:** Not classified

**Repeated dose toxicity:** Not classified

**Aspiration hazard:** Not classified

**Other Toxicological Information** No information available

**SECTION 12: Ecological Information**

**12.1. Toxicity**

The 96 hr LC50 in rainbow trout was > 10mg/L.  
The 48 hr EC50 in Daphnia magna was > 5.6 mg/L

**12.2 Persistence and degradability**

Expected to be persistent in soils.

**12.3 Bioaccumulative potential**

Bioaccumulation potential in aquatic environments is low.

**12.4 Mobility in soil:** No data available

**12.5 Results of PBT and vPvB assessment**

Not bioaccumulative and not regarded as a PBT / vPvB.

**12.6 Other adverse effects:** No information available.

**SECTION 13: Disposal Considerations**

Recycle to process, if possible. Consult your local or regional authorities for disposal options.

PyroVex<sup>®</sup> B-110**SECTION 14: Transport Information**

DOT (US)	Not a controlled goods
ADR, IMDG	Not a controlled goods
IATA	

**SECTION 15: Regulatory Information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

This substance included on or exempted from listing on the following inventories:

United States (TSCA),  
Canada - Domestic Substances List (DSL)  
European Inventory of Existing Commercial Chemical (EINECS # 211-185-4)  
Australia - Inventory of Chemical Substances (AICS)  
China - Inventory of Existing Chemical Substances (IECSC)  
Japan - Existing and New Chemical Substances (ENCS) ((3)-62)  
Korea - Existing and Evaluated Chemical Substances (KECL) (KE-33264)  
New Zealand - Inventory of Chemicals (NZIoC)  
Philippines - Inventory of Chemicals and Chemical Substances (PICCS)

U.S. EPA High Production Volume (HPV) Challenge Program.  
40 CFR 63 (Subpart F), 40 CFR 712 (Subpart B), 40 CFR 716 (Subpart B).

**15.2 Chemical Safety Assessment:**

EU REACH Registration dossier.  
REACH Registration number: 01-2119486483-29-0001

**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))  
06 May 2015  
V2: Change to Velsicol new format, 19 July 2016

**16.2 Key literature references and sources for data**

TOXNET by National Library of Medicine, <http://toxnet.nlm.nih.gov/>  
Ariel WebInsight, 3E Company.com  
HSDB Hazardous Substance Data Bank (#5438)  
Review of Toxicological Literature, Scott Masten, Ph.D., NIEHS, October 1999.  
Manufacture SDS  
ECHA website: <http://echa.europa.eu/web/guest/home>

**16.3 Classification for mixtures and used evaluation method according to Hazard Communication Standard (HCS)(29 CFR 1910.1200(g)), Not a mixture.****16.4 Training advice:** accordance with Hazard Communication Standard (HCS)(29 CFR 1910.1200(g))**16.5 Further information:** Notice to Reader

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