



Health	2
Fire	1
Reactivity	0
Personal Protection	E

## Material Safety Data Sheet 2,4,6-Trichlorophenol MSDS

### Section 1: Chemical Product and Company Identification

**Product Name:** 2,4,6-Trichlorophenol

**Catalog Codes:** SLT3727

**CAS#:** 88-06-2

**RTECS:** SN1575000

**TSCA:** TSCA 8(b) inventory: 2,4,6-Trichlorophenol

**CI#:** Not available.

**Synonym:** Dowcide 2S, Dowicide 2S, OMAL, Phenchlor,;

**Chemical Name:** Phenol, 2,4,6-trichloro-

**Chemical Formula:** C<sub>6</sub>H<sub>3</sub>Cl<sub>3</sub>O

**Contact Information:**

**Sciencelab.com, Inc.**

14025 Smith Rd.

Houston, Texas 77396

US Sales: **1-800-901-7247**

International Sales: **1-281-441-4400**

Order Online: [ScienceLab.com](http://ScienceLab.com)

**CHEMTREC (24HR Emergency Telephone), call:**

1-800-424-9300

**International CHEMTREC, call:** 1-703-527-3887

**For non-emergency assistance, call:** 1-281-441-4400

### Section 2: Composition and Information on Ingredients

**Composition:**

Name	CAS #	% by Weight
{2,4,6-}Trichlorophenol	88-06-2	100

**Toxicological Data on Ingredients:** 2,4,6-Trichlorophenol: ORAL (LD50): Acute: 820 mg/kg [Rat]. 1000 mg/kg [Guinea pig].

### Section 3: Hazards Identification

**Potential Acute Health Effects:** Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation.

**Potential Chronic Health Effects:**

**CARCINOGENIC EFFECTS:** Classified 2 (Some evidence.) by NTP. IARC: IARC Agent Not Assigned an Overall Evaluation; IARC Evidence of Carcinogenicity in Animal is L (Limited data). **MUTAGENIC EFFECTS:** Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast. **TERATOGENIC EFFECTS:** Not available. **DEVELOPMENTAL TOXICITY:** Not available. The substance may be toxic to blood, the nervous system, liver, bone marrow. Repeated or prolonged exposure to the substance can produce target organs damage.

### Section 4: First Aid Measures

**Eye Contact:**

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. WARM water MUST be used. Get medical attention.

**Skin Contact:**

In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

**Serious Skin Contact:**

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

**Inhalation:**

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**Serious Inhalation:** Not available.

**Ingestion:**

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

**Serious Ingestion:** Not available.

### Section 5: Fire and Explosion Data

**Flammability of the Product:** May be combustible at high temperature.

**Auto-Ignition Temperature:** Not available.

**Flash Points:** CLOSED CUP: 99°C (210.2°F).

**Flammable Limits:** Not available.

**Products of Combustion:** These products are carbon oxides (CO, CO<sub>2</sub>), halogenated compounds.

**Fire Hazards in Presence of Various Substances:**

Slightly flammable to flammable in presence of heat. Non-flammable in presence of shocks.

**Explosion Hazards in Presence of Various Substances:**

Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

**Fire Fighting Media and Instructions:**

SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

**Special Remarks on Fire Hazards:** Not available.

**Special Remarks on Explosion Hazards:** Not available.

### Section 6: Accidental Release Measures

**Small Spill:**

Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

**Large Spill:**

Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

### Section 7: Handling and Storage

**Precautions:**

Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents.

**Storage:** Keep container tightly closed. Keep container in a cool, well-ventilated area.

## Section 8: Exposure Controls/Personal Protection

### Engineering Controls:

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

### Personal Protection:

Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

### Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

**Exposure Limits:** Not available.

## Section 9: Physical and Chemical Properties

### Physical state and appearance:

Solid. (Crystalline solid. Crystalline granules solid.)

**Odor:** Phenolic (Strong.)

**Taste:** Not available.

**Molecular Weight:** Not available.

**Color:** Off-white. Beige. (Light.)

**pH (1% soln/water):** Not available.

**Boiling Point:** 246°C (474.8°F) @ 760 mmHg

**Melting Point:** 69°C (156.2°F)

**Critical Temperature:** Not available.

**Specific Gravity:** 1.4901 (Water = 1)

**Vapor Pressure:** Not applicable.

**Vapor Density:** Not available.

**Volatility:** Not available.

**Odor Threshold:** Not available.

**Water/Oil Dist. Coeff.:** The product is more soluble in oil;  $\log(\text{oil/water}) = 3.7$

**Ionicity (in Water):** Not available.

**Dispersion Properties:** See solubility in water, methanol, diethyl ether, acetone.

### Solubility:

Easily soluble in methanol, diethyl ether, acetone. Partially soluble in hot water. Very slightly soluble in cold water.

## Section 10: Stability and Reactivity Data

**Stability:** The product is stable.

**Instability Temperature:** Not available.

**Conditions of Instability:** Excess heat, incompatible materials

**Incompatibility with various substances:** Reactive with oxidizing agents.

**Corrosivity:** Not available.

**Special Remarks on Reactivity:** Incompatible with oxidizing materials, acid chlorides, acid anhydrides

**Special Remarks on Corrosivity:** Not available.

**Polymerization:** Will not occur.

## Section 11: Toxicological Information

**Routes of Entry:** Inhalation. Ingestion.

**Toxicity to Animals:** Acute oral toxicity (LD50): 820 mg/kg [Rat].

**Chronic Effects on Humans:**

CARCINOGENIC EFFECTS: Classified 2 (Some evidence.) by NTP; IARC: IARC Agent Not Assigned an Overall Evaluation; IARC Evidence of Carcinogenicity in Animal is L (Limited data). MUTAGENIC EFFECTS : Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast. May cause damage to the following organs: blood, the nervous system, liver, bone marrow.

**Other Toxic Effects on Humans:** Hazardous in case of skin contact (irritant), of ingestion, of inhalation.

**Special Remarks on Toxicity to Animals:** Not available.

**Special Remarks on Chronic Effects on Humans:**

May cause adverse reproductive effects. May cause cancer. May affect genetic material (mutagenic).

**Special Remarks on other Toxic Effects on Humans:**

Acute Potential Health Effects: Skin: Causes moderate skin irritation. Eyes: Causes severe eye irritation. May cause chemical conjunctivitis and corneal injury, and iritis. Inhalation: Causes respiratory tract (nose, throat, lungs), and mucous membrane irritation. Symptoms may include coughing, wheezing, and/or shortness of breath. Ingestion: May be harmful if swallowed. May cause gastrointestinal tract irritation with nausea, vomiting, diarrhea. May affect behavior/central nervous system/nervous system (tremor, convulsions, restlessness, shaking, weakness), and respiration (dyspnea, increased rate of respiration). Chronic Potential Health Effects: Skin: Prolonged skin contact may cause mild to moderate chemical burns of the skin. Ingestion: Prolonged or repeated ingestion may affect the liver, blood (leukocytosis, monocytosis), bone marrow (hyperplasia of bone marrow), urinary system (bladder), and behavior/central nervous system/nervous system (symptoms similar to that of acute ingestion) Inhalation: Prolonged or repeated exposure may cause bronchitis to develop with cough, phlegm, and/or shortness of breath.

## Section 12: Ecological Information

**Ecotoxicity:**

Ecotoxicity in water (LC50): 0.7 ppm 24 hours [Fish (Blue Gill)]. 0.3 ppm 96 hours [Fish (Blue Gill)]. 10 ppm 24 hours [Fish (Goldfish)]. 9.2ppm any hours [Fish (Flathead Minnow)]. 4.5 ppm any hours [Fish (Flathead Minnow)]. 2.8 mg/l 96 hours [Fish (Flathead Minnow)].

**BOD5 and COD:** Not available.

**Products of Biodegradation:**

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

**Toxicity of the Products of Biodegradation:** The products of degradation are as toxic as the product itself.

**Special Remarks on the Products of Biodegradation:**

Terrestrial Fate: It is expected to dissociate somewhat in moist soil. It is expected to have low mobility in soil. Volatilization is expected to be slow from moist soil surfaces. It is not expected to volatilize from dry soil surfaces given its vapor pressure of 0.008 mm Hg at 25 deg. C. This compound is expected to biodegrade in soils with aerobic and anaerobic biodegradation half-lives of about 5 and 20 days, respectively. Aquatic Fate: It is expected to dissociate somewhat to 2,4,6-trichlorophenolate in water. It is expected to volatilize from water surfaces. Estimated volatilization half-lives for a model river and model lake are 20 and 150 days, respectively. It is expected to undergo photolysis in surface waters based on an aqueous photodegradation half-life of 2.1 hours when irradiated with light at environmentally relevant wavelengths. The potential for bioconcentration in aquatic organisms is considered high based upon BCF values of 250-310 measured in fish. It is expected to biodegrade in water based on a biodegradation half-life of 6.3 days determined from a river die-away test. Atmospheric Fate: It is expected to exist solely as a vapor in the ambient atmosphere. Vapor-phase 2,4,6-trichlorophenol is degraded in the atmosphere by reaction with photochemically-produced hydroxyl radicals. The half-life for this reaction in air is estimated to be about 26 days. 2,4,6-trichlorophenol exhibits a UV maximum absorbance at 311 nm; therefore, degradation by natural sunlight is possible.

### Section 13: Disposal Considerations

**Waste Disposal:**

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

### Section 14: Transport Information

**DOT Classification:** Not a DOT controlled material (United States).

**Identification:** Not applicable.

**Special Provisions for Transport:** Not applicable.

### Section 15: Other Regulatory Information

**Federal and State Regulations:**

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: 2,4,6-Trichlorophenol California prop. 65 (no significant risk level): 2,4,6-Trichlorophenol: 0.01 mg/day (value) California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: 2,4,6-Trichlorophenol Connecticut hazardous material survey.: 2,4,6-Trichlorophenol Illinois toxic substances disclosure to employee act: 2,4,6-Trichlorophenol Illinois chemical safety act: 2,4,6-Trichlorophenol New York release reporting list: 2,4,6-Trichlorophenol Rhode Island RTK hazardous substances: 2,4,6-Trichlorophenol

**Other Regulations:**

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

**Other Classifications:**

**WHMIS (Canada):**

CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC). CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

**DSCL (EEC):**

R22- Harmful if swallowed. R36/38- Irritating to eyes and skin. R40- Limited evidence of a carcinogenic effect. R50/53- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. S36/37- Wear suitable protective clothing and gloves. S60- This material and its container must be disposed of as hazardous waste. S61- Avoid release to the environment. Refer to special instructions/Safety data sheets.

**HMIS (U.S.A.):**

**Health Hazard:** 2

**Fire Hazard:** 1

**Reactivity:** 0

**Personal Protection:** E

**National Fire Protection Association (U.S.A.):**

**Health:** 2

**Flammability:** 1

**Reactivity:** 0

**Specific hazard:**

**Protective Equipment:**

Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

## Section 16: Other Information

**References:** Not available.

**Other Special Considerations:** Not available.

**Created:** 10/10/2005 12:08 AM

**Last Updated:** 11/01/2010 12:00 PM

*The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall ScienceLab.com be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if ScienceLab.com has been advised of the possibility of such damages.*