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## Material Safety Data Sheet

### PARACHLOROBENZOTRIFLUORIDE

#### Section 1: Chemical Product and Company Identification

**Product Name:** Parachlorobenzotrifluoride,99%

**CAS#:** 98-56-6

**RTECS:** XS9145000

**TSCA:** TSCA 8(b) inventory:Parachlorobenzotrifluoride

**CI#:** Not available.

**Synonym:**P-Chloro-A,A,A-Trifluorotoluene; P-Trifluoromethylphenyl Chloride; PCBTF;  
Chlorobenzotrifluorides; P-CHLOROBENZOTRIFLUORIDE; OXSOL 100.

**Chemical Name:** 4-Chlorobenzotrifluoride

**Chemical Formula:** C7H4ClF3

**Contact Information for Emergency:** (0086) 551 65418677

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#### Section 2: Composition and Information on Ingredients

**Composition:**

Name	CAS # %	By Weight
Parachlorobenzotrifluoride	98-56-6	100G

**Toxicological Data on Ingredients:** Not applicable.

#### Section 3: Hazards Identification

##### EMERGENCY OVERVIEW

**Appearance:** clear, colorless liquid. Flash Point: 47 deg C. **Warning!** Causes eye and skin irritation. May cause digestive tract irritation. Causes respiratory tract irritation. Irritant.

**Flammable liquid and vapor.** May cause central nervous system depression. Long-term

exposure may cause bone and joint changes.

**Target Organs:** Central nervous system, skeletal structures, bone.

**Potential Health Effects**

**Eye:** Causes eye irritation. May cause chemical conjunctivitis and corneal damage.

**Skin:** Causes skin irritation. May cause irritation and dermatitis. May cause cyanosis of the extremities.

**Ingestion:** May cause gastrointestinal irritation with nausea, vomiting and diarrhea. Ingestion of large amounts may cause CNS depression. Ingestion of large amounts of fluoride may cause salivation, nausea, vomiting, abdominal pain, fever, labored breathing. Exposure to fluoride compounds can result in systemic toxic effects on the heart, liver, and kidneys. It may also deplete calcium levels in the body leading to hypocalcemia and death. Fluoride can reduce calcium levels leading to fatal hypocalcemia.

**Inhalation:** Causes respiratory tract irritation. Aspiration may lead to pulmonary edema. Vapors may cause dizziness or suffocation. Can produce delayed pulmonary edema. May cause burning sensation in the chest.

**Chronic:** Chronic inhalation and ingestion may cause chronic fluoride poisoning (fluorosis) characterized by weight loss, weakness, anemia, brittle bones, and stiff joints. Effects may be delayed. Chronic exposure to fluoride compounds may cause systemic toxicity.

#### Section 4: First Aid Measures

**Eye Contact:**

Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

**Skin Contact:**

Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

**Inhalation:**

Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation.

**Serious Inhalation:**

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation.

**WARNING:** It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek medical attention.

**Ingestion:**

Never give anything by mouth to an unconscious person. Get medical aid. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

**Serious Ingestion:** Not available.

**Notes to Physician:** Treat symptomatically and supportively.

#### Section 5: Fire and Explosion Data

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressuredemand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Will burn if involved in a fire. Use water spray to keep fire-exposed containers cool. Containers may explode in the heat of a fire. Flammable liquid and vapor. Vapors may

be heavier than air. They can spread along the ground and collect in low or confined areas.

**Extinguishing Media:** For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. For large fires, use water spray, fog, or alcohol-resistant foam. Use water spray to cool fire-exposed containers. Water may be ineffective. Do NOT use straight streams of water.

**Flash Point:** 47 deg C ( 116.60 deg F)

**Autoignition Temperature:** > 650 deg C (> 1,202.00 deg F)

**Explosion Limits, Lower:**Not available.

**Upper:** Not available.

**NFPA Rating:** (estimated) Health: 2; Flammability: 2; Instability: 1

## Section 6: Accidental Release Measures

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation. A vapor suppressing foam may be used to reduce vapors.

## Section 7: Handling and Storage

**Handling:** Wash thoroughly after handling. Use with adequate ventilation. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Keep away from heat, sparks and flame. Avoid ingestion and inhalation. Wash clothing before reuse. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

**Storage:** Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Flammables-area.

## Section 8: Exposure Controls/Personal Protection

### Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local explosion-proof ventilation to keep airborne levels to acceptable levels.

### Personal Protection:

Face shield. Full suit. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves. Boots.

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

Splash goggles. Full suit. Vapor 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.

## Section 9: Physical and Chemical Properties

**Physical state and appearance:** Liquid.

**Odor:** Fish-like

**Taste:** Sour

**Molecular Weight:** Not applicable.

**Color:** Clear Colorless.

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

**Boiling Point:** 136-138 deg C @ 760.00mmHg

**Melting Point:** -36 deg C

**Solubility:** 29 ppm (23 c)

**Specific Gravity:** 1.3530g/cm<sup>3</sup>

**Vapor Pressure:** Not available.)

**Vapor Density:** 6.23

**Volatility:** Not available.

**Odor Threshold:** The highest known value is 0.625 ppm (Formic acid)

**Water/Oil Dist. Coeff.:** Not available.

**Ionicity (in Water):** 0.67 cP 38.00 deg

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

**Solubility:**

Easily soluble in acetone. Soluble in cold water, hot water, diethyl ether.

## Section 10: Stability and Reactivity Data

**Chemical Stability:** Stable at room temperature in closed containers under normal storage and handling conditions.

**Conditions to Avoid:** Incompatible materials, ignition sources, excess heat, strong oxidants.

Incompatibilities with Other Materials: Oxidizing agents.

**Hazardous Decomposition Products:** Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide, hydrogen fluoride gas.

**Hazardous Polymerization:** Has not been reported

## Section 11: Toxicological Information

**RTECS#:** XS9145000

**CAS#** 98-56-6

**LD50/LC50:**

**Inhalation, mouse:** LC50 = 20 gm/m<sup>3</sup>;

**Inhalation, rat:** LC50 = 22 gm/m<sup>3</sup>;

**Oral, mouse:** LD50 = 11500 mg/kg;

**Oral, rat:** LD50 = 13 gm/kg;<BR.

**Carcinogenicity:**

CAS# 98-56-6: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

**Epidemiology:** No information available.

**Teratogenicity:** No information available.

**Reproductive Effects:** No information available.

**Neurotoxicity:** No information available.

**Mutagenicity:** No information available.

**Other Studies:** See actual entry in RTECS for complete information.

## Section 12: Ecological Information

**Ecotoxicity:** Not available.

**BOD5 and COD:** Not available.

**Products of Biodegradation:**Not available.

**Toxicity of the Products of Biodegradation:** Not available.

**Special Remarks on the Products of Biodegradation:** Not available.

## Section 13: Disposal Considerations

### Waste Disposal:

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

**RCRA P-Series:** None listed.

**RCRA U-Series:** None listed.

## Section 14: Transport Information

**DOT Classification:** Class 3

**Identification:** : UN2234

**Special Provisions for Transport:** III

## Section 15: Other Regulatory Information

### US FEDERAL

#### TSCA

CAS# 98-56-6 is listed on the TSCA inventory.

#### Health & Safety Reporting List

CAS# 98-56-6: Effective 4/29/83; Sunset 4/29/93

#### Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

#### Section 12b

None of the chemicals are listed under TSCA Section 12b.

#### TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

#### SARA

#### CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

#### SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

#### Section 313

No chemicals are reportable under Section 313.

**Clean Air Act:**

This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depleters. This material does not contain any Class 2 Ozone depleters.

**Clean Water Act:**

None of the chemicals in this product are listed as Hazardous Substances under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

**OSHA:**

None of the chemicals in this product are considered highly hazardous by OSHA.

**STATE:**

CAS# 98-56-6 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:Xi

**Risk Phrases:**

R 10 Flammable.

R 36/37/38 Irritating to eyes, respiratory system and skin.

**Safety Phrases:**

S 16 Keep away from sources of ignition - No smoking.

S 24/25 Avoid contact with skin and eyes.

S 33 Take precautionary measures against static discharges.

S 37 Wear suitable gloves.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S 9 Keep container in a well-ventilated place.

S 28A After contact with skin, wash immediately with plenty of water.

**WGK (Water Danger/Protection)**

CAS# 98-56-6: 2

**Canada - DSL/NDSL**

CAS# 98-56-6 is listed on Canada's DSL List.

**Canada - WHMIS**

This product has a WHMIS classification of B3, D2B.

**Canadian Ingredient Disclosure List**

CAS# 98-56-6 is not listed on the Canadian Ingredient Disclosure List.

**Exposure Limits**

CAS# 98-56-6: OEL-RUSSIA:STEL 20 mg/m<sup>3</sup>;Skin

**Section 16: Other Information**

**References:** Not available.

**Other Special Considerations:** Not available.

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