Material Safety Data Sheet
4-Chlorophenoxyacetic acid, 98%

Section 1 - Chemical Product and Company Identification

**MSDS Name:** 4-Chlorophenoxyacetic acid, 98%

**Synonyms:** Acetic acid, (p-chlorophenoxy)-; Acetic acid, (4-chlorophenoxy)-; BI 12; p-Chlorophenoxyacetic acid; (4-Chlorophenoxy)acetic acid; 4-CP; 4-CPA; Parachlorophenoxyacetic acid; PCPA;

Section 2 - Composition, Information on Ingredients

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name</th>
<th>Percent</th>
<th>EINECS/ELINCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>122-88-3</td>
<td>p-Chlorophenoxyacetic acid</td>
<td>98</td>
<td>204-581-3</td>
</tr>
</tbody>
</table>

Section 3 - Hazards Identification

**EMERGENCY OVERVIEW**

Appearance: slightly beige needles.

**Caution!** May be harmful if swallowed. May cause digestive tract irritation with nausea, vomiting, and diarrhea. May cause eye and skin irritation.

**Target Organs:** No data found.

**Potential Health Effects**

**Eye:** May cause eye irritation.

**Skin:** May cause skin irritation. Individuals with pre-existing skin disorders may be more susceptible to the effects of this substance.

**Ingestion:** May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May be harmful if swallowed.

**Inhalation:** May cause respiratory tract irritation. May cause irritation of the mucous membranes.

**Chronic:** No information found.

Section 4 - First Aid Measures

**Eyes:** Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the
upper and lower eyelids. Get medical aid immediately.

**Skin:** Get medical aid immediately. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

**Ingestion:** Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical aid immediately. Vomiting may occur spontaneously. If vomiting occurs and the victim is conscious, give water to further dilute the chemical.

**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.

**Notes to Physician:** For ingestion, the stomach should be intubated, aspirated, and lavaged with a slurry of activated charcoal--protect the airway from aspiration of gastric contents.

### Section 5 - Fire Fighting Measures

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

**Extinguishing Media:** Use agent most appropriate to extinguish fire.

**Flash Point:** Not applicable.

**Autoignition Temperature:** Not applicable.

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

**Upper:** Not available.

**NFPA Rating:** (estimated) Health: 1; Flammability: 0; Instability: 0

### Section 6 - Accidental Release Measures

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

**Spills/Leaks:** Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up, then place into a suitable container for disposal. Avoid generating dusty conditions. Provide ventilation.

### Section 7 - Handling and Storage

**Handling:** Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Do not ingest or inhale. Use with adequate ventilation.

**Storage:** Keep containers tightly closed. Store in a cool, dry area away from incompatible substances.
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 ventilation to keep airborne concentrations low.

**Exposure Limits**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA - Final PELs</th>
</tr>
</thead>
<tbody>
<tr>
<td>p-Chlorophenoxyacetic acid</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
</tbody>
</table>

**OSHA Vacated PELs:** p-Chlorophenoxyacetic acid: No OSHA Vacated PELs are listed for this chemical.

**Personal Protective Equipment**

**Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin:** Wear appropriate protective gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Respirators:** A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

**Physical State:** Needles

**Appearance:** Slightly beige

**Odor:** None reported

**pH:** Not available.

**Vapor Pressure:** Not available.

**Vapor Density:** Not available.

**Evaporation Rate:** Not available.

**Viscosity:** Not available.

**Boiling Point:** Not available.

**Freezing/Melting Point:** 157.00 - 159.00 deg C

**Decomposition Temperature:** Not available.

**Solubility:** Slightly soluble

**Specific Gravity/Density:** Not available.

**Molecular Formula:** C8H7ClO3

**Molecular Weight:** 186.59

Section 10 - Stability and Reactivity
**Chemical Stability:** Stable under normal temperatures and pressures.

**Conditions to Avoid:** Incompatible materials, strong oxidants.

**Incompatibilities with Other Materials:** Strong oxidizing agents, strong bases.

**Hazardous Decomposition Products:** Hydrogen chloride, carbon monoxide, carbon dioxide, chloride fumes.

**Hazardous Polymerization:** Has not been reported

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### Section 11 - Toxicological Information

**RTECS#:**

CAS# 122-88-3: AG0175000

**LD50/LC50:**

CAS# 122-88-3:
- Oral, rat: LD50 = 850 mg/kg;

**Carcinogenicity:**

CAS# 122-88-3: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

**Epidemiology:** No information found

**Teratogenicity:** No information found

**Reproductive Effects:** No information found

**Mutagenicity:** Unscheduled DNA synthesis: Human cells = 10 mmol/L.

**Neurotoxicity:** No information found

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### Section 12 - Ecological Information

**Ecotoxicity:** No data available. No information available.

**Environmental:** Degrades in both anaerobic and aerobic conditions in the soil. Has moderate to high mobility in soil, volatilization not expected to be important. Biodegrades in water, ionized in water at environmentally significant pHs. Will not volatilize from water or bioconcentrate. May undergo photolytic degradation in water. Will undergo vapor-phase oxidation in the atmosphere by photochemically produced hydroxyl radicals. Can be removed from atmosphere by wet deposition.

**Physical:** Expected half-life in air = 2.1 days.

**Other:** No information available.

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### Section 13 - Disposal Considerations

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

<table>
<thead>
<tr>
<th>IATA</th>
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<tbody>
<tr>
<td><strong>Shipping Name:</strong></td>
<td>Not regulated as a hazardous material</td>
</tr>
<tr>
<td><strong>Hazard Class:</strong></td>
<td></td>
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<tr>
<td><strong>UN Number:</strong></td>
<td></td>
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<tr>
<td><strong>Packing Group:</strong></td>
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</tbody>
</table>

### Section 15 - Regulatory Information

**Hazard Symbols:**
- XN

**Risk Phrases:**
- R 22 Harmful if swallowed.

**Safety Phrases:**

### Section 16 - Additional Information

**MSDS Creation Date:** 9/02/1997  
**Revision #6 Date:** 10/03/2005

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