MATERIAL SAFETY DATA SHEET

Section 1 - Chemical Product and Company Identification

MSDS Name: 1-Chloronaphthalene, ca. 90%, remainder 2-chloronaphthalene
Catalog Numbers: AC180970000, AC180970010, AC180970050, AC180971000, AC386550000, AC386550010, AC386550100, AC386550050, AC386551000
Synonyms: alpha-Chloronaphthalene/beta-chloronaphthalene.
Company Identification: Acros Organics BVBA
Janssen Pharmaceuticaalaan 3a
2440 Geel, Belgium
Company Identification: (USA)
Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410
For information in the US, call: 800-ACROS-01
For information in Europe, call: +32 14 57 52 11
Emergency Number, Europe: +32 14 57 52 99
Emergency Number US: 201-796-7100
CHEMTREC Phone Number, US: 800-424-9300
CHEMTREC Phone Number, Europe: 703-527-3887

Section 2 - Composition, Information on Ingredients

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CAS#: 90-13-1
Chemical Name: 1-Chloronaphthalene
%: 90
EINECS#: 201-967-3
Hazard Symbols: XN
Risk Phrases: 22

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CAS#: 91-58-7
Chemical Name: 2-Chloronaphthalene
%: 10
EINECS#: 202-079-9
Hazard Symbols: XN
Risk Phrases: 22

Text for R-phrases: see Section 16
## Section 3 - Hazards Identification

### EMERGENCY OVERVIEW

**Warning!** May be harmful if swallowed. Causes eye, skin, and respiratory tract irritation. Target Organs: Central nervous system, liver, respiratory system, eyes, skin.

### Potential Health Effects

- **Eye:** Causes severe eye irritation.
- **Skin:** Causes severe skin irritation.
- **Ingestion:** Causes gastrointestinal irritation with nausea, vomiting and diarrhea. May cause liver damage. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure. May cause skin eruptions and/or acne.
- **Inhalation:** Causes respiratory tract irritation. May cause effects similar to those described for ingestion.

### Chronic:

### 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:** Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if symptoms occur.
- **Ingestion:** If victim is conscious and alert, give 2-4 cupfuls of milk or water. Get medical aid immediately.
- **Inhalation:** Get medical aid immediately. Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen.

### Notes to Physician:

### 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:** In case of fire, use water, dry chemical, chemical foam, or alcohol-resistant foam.
- **Autoignition Temperature:** 587 deg C (1,088.60 deg F)
- **Flash Point:** 121 deg C (249.80 deg F)
- **Explosion Limits:** Not available
  - **Lower:**
  - **Upper:**
- **NFPA Rating:** health: 2; flammability: 1; instability: 0;

### 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. Clean up spills immediately, observing precautions in the Protective Equipment section.

### Section 7 - Handling and Storage

- **Handling:** Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use only in a well-ventilated area. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation.
- **Storage:** Store in a cool, dry place. Keep container closed when not in use.

### Section 8 - Exposure Controls, Personal Protection

- **Engineering Controls:**

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http://iris.fishersci.ca/msds2.nsf/0/AC1CE7354490E64D85256CA500000ACBA/$file/MSD...
Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels.

### Exposure Limits

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH Final PELs</th>
<th>NIOSH Final PELs</th>
<th>OSHA Final PELs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-Chloronaphthalene</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
<tr>
<td>2-Chloronaphthalene</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
</tbody>
</table>

OSHA Vacated PELs: 1-Chloronaphthalene: None listed 2-Chloronaphthalene: None listed

### Personal Protective Equipment

- **Eyes:** Wear chemical splash goggles.
- **Skin:** Wear appropriate gloves to prevent skin exposure.
- **Clothing:** Wear appropriate protective clothing to prevent skin exposure.
- **Respirators:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

### Section 9 - Physical and Chemical Properties

- **Physical State:** Liquid
- **Color:** clear colorless to yellow
- **Odor:** mothball-like
- **pH:** Not available
- **Vapor Pressure:** 0.016 mm Hg @ 20 deg C
- **Vapor Density:** 5.6 (air=1)
- **Evaporation Rate:** Not available
- **Viscosity:** Not available
- **Boiling Point:** 259 deg C (498.20°F)
- **Freezing/Melting Point:** -2.5 deg C (27.50°F)
- **Decomposition Temperature:** Not available
- **Solubility in water:** Negligible
**Specific Gravity/Density:** 1.190 g/ml  
**Molecular Formula:** C10H7Cl  
**Molecular Weight:** 162.62

### Section 10 - Stability and Reactivity

**Chemical Stability:** Stable under normal temperatures and pressures.  
**Conditions to Avoid:** Excess heat.  
**Incompatibilities with Other Materials**  
Strong oxidizing agents.  
**Hazardous Decomposition Products**  
Hydrogen chloride, carbon monoxide, carbon dioxide.  
**Hazardous Polymerization**  
Has not been reported.

### Section 11 - Toxicological Information

**RTECS#:**  
CAS# 90-13-1: QJ2100000  
CAS# 91-58-7: QJ2275000  
**LD50/LC50:**  
**RTECS:**  
CAS# 90-13-1: Oral, mouse: LD50 = 1091 mg/kg;  
Oral, rat: LD50 = 1540 mg/kg;  
CAS# 91-58-7: Oral, mouse: LD50 = 886 mg/kg;  
Oral, rat: LD50 = 2078 mg/kg;  
**Carcinogenicity:**  
1-Chloronaphthalene - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.  
2-Chloronaphthalene - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.  
**Other:**  
See actual entry in RTECS for complete information.

### Section 12 - Ecological Information

Not available

### Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

### Section 14 - Transport Information

**US DOT**  
**Shipping Name:** Not regulated  
**Hazard Class:**  
**UN Number:**  
**Packing Group:**  
**Canada TDG**  
**Shipping Name:** Not regulated as a hazardous material  
**Hazard Class:**  
**UN Number:**  
**Packing Group:**  
**USA RQ:** CAS# 91-58-7: 5000 lb final RQ; 2270 kg final RQ

### Section 15 - Regulatory Information

**European/International Regulations**  
European Labeling in Accordance with EC Directives  
**Hazard Symbols:** XN  
**Risk Phrases:**
R 22 Harmful if swallowed.

Safety Phrases:

WGK (Water Danger/Protection)

CAS# 90-13-1: 2
CAS# 91-58-7: Not available

Canada

CAS# 90-13-1 is listed on Canada's DSL List
CAS# 91-58-7 is listed on Canada's DSL List

Canadian WHMIS Classifications: D2B

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

CAS# 90-13-1 is not listed on Canada's Ingredient Disclosure List.
CAS# 91-58-7 is not listed on Canada's Ingredient Disclosure List.

US Federal

TSCA

CAS# 90-13-1 is listed on the TSCA Inventory.
CAS# 91-58-7 is listed on the TSCA Inventory.

Section 16 - Other Information

MSDS Creation Date: 12/12/1997
Revision #5 Date 9/26/2007

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantibility 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 the company 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 the company has been advised of the possibility of such damages.