Material Safety Data Sheet
1-Naphthol >98%

MSDS# 26135

Section 1 - Chemical Product and Company Identification

MSDS Name: 1-Naphthol >98%
Catalog Numbers: AC128190000, AC128190025, AC128190050, AC128191000, AC415300000, AC415302500, 12819-5000, 41530-0010, B12281, N12-100

Company Identification:
Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
For information in the US, call:
201-796-7100
Emergency Number US:
201-796-7100
CHEMTREC Phone Number, US:
800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#: 90-15-3
Chemical Name: 1-Naphthol
%: >98
EINECS#: 201-969-4

Hazard Symbols: XN
Risk Phrases: 21/22 37/38 41

Section 3 - Hazards Identification

EMERGENCY OVERVIEW
Warning! May cause liver and kidney damage. Harmful if swallowed, inhaled, or absorbed through the skin. May cause blood abnormalities. Causes severe eye irritation and possible eye injury. Causes skin and respiratory tract irritation. Target Organs: Blood, kidneys, liver, eyes.

Potential Health Effects
Eye: May cause eye injury.
Skin: Causes skin irritation. Harmful if absorbed through the skin.
Ingestion: Harmful if swallowed. Causes gastrointestinal irritation with nausea, vomiting and diarrhea. May cause burns to the digestive tract.
Inhalation: Harmful if inhaled. May cause severe irritation of the upper respiratory tract with pain, burns, and inflammation.
Chronic: May cause liver and kidney damage. May cause anemia and other blood cell abnormalities. Chronic inhalation, skin absorption or ingestion of naphthalene have caused severe hemolytic anemia.

Section 4 - First Aid Measures

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid immediately.
Skin: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid immediately. Wash clothing before reuse.
Ingestion: If swallowed, do NOT induce vomiting. Get medical aid immediately. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person.
Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician: Treat symptomatically and supportively.

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. This material in sufficient quantity and reduced particle size is capable of creating a dust explosion.

Extinguishing Media: Use dry chemical, carbon dioxide, or appropriate foam.

Autoignition Temperature: 541 deg C (1,005.80 deg F)
Flash Point: 125 deg C (257.00 deg F)
Explosion Limits: Lower: .80 vol %
Explosion Limits: Upper: 5.00 vol %
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: Vacuum or sweep up material and place into a suitable disposal container. Avoid generating dusty conditions. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Do not breathe dust.

Storage: Keep container closed when not in use. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Storage under a nitrogen blanket has been recommended. Store protected from light.

Section 8 - Exposure Controls, Personal Protection

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

OSHA Vacated PELs: 1-Naphthol: None listed

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

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.

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a Respirators: 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: Flakes
Color: gray or beige to brown  
Odor: slight phenolic odor  

pH: Not available  
Vapor Pressure: 1 mm Hg @ 94 deg C  
Vapor Density: 4.5 (air=1)  
Evaporation Rate: Not available  
Viscosity: Not available  
Boiling Point: 278 - 280 deg C @ 760 mmHg  
Freezing/Melting Point: 94 - 98 deg C  
Decomposition Temperature: Not available  

Solubility in water: practically insoluble in water  
Specific Gravity/Density:  
Molecular Formula: C10H8O  
Molecular Weight: 144.17  

Section 10 - Stability and Reactivity  

Chemical Stability: Stable under normal temperatures and pressures. Darkens on exposure to light.  
Conditions to Avoid: Light, dust generation, exposure to air.  
Incompatibilities with Other Materials: Not available  
Hazardous Decomposition Products: Carbon monoxide, carbon dioxide, carbon dioxide.  
Hazardous Polymerization: Will not occur.  

Section 11 - Toxicological Information  

RTECS#: CAS# 90-15-3: QL2800000  
RTECS:  
CAS# 90-15-3: Draize test, rabbit, eye: 1 mg Severe;  
Draize test, rabbit, skin: 500 mg/24H Severe;  
Inhalation, rat: LC50 = >420 mg/m3/1H;  
Oral, mouse: LD50 = 275 mg/kg;  
Oral, mouse: LD50 = 275 mg/kg;  
LD50/LC50:  
Oral, rabbit: LD50 = 9 gm/kg;  
Oral, rabbit: LD50 = 9000 mg/kg;  
Oral, rat: LD50 = 1870 mg/kg;  
Oral, rat: LD50 = 2000 mg/kg;  
Skin, rabbit: LD50 = 880 mg/kg;  
Skin, rabbit: LD50 = 880 mg/kg;  

Carcinogenicity: 1-Naphthol - 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  

Section 13 - Disposal Considerations  

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

Section 14 - Transport Information  

US DOT  
Shipping Name: TOXIC SOLIDS, ORGANIC, N.O.S.  
Hazard Class: 6.1  
UN Number: UN2811  
Packing Group: III  
Canada TDG  
Shipping Name: Not available  
Hazard Class:  
UN Number:  
Packing Group:
Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XN

Risk Phrases:
  R 21/22 Harmful in contact with skin and if swallowed.
  R 37/38 Irritating to respiratory system and skin.
  R 41 Risk of serious damage to eyes.

Safety Phrases:
  S 22 Do not breathe dust.
  S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
  S 37/39 Wear suitable gloves and eye/face protection.

WGK (Water Danger/Protection)

CAS# 90-15-3: 1

Canada

CAS# 90-15-3 is listed on Canada's DSL List

Canadian WHMIS Classifications: D1B, 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# 90-15-3 is listed on Canada's Ingredient Disclosure List

US Federal

TSCA

CAS# 90-15-3 is listed on the TSCA

Inventory.

Section 16 - Other Information

MSDS Creation Date: 8/19/1998
Revision #10 Date 7/20/2009

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.

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