Material Safety Data Sheet

Naphthol Alpha Solution

Product Name: Naphthol Alpha Solution
Product Code(s): 87-6671, 87-6673
Size: 120 mL, 500 mL
Chemical Name: N/A
CAS Number: N/A
Formula: See Section 3
Synonyms: N/A
Distributor: Carolina Biological Supply Company, 2700 York Road, Burlington, NC 27215
Chemical Information: 800-227-1150 (8am-5pm (ET) M-F) Chemtrec 800-424-9300 (Transportation Spill Response 24 hours)

Section 1 - Product Description

Section 2 - Hazard Identification

Emergency Overview: Will temporarily discolor skin.
Potential Health Effects:

<table>
<thead>
<tr>
<th>Eyes</th>
<th>In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin</td>
<td>Irritating to skin.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Harmful if swallowed.</td>
</tr>
<tr>
<td>Inhalation</td>
<td>Irritating to respiratory system.</td>
</tr>
</tbody>
</table>

Section 3 - Composition / Information on Ingredients

Principal Hazardous Components: Ethyl alcohol(CAS#64-17-5) 85.5%
TLV units: Alpha-Naphthol: N/A
Hexane ACGIH-TLV 50 ppm (TWA)
Methyl isobutyl ketone ACGIH-TLV 50 ppm (TWA) 75 (STEL)
Ethyl Alcohol: ACGIH-TLV 1000 ppm (TWA)

PEL units: Alpha-Naphthol: N/A
Hexane OSHA-PEL 500 ppm (TWA)
Methyl isobutyl ketone OSHA-PEL 100 ppm (TWA)
Ethyl Alcohol: OSHA-PEL 1000ppm (TWA)

Section 4 - First Aid Measures

Emergency and First Aid Procedures:

<table>
<thead>
<tr>
<th>Eyes</th>
<th>In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin</td>
<td>After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water.</td>
</tr>
<tr>
<td>Inhalation</td>
<td>In case of accident by inhalation: remove casualty to fresh air and keep at rest.</td>
</tr>
</tbody>
</table>
Section 5 - Firefighting Procedures

Flash Point (Method Used): Ethyl Alcohol: 13 °C (cc)
NFPA Rating:
  Health: 2
  Fire: 3
  Reactivity: 0
Extinguisher Media: Use dry chemical, CO2 or appropriate foam.
Flammable Limits in Air % by Volume: Ethyl Alcohol: LEL 3.3% Ethyl Alcohol: UEL 19%
Autoignition Temperature: Ethyl Alcohol 422.7 °C
Special Firefighting Procedures: Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.
Unusual Fire and Explosion Hazards: Vapors may travel back to ignition source. Closed Containers exposed to heat may explode.

Section 6 - Spill or Leak Procedures

Steps to Take in Case Material Is Released or Spilled: Ventilate area of spill. Eliminate all sources of ignition. Remove all non-essential personnel from area. Clean-up personnel should wear proper protective equipment and clothing. Absorb material with suitable absorbent and containerize for disposal.

Section 7 - Special Precautions

Precautions to Take in Handling or Storing: Toxic by inhalation and if swallowed. Avoid contact with skin and eyes. Do not breathe gas/fumes/vapor/spray. Bond and ground containers when transferring liquid. This material should be kept in an area suitable for the storage of flammable liquids. Store away from oxidizing agents, sparks and flame.

Section 8 - Protection Information

Respiratory Protection (Specify Type): None needed under normal conditions of use with adequate ventilation. A NIOSH/MSHA chemical cartridge respirator should be worn if PEL or TLV is exceeded.
Ventilation:
  Local Exhaust: Yes
  Mechanical(General): Yes
  Special: No
  Other: No
Protective Gloves: Natural rubber, Neoprene, PVC or equivalent.
Eye Protection: Splash proof chemical safety goggles should be worn.
Other Protective Clothing or Equipment: Lab coat, apron, eye wash, safety shower.

Section 9 - Physical Data

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Molecular Weight</td>
<td>N/A</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>25.8 °C</td>
</tr>
<tr>
<td>Vapor Density(Air=1)</td>
<td>1.59</td>
</tr>
<tr>
<td>Percent Volatile by Volume</td>
<td>95%</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Slightly Soluble</td>
</tr>
<tr>
<td>Melting Point</td>
<td>N/A</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>N/A</td>
</tr>
<tr>
<td>Specific Gravity (H2O=1)</td>
<td>&lt; 1</td>
</tr>
<tr>
<td>Evaporation Rate (BuAc=1)</td>
<td>1.70</td>
</tr>
<tr>
<td>Appearance and Odor</td>
<td>Dark Red liquid; fruity odor</td>
</tr>
</tbody>
</table>

Section 10 - Reactivity Data

Stability: Stable
Conditions to Avoid: Keep away from sources of ignition - No smoking.
Incompatibility (Materials to Avoid): Oxidizers, Acids,
Hazardous Decomposition Products: COx,
Hazardous Polymerization: Will not occur
Section 11 - Toxicity Data

Toxicity Data:  
- Alpha-Naphthol: orl-rat LD50 1879 mg/kg  
- Hexane: orl-rat LD50 28,710 mg/kg  
- Methyl isobutyl ketone: orl-rat LD50 2080 mg/kg  
- Ethyl alcohol: orl-rat LD50 7060 mg/kg

Effects of Overexposure:  
- Acute: See Section 2  
- Chronic: Tumorigenic data cited. Reproductive data cited. Mutation data cited. Not listed as a carcinogen by IARC, NTP or OSHA.

Conditions Aggravated by Overexposure:  
- Gastrointestinal, Cardiovascular system  
- Impaired Kidney Function  
- Liver disorders

Target Organs:  
- Cardiovascular system  
- Gastrointestinal tract  
- Liver  
- Kidneys

Primary Route(s) of Entry:  
- Inhalation and skin contact.

Section 12 - Ecological Data

EPA Waste Numbers:  
- Ethanol, 95% D001

Section 13 - Disposal Information

Waste Disposal Methods:  
Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.

Section 14 - Transport Information

DOT Proper Shipping Name:  
- UN1993, Flammable liquids, n.o.s. (Ethanol, methyl isobutyl ketone), 3, II

Section 15 - Regulatory Information

EPA TSCA Status:  
- On TSCA Inventory

Hazard Category for SARA Section 311/312 Reporting:  
- Acute

<table>
<thead>
<tr>
<th>Name List</th>
<th>Chemical Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alpha-Naphthol - No</td>
<td>Alpha-Naphthol - No</td>
</tr>
<tr>
<td>Hexane - No</td>
<td>Hexane - No</td>
</tr>
<tr>
<td>Methyl isobutyl ketone - Yes</td>
<td>Methyl isobutyl ketone - No</td>
</tr>
<tr>
<td>Ethyl Alcohol - No</td>
<td>Ethyl Alcohol - No</td>
</tr>
</tbody>
</table>

CERCLA Section 103 RQ(lb.):  
- Alpha-Naphthol - No
- Hexane - No
- Methyl isobutyl ketone - 5,000 lbs
- Ethyl Alcohol - No

RCRA Section 261.33:  
- Alpha-Naphthol - No
- Hexane - No
- Methyl isobutyl ketone - Yes, Ignitable
- Ethyl Alcohol - No

Section 16 - Additional Information

The information provided in this Material Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the Material Safety Data Sheet. Any employer must carefully assess the applicability of any information contained herein in regards to the particular use to which the employer puts the material.

Glossary
- ACGIH: American Conference of Governmental Industrial Hygienists
- CAS Number: Chemical Services Abstract Number
- CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act
- DOT: U.S. Department of Transportation
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IARC</td>
<td>International Agency of Research on Cancer</td>
</tr>
<tr>
<td>N/A</td>
<td>Not Available</td>
</tr>
<tr>
<td>NTP</td>
<td>National Toxicology Program</td>
</tr>
<tr>
<td>OSHA</td>
<td>Occupational Safety and Health Administration</td>
</tr>
<tr>
<td>PEL</td>
<td>Permissible Exposure Limit</td>
</tr>
<tr>
<td>ppm</td>
<td>Parts per million</td>
</tr>
<tr>
<td>RCRA</td>
<td>Resource Conservation and Recovery Act</td>
</tr>
<tr>
<td>SARA</td>
<td>Superfund Amendments and Reauthorization Act</td>
</tr>
<tr>
<td>TLV</td>
<td>Threshold Limit Value</td>
</tr>
<tr>
<td>TSCA</td>
<td>Toxic Substances Control Act</td>
</tr>
</tbody>
</table>