1. Product /Company Identification

Product Name: NATURAL ACETIC ACID

Manufacturer: Elan Chemical Co. Inc.
268 Doremus Ave.
Newark, NJ 07105
U.S.A.
Phone: (973)344-8014
Fax: (973)344-5880
Emergency: 800-424-9300 (Chemtrec)

2. Composition/Information on Ingredient

Synonyms: Acetic Acid, glacial
CAS Number: 64-19-7
FEMA: 2006
Molecular Formula: C₂H₄O₂
Molecular Weight: 60.05

3. Hazards Identification

Emergency Overview

**Harmful by inhalation** and if swallowed.
Irritant. Irritating to eyes, respiratory system and skin.

Combustible (USA) Flammable(EU) Corrosive
Flammable. Harmful in contact with skin. Causes severe burns.

<table>
<thead>
<tr>
<th>HMIS</th>
<th>NFPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>3</td>
</tr>
<tr>
<td>Flammability</td>
<td>2</td>
</tr>
<tr>
<td>Reactivity</td>
<td>0</td>
</tr>
</tbody>
</table>

4. First Aid Measures

Oral Exposure: If swallowed, wash out mouth with water provided person is conscious.
Call a physician. Do not induce vomiting.
5. Fire Fighting Measures

Flammable Hazards: YES

Flash Point: 40°C (104°F)

Extinguishing Material: Carbon Dioxide
Dry Chemical Powder
Foam

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Specific Fire Fighting Hazards: Emits toxic fumes under fire conditions. Combustible

6. Accidental Release Measures

Procedure to be followed in case of leak or spill:
Evacuate Area

Personal Protection: Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves.

Clean up Methods: Cover with dry lime or soda ash, pick up, keep in a closed container, and hold for waste disposal. Ventilate area and wash spill site after clean up is complete.

7. Handling and Storage Procedures

Handling: Do not breathe vapor. Do not get in eyes, on skin and on clothing. Avoid prolonged or repeated exposure.

Storage: Keep container tightly closed. Keep away from heat and open flame. Store in a cool dry place.

8. Exposure Controls/ PPE

Natural Acetic Acid
Respiratory: At a minimum, workers should wear a NIOSH-approved full-face air-purifying respirator.
Eyes: Chemical Safety goggles
Skin: Chemical resistant gloves.
Ventilation: Mechanical exhaust required.
Other: Face Shield (8-in minimum)

General Hygiene Measures: Wash contaminated clothing before reuse. Wash thoroughly after handling.

9. Physical/Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Colorless, Clear liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>Strong, pungent, characteristic vinegar odor.</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>117 ºC</td>
</tr>
<tr>
<td>Melting Point</td>
<td>16.2ºC</td>
</tr>
<tr>
<td>Flash Point</td>
<td>40 ºC (104 º F)</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>2.07 g</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.052</td>
</tr>
<tr>
<td>Refractive Index</td>
<td>1.372</td>
</tr>
</tbody>
</table>

10. Stability and Reactivity

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stability</td>
<td>Stable</td>
</tr>
<tr>
<td>Conditions to Avoid</td>
<td>Moisture</td>
</tr>
<tr>
<td>Materials to Avoid</td>
<td>Oxidizing agents, soluble carbonates and phosphates, hydroxides, oxides, metals, peroxides, permanganates, amines, alcohols,</td>
</tr>
<tr>
<td>Hazardous Decomposition Products</td>
<td>Carbon Monoxide, Carbon Dioxide.</td>
</tr>
</tbody>
</table>

11. Toxicological Information

<table>
<thead>
<tr>
<th>Exposure Effects</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin Contact</td>
<td>Causes Burns.</td>
</tr>
<tr>
<td>Skin Absorption</td>
<td>Harmful if absorbed through skin.</td>
</tr>
<tr>
<td>Eye Contact</td>
<td>Causes Burns.</td>
</tr>
<tr>
<td>Inhalation</td>
<td>Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. May be harmful if inhaled.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Harmful if swallowed.</td>
</tr>
</tbody>
</table>

To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

12. Ecological Information

No Data Available.

13. Disposal Considerations
Disposal: This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Dispose of in accordance with local, state, and federal regulations.

14. Transportation Information

Ground (DOT) & Air (IATA)
Proper shipping Name: Acetic Acid, glacial
UN#: 2789
Class: 8 & 3
Packing group: Packing Group II
Hazard label: Corrosive & Flammable
PIH: not PIH

15. Regulatory Information

EU Classifications:
Symbol of Danger: C
Indication of Danger: Corrosive
R: 10 35
Risk Statements: Flammable. Causes Severe Burns
S: 26 36/37/39 45
Safety Statements: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately.

US Classifications:
Indication of Danger: Corrosive
Risk Statements: Causes Burns. Harmful in contact with skin and if swallowed.
Safety Statements: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately.

United States Regulatory Information
SARA Listed: No
TSCA Inventory Item: Yes

Canada:
DSL: Yes
NDSL: No

16. Additional Information

This material safety data sheet is intended to meet the specific requirements of 29 CFR 1910.1200 and should be used accordingly. While the information has been obtained from sources believed to be accurate and reliable, no warranty, expressed or implied, can be made with regard to its completeness, correctness or accuracy. Any users or handlers of this product who are not under the direct control of Elan Chemical Co., Inc. are responsible for evaluating
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