## 1. CORRECTIVE RESPONSE ACTIONS

**Stop discharge**

### Fire
- Not flammable.
- **Exposure**
  - **VAPOR**
    - Irritating to eyes and nose and throat. Harmful if inhaled.
    - If in eyes, hold eyelids open and flush with plenty of water.
    - If breathing has stopped, give artificial respiration.
    - Liquid: will burn skin and eyes, harmful if swallowed.
    - Remove contaminated clothing and shoes, flush skin with plenty of water.
  - **LIQUID**
    - Will burn skin and eyes, harmful if swallowed.
    - Remove contaminated clothing and shoes, flush skin with plenty of water.
    - If in eyes, hold eyelids open and flush with plenty of water.
    - If swallowed and victim is conscious, have victim drink water or milk and have victim induce vomiting. If swallowed and victim is unconscious or having convulsions, do nothing except keep victim warm.
- **Water**
  - Effect of low concentrations on aquatic life is unknown. May be dangerous if it enters water intakes.
  - Notify local health and wildlife officials. Notify operators of nearby water intakes.

### Water Pollution
- Currently not available.
- CAUTIONARY RESPONSE INFORMATION
- CALL FOR MEDICAL AID.
- **Water**
  - Currently not available.
- **Inhalation**
  - Currently not available.
- **Solid**
  - Not pertinent.
- **Liquid**
  - Not pertinent.

## 2. CHEMICAL DESIGNATIONS

| 2.1 | CG Compatibility Group: Not listed |
| 2.2 | Formula: CH$_2$CONH$_2$  |
| 2.3 | IMO UN Designation: Not listed |
| 2.4 | DOT No.: 2074 |
| 2.5 | CAS Registry No.: 79-06-1 |
| 2.6 | NACEN Guide No.: 103P |
| 2.7 | Standard Industrial Trade Classification: 51471 |

## 3. HEALTH HAZARDS

### 3.1 Personal Protective Equipment
- Safety glasses with side shields; clean body-covering clothing; rubber gloves, boots, apron, as directed by circumstances; in absence of proper environmental control, use approved dust respirator.

### 3.2 Symptoms Following Exposure
- Has produced central nervous system damage, which is partly reversible. Effects can be produced by oral or skin contact. Chronic acrylamide poisoning can cause midbrain disturbance and peripheral neuropathy. Contact with liquid can cause moderate irritation of eyes and skin and may cause moderate transient corneal injury.

### 3.3 Treatment of Exposure
- **Inhalation**: If it effects occur, immediately get patient to fresh air, keep him quiet and warm, and get medical help. **Ingestion**: If ingested, immediately give large amounts of water (or milk if immediately available), then induce vomiting and get medical help. **Skin**: immediately flush with plenty of water for at least 15 min. and get medical help promptly. **Eye**: flush with abundant soap solution.

## 4. FIRE HAZARDS

### 4.1 Flash Point
- Currently not available.

### 4.2 Flammable Limits in Air
- Currently not available.

### 4.3 Fire Extinguishing Agents
- Dry chemical, foam, CO$_2$, water spray.

### 4.4 Fire Extinguishing Agents Not to Be Used
- Currently not available.

### 4.5 Special Hazards of Combustion Products
- Toxic oxides of nitrogen may form in fire.

### 4.6 Behavior in Fire
- Sealed containers may burst as a result of polymerization.

### 4.7 Auto Ignition Temperature
- 464°F

### 4.8 Electrical Hazards
- Not pertinent

### 4.9 Burning Rate
- Not pertinent

### 4.10 Explosive Characteristics: Not pertinent

### 4.11 Stoichiometric Air to Fuel Ratio
- Not pertinent

### 4.12 Flame Temperature
- Not pertinent

### 4.13 Combustion Molar Ratio (Reactant to Product); Currently not available

### 4.14 Minimum Oxygen Concentration for Combustion (MOC); Not listed

## 5. CHEMICAL REACTIVITY

### 5.1 Reactivity with Water
- No reaction

### 5.2 Reactivity with Common Materials
- Currently not available

### 5.3 Stability During Transport
- Stable

### 5.4 Neutralizing Agents for Acids and Bases
- Not pertinent

### 5.5 Polymerization
- May occur at temperatures above 50°C (120°F)

### 5.6 Inhibitor of Polymerization
- Oxygen (air) plus 50 ppm of copper as copper sulfate

## 6. WATER POLLUTION

### 6.1 Aquatic Toxicity
- 130 ppm/96 hr/ Haralson fish/LD$_50$

### 6.2 Waterfowl Toxicity
- Currently not available

### 6.3 Biological Oxygen Demand (BOD)
- Currently not available

### 6.4 Food Chain Concentration Potential
- Not pertinent

### 6.5 GESAMP Hazard Profile
- Bioaccumulation: 0
- Damage to living resources: 1
- Human Oral hazard: 2
- Human Contact hazard: II
- Reduction of amenities: XX

## 7. SHIPPING INFORMATION

### 7.1 Grades of Purity
- 15%-50% solution in water

### 7.2 Storage Temperature
- Below 50°C (122°F)

### 7.3 Inert Atmosphere
- Ventilated (natural)

### 7.4 Venting
- Open

### 7.5 IMO Pollution Category
- D

### 7.6 Ship Type
- 2

### 7.7 Barge Hull Type
- Currently not available

## 8. HAZARD CLASSIFICATIONS

### 8.1 49 CFR Category
- Keep away from Food

### 8.2 49 CFR Class
- 6.1

### 8.3 49 CFR Package Group
- III

### 8.4 Marine Pollutant
- Not pertinent

### 8.5 NFFA Hazard Classification
- Category Classification
  - Health Hazard (Blue): Not pertinent
  - Flammability (Red): Not pertinent
  - Instability (Yellow): 2

### 8.6 EPA Reportable Quantity
- 5000

### 8.7 EPA Pollution Category
- D

### 8.8 ROR Waste Number
- M007

### 8.9 EPA FWPCA List
- Not listed

## 9. PHYSICAL & CHEMICAL PROPERTIES

### 9.1 Physical State
- At 15°C and 1 atm: Liquid

### 9.2 Molecular Weight
- 74 (solid only)

### 9.3 Boiling Point
- Currently not available

### 9.4 Freezing Point
- 158°F or 88°C ± 5.7 K

### 9.5 Critical Temperature
- Not pertinent

### 9.6 Critical Pressure
- Not pertinent

### 9.7 Specific Gravity
- 1.05 at 25°C (liquid)

### 9.8 Liquid Surface Tension
- Currently not available

### 9.9 Liquid Water Interfacial Tension
- Not pertinent

### 9.10 Vapor (Gas) Specific Gravity
- Not pertinent

### 9.11 Ratio of Specific Heats of Vapor (Gas)
- Not pertinent

### 9.12 Latent Heat of Vaporization
- Not pertinent

### 9.13 Heat of Combustion
- Not pertinent

### 9.14 Heat of Decomposition
- Not pertinent

### 9.15 Heat of Solution
- Not pertinent

### 9.16 Heat of Polymerization
- Currently not available

### 9.17 Heat of Fusion
- Currently not available

### 9.18 Limiting Value
- Currently not available

### 9.19 Void Vapor Pressure
- Currently not available

## NOTES

- Currently not available
## ACRYLAMIDE SOLUTION

**Table 9.20: Saturated Liquid Density**

<table>
<thead>
<tr>
<th>Temperature (degrees F)</th>
<th>Pounds per cubic foot</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOT</td>
<td>P</td>
</tr>
<tr>
<td>PE</td>
<td>T</td>
</tr>
<tr>
<td>R</td>
<td>E</td>
</tr>
<tr>
<td>T</td>
<td>N</td>
</tr>
</tbody>
</table>

**Table 9.21: Liquid Heat Capacity**

<table>
<thead>
<tr>
<th>Temperature (degrees F)</th>
<th>British thermal unit per pound-F</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOT</td>
<td>P</td>
</tr>
<tr>
<td>PE</td>
<td>T</td>
</tr>
<tr>
<td>RT</td>
<td>EN</td>
</tr>
<tr>
<td>IN</td>
<td>T</td>
</tr>
</tbody>
</table>

**Table 9.22: Liquid Thermal Conductivity**

<table>
<thead>
<tr>
<th>Temperature (degrees F)</th>
<th>British thermal unit inch per hour-square foot-F</th>
<th>Centipoise</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOT</td>
<td>P</td>
<td>T</td>
</tr>
<tr>
<td>PE</td>
<td>T</td>
<td>EN</td>
</tr>
<tr>
<td>RT</td>
<td>IN</td>
<td>E</td>
</tr>
<tr>
<td>IN</td>
<td>T</td>
<td>N</td>
</tr>
</tbody>
</table>

**Table 9.23: Liquid Viscosity**

<table>
<thead>
<tr>
<th>Temperature (degrees F)</th>
<th>Centipoise</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOT</td>
<td>P</td>
</tr>
<tr>
<td>PE</td>
<td>T</td>
</tr>
<tr>
<td>RT</td>
<td>EN</td>
</tr>
<tr>
<td>IN</td>
<td>T</td>
</tr>
</tbody>
</table>

**Table 9.24: Solubility in Water**

<table>
<thead>
<tr>
<th>Temperature (degrees F)</th>
<th>Pounds per 100 pounds of water</th>
</tr>
</thead>
<tbody>
<tr>
<td>60</td>
<td>216.000</td>
</tr>
</tbody>
</table>

**Table 9.25: Saturated Vapor Pressure**

<table>
<thead>
<tr>
<th>Temperature (degrees F)</th>
<th>Pounds per square inch</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOT</td>
<td>P</td>
</tr>
<tr>
<td>PE</td>
<td>T</td>
</tr>
<tr>
<td>R</td>
<td>E</td>
</tr>
<tr>
<td>T</td>
<td>N</td>
</tr>
</tbody>
</table>

**Table 9.26: Saturated Vapor Density**

<table>
<thead>
<tr>
<th>Temperature (degrees F)</th>
<th>Pounds per cubic foot</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOT</td>
<td>P</td>
</tr>
<tr>
<td>PE</td>
<td>T</td>
</tr>
<tr>
<td>R</td>
<td>E</td>
</tr>
<tr>
<td>T</td>
<td>N</td>
</tr>
</tbody>
</table>

**Table 9.27: Ideal Gas Heat Capacity**

<table>
<thead>
<tr>
<th>Temperature (degrees F)</th>
<th>British thermal unit per pound-F</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOT</td>
<td>P</td>
</tr>
<tr>
<td>PE</td>
<td>T</td>
</tr>
<tr>
<td>RT</td>
<td>EN</td>
</tr>
<tr>
<td>IN</td>
<td>T</td>
</tr>
</tbody>
</table>