1. PRODUCT AND COMPANY IDENTIFICATION

Product name : ANCAMIDE ® 2482 Curing Agent

Product Use Description : Curing Agent

Company : Air Products and Chemicals,Inc

7201 Hamilton Blvd.
Allentown, PA 18195-1501

Telephone : 1-800-345-3148 Chemicals
1-800-752-1597 Gases and Electronic Chemicals

Emergency telephone number : 800-523-9374 USA
01-610-481-7711 International

2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS Number</th>
<th>Concentration (Weight)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyamide</td>
<td></td>
<td>60% - 100 %</td>
</tr>
<tr>
<td>Cycloaliphatic amine</td>
<td></td>
<td>5% - 10 %</td>
</tr>
<tr>
<td>Cycloaliphatic amine</td>
<td></td>
<td>5% - 10 %</td>
</tr>
<tr>
<td>Aromatic amine</td>
<td></td>
<td>3% - 7 %</td>
</tr>
<tr>
<td>Cycloaliphatic amine</td>
<td></td>
<td>1% - 5 %</td>
</tr>
<tr>
<td>Cyclic amines and hydrocarbons</td>
<td></td>
<td>1% - 5 %</td>
</tr>
</tbody>
</table>

CHEMICAL FAMILY: Polyamide

3. HAZARDS IDENTIFICATION

Emergency Overview

Corrosive.
Severe skin irritant.
Severe eye irritant.
Severe respiratory irritant.
May cause sensitization by skin contact.

Potential Health Effects

Inhalation : Harmful if inhaled and may cause delayed lung injury. Inhalation of aerosol may cause irritation to the upper respiratory tract. Risk of serious damage to the lungs (by inhalation). May cause nose, throat, and lung irritation. Can cause severe eye, skin and respiratory tract burns. Inhalation of vapors and/or aerosols in high concentration may cause irritation of respiratory system.

Eye contact : Causes eye burns. May cause blindness. Severe eye irritation.

Skin contact : Causes skin burns.
Ingestion : If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach.

Chronic Health Hazard : This product contains no listed carcinogens according to IARC, ACGIH, NTP and/or OSHA in concentrations of 0.1 percent or greater. Prolonged contact may result in chemical burns and permanent damage. Repeated or prolonged contact causes sensitization, asthma and eczemas.

Exposure Guidelines

Target Organs : Respiratory system.  
                 Skin.  
                 Eyes.  

Symptoms : Repeated and/or prolonged exposure to low concentrations of vapors and/or aerosols may cause: Sore throat.

Aggravated Medical Condition

Asthma. Adverse respiratory effects (such as cough, tightness of chest or shortness of breath). Eye disease  
Skin disorders and Allergies. Adverse skin effects (such as rash, irritation or corrosion). Adverse eye effects  
(such as conjunctivitis or corneal damage).

4. FIRST AID MEASURES

General advice : Seek medical advice. If breathing has stopped or is labored, give assisted respirations. Supplemental oxygen may be indicated. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation immediately.

Eye contact : Rinse immediately with plenty of water also under the eyelids for at least 20 minutes. Remove contact lenses.

Skin contact : Immediately remove contaminated clothing, and any extraneous chemical, if possible to do so without delay. Wash off immediately with plenty of water for at least 20 minutes. Cover wound with sterile dressing. Take off contaminated clothing and shoes immediately. NOTE TO PHYSICIANS: Application of corticosteroid cream has been effective in treating skin irritation.

Ingestion : If a person vomits when lying on his back, place him in the recovery position. Prevent aspiration of vomit. Turn victim's head to the side.

Inhalation : If breathing has stopped or is labored, give assisted respirations. Supplemental oxygen may be indicated. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation immediately. Move to fresh air.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Alcohol-resistant foam.  
                               Carbon dioxide (CO2).  
                               Dry chemical.  
                               Dry sand.
Limestone powder.

Specific hazards: May generate ammonia gas. May generate toxic nitrogen oxide gases. Use of water may result in the formation of very toxic aqueous solutions. Do not allow run-off from fire fighting to enter drains or water courses. Incomplete combustion may form carbon monoxide. Ammonia gas may be liberated at high temperatures. In case of incomplete combustion an increased formation of oxides of nitrogen (NOx) is to be expected. Downwind personnel must be evacuated. Burning produces obnoxious and toxic fumes.

Special protective equipment for fire-fighters: Avoid contact with the skin. A face shield should be worn. Use personal protective equipment. Wear self contained breathing apparatus for fire fighting if necessary.

Further information: Do not allow run-off from fire fighting to enter drains or water courses.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Use self-contained breathing apparatus and chemically protective clothing. Wear suitable protective clothing, gloves and eye/face protection. Evacuate personnel to safe areas.

Environmental precautions: Construct a dike to prevent spreading.

Methods for cleaning up: Approach suspected leak areas with caution. Contact Air Products’ Emergency Response Center for advice. Place in appropriate chemical waste container.

Additional advice: Open enclosed spaces to outside atmosphere. If possible, stop flow of product.

7. HANDLING AND STORAGE

Handling
Use only in well-ventilated areas. Avoid breathing vapors and/or aerosols. Avoid contact with skin and eyes. Emergency showers and eye wash stations should be readily accessible. Adhere to work practice rules established by government regulations. Avoid contact with eyes. Use personal protective equipment. When using, do not eat, drink or smoke.

Storage
Do not store near acids. Keep containers tightly closed in a dry, cool and well-ventilated place.

Technical measures/Precautions
Do not store in reactive metal containers.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures
Provide readily accessible eye wash stations and safety showers. Provide natural or explosion-proof ventilation adequate to ensure concentrations are kept below exposure limits.
Personal protective equipment

Respiratory protection : Wear appropriate respirator when ventilation is inadequate.

Hand protection : PVC disposable gloves
Impervious gloves.
The breakthrough time of the selected glove(s) must be greater than the intended use period.

Eye protection : Full face shield with goggles underneath.
Chemical resistant goggles must be worn.

Skin and body protection : Impervious clothing.
Full rubber suit (rain gear).
Rubber or plastic boots.
Long sleeve shirts and trousers without cuffs.
Slicker Suit.

Environmental exposure controls : Construct a dike to prevent spreading.

Special instructions for protection and hygiene : Discard contaminated leather articles. Provide readily accessible eye wash stations and safety showers. Wash at the end of each workshift and before eating, smoking or using the toilet.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form : Liquid.

Color : Amber.

Odor : Ammoniacal.

Relative density : 0.97 (water = 1)

Vapor pressure : 19.551 hPa at 70 °F (21 °C)

Density : 0.97 g/cm³ at 70 °F (21 °C)

pH : Alkaline.

Boiling point/range : 31.833 °F (176.67 °C)

Flash point : > 392 °F (> 200 °C)

Water solubility : Slightly soluble.

10. STABILITY AND REACTIVITY

Stability : Stable under normal conditions.
Materials to avoid:
- Sodium hypochlorite.
- Organic acids (i.e. acetic acid, citric acid etc.).
- Mineral acids.
- Product slowly corrodes copper, aluminum, zinc and galvanized surfaces.
- Reaction with peroxides may result in violent decomposition of peroxide possibly creating an explosion.
- Oxidizing agents.
- Acetamide and formamide derivatives of a component of this product are extremely irritating to humans and animals. To prevent the formation of these amides do not mix this product with any of the following reagents: acetic anhydride, acetyl chloride, methyl acetate, ethyl acetate, methyl formate, ethyl formate, or other alkyl acetate or formate esters. It is not expected that acetic acid or formic acid themselves would react with this component at room temperature, but given the extremely low doses required to cause irritation, these reagents should also be avoided.

Hazardous decomposition products:
- Nitric acid.
- Ammonia
- Nitrogen oxides (NOx).
- Nitrogen oxide can react with water vapors to form corrosive nitric acid.
- Carbon monoxide.
- Carbon dioxide (CO2).

11. TOXICOLOGICAL INFORMATION

Acute Health Hazard

Ingestion:
- No data is available on the product itself.

Ingestion - Components
- Cycloaliphatic amine
  - LD50: 625 mg/kg
  - Species: Rat.

Inhalation:
- No data is available on the product itself.

Skin:
- No data is available on the product itself.

Eye irritation/corrosion:
- Severe eye irritation.

Acute dermal irritation/corrosion:
- Severe skin irritation.

12. ECOLOGICAL INFORMATION

Ecotoxicity effects

Aquatic toxicity:
- No data is available on the product itself.

Toxicity to fish - Components
- Cycloaliphatic amine
  - LC50 (96 h): 46 - 100 mg/l
  - Species: Golden orfe (Leuciscus idus).
Toxicity to daphnia - Components
Cycloaliphatic amine  EC50 (48 h) : 6.84 mg/l  Species : Daphnia magna.

Toxicity to algae - Components
Cycloaliphatic amine  EC50 (72 h) : 140 - 200 mg/l  Species : Algae.

Toxicity to other organisms : No data available.

Persistence and degradability
Mobility : No data available.
Bioaccumulation : No data is available on the product itself.

13. DISPOSAL CONSIDERATIONS
Waste from residues / unused products  : Contact supplier if guidance is required.
Contaminated packaging : Dispose of container and unused contents in accordance with federal, state, and local requirements.

14. TRANSPORT INFORMATION

CFR
Proper shipping name  : Amines, liquid, corrosive, n.o.s. (Cycloaliphatic amine )
Class  : 8
UN/ID No.  : UN2735
Packing group  : III

IATA
Proper shipping name  : Amines, liquid, corrosive, n.o.s. (Cycloaliphatic amine )
Class  : 8
UN/ID No.  : UN2735
Packing group  : III

IMDG
Proper shipping name  : AMINES, LIQUID, CORROSIVE, N.O.S. (Cycloaliphatic amine )
Class  : 8
UN/ID No.  : UN2735
Packing group  : III

CTC
Proper shipping name  : AMINES, LIQUID, CORROSIVE, N.O.S. (Cycloaliphatic amine )
Class  : 8
UN/ID No.  : UN2735
Packing group  : III
15. REGULATORY INFORMATION

Corrosive. Sensitizer.

<table>
<thead>
<tr>
<th>Country</th>
<th>Regulatory list</th>
<th>Notification</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>TSCA</td>
<td>Included on Inventory.</td>
</tr>
<tr>
<td>EU</td>
<td>EINECS</td>
<td>Not on Inventory.</td>
</tr>
<tr>
<td>Canada</td>
<td>DSL</td>
<td>Included on Inventory.</td>
</tr>
<tr>
<td>Australia</td>
<td>AICS</td>
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<tr>
<td>Japan</td>
<td>ENCS</td>
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<tr>
<td>South Korea</td>
<td>ECL</td>
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<tr>
<td>China</td>
<td>SEPA</td>
<td>Not on Inventory.</td>
</tr>
<tr>
<td>Philippines</td>
<td>PICCS</td>
<td>Not on Inventory.</td>
</tr>
</tbody>
</table>

EPA SARA Title III Section 312 (40 CFR 370) Hazard Classification:
Acute Health Hazard

EPA SARA Title III Section 313 (40 CFR 372) Component(s) above ‘de minimus’ level:
None.

US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)
This product does not contain any chemicals known to State of California to cause cancer, birth defects or any other harm.

WHMIS Hazard Classification
Toxic Material Causing Other Toxic Effects, Corrosive Material

WHMIS Trade Secret Registry Number(s)
4959 Filing Date 10/23/2001

16. OTHER INFORMATION

HMIS Rating
Health          : 3
Flammability    : 1
Physical hazard : 0

Prepared by     : Air Products and Chemicals, Inc. Global EH&S Product Safety Department

For additional information, please visit our Product Stewardship web site at http://www.airproducts.com/productstewardship/