



MATERIAL SAFETY DATA SHEET

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3/28/05

1- COMMERCIAL NAME : AC 2320-1 Medium HARDENER

2- COMPOSITION/INFORMATION ON INGREDIENTS :

| CHEMICAL NAME | CAS NUMBER | QUANTITY in % |
|--------------------------|--------------|---------------|
| 1. Diethylenetriamine | 111-40-0 | 30-40 |
| 2. Diethyltoluenediamine | 68479-98-1 | 40-50 |
| 3. Amine/Epoxy Adduct | trade secret | 10-15 |
| 4. N/A | N/A | N/A |

3- HAZARDS IDENTIFICATION :

- Corrosive to skin and eyes.
- May cause skin sensitization and/or burning.
- Vapors/mists may cause upper respiratory tract irritation.
- May causes gastrointestinal irritation and possibly burns if swallowed, corrosive to mouth, throat and stomach.

4- FIRST AID MEASURES :

- Change any soiled clothing immediately.
- **In case of eye contact** : open eyelids as far as possible and flush with large quantities of water for at least fifteen minutes. Get immediate medical attention.
- **In case of skin contact** : physically remove the product and wash skin thoroughly with soap and water. Consult a physician if skin irritation occurs.
- **In case of swallowing** : give 1-2 glasses of milk or water to conscious person, DO NOT induce vomiting. Get immediate medical attention.
- **In case of inhalation** : remove the patient from the contaminated area, give oxygen if necessary. Call a physician if aftereffects occur.

5- FIRE-FIGHTING MEASURES :

5-1 Fire-extinguisher types :

- Use : chemical foam, CO2, powder. Where the fire is of major proportions, water spray may also be used.
- Do not use : n/a

5-2 Specific fire and explosion risks :

- Incomplete combustion or pyrolysis mainly produces carbon monoxide and nitrogen oxides and nitrogen containing organic compounds may be released upon combustion. Prevent exposure to combustion products.

5-3 specific protective measures during firefighting :

- Firefighting personnel should be equipped with full turn-out gear and insulated, autonomous respiratory protection equipment.

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9- PHYSICAL AND CHEMICAL PROPERTIES :

Physical state : Liquid

Color : Dark

Odor : amine-like

pH : not established

Flash point : > 230°F / 110°C

Decomposition temperature : > 392°F / 200°C

Specific gravity : 1.01

Solubility : - in water: at 68°F/20°C:low

- in solvents: Yes (soluble in many organic solvents; benzene hydrocarbons, chlorinated hydrocarbons, acetone, phthalates, etc.)

10- STABILITY AND REACTIVITY

10-1 Dangerous decomposition :

- Stable at normal conditions.

- Carbon Monoxide, Carbon Dioxide, ammonia when heated, Nitric Acid, and volatile amines during thermal decomposition. Irritating and toxic fumes at elevated temperatures.

10-2 Hazardous reactions with :

Do not place the product in contact with nitrocellulose or halo hydrocarbon derivatives. Do not allow uncontrolled reactions with epoxy resins, acids, anhydrides, chloride acid compounds. Can create corrosive gases/vapors.

11- TOXICOLOGICAL INFORMATION :

Effects on eyes : Corrosive, may cause severe ocular irritation. Vapors may cause also eye irritation and pain.

Effects on skin : Corrosive, a single short exposure may cause skin irritation/burns, caustic effect on skin and mucous membranes.

Inhalation : Excessive exposure may cause irritation and or burns to the upper respiratory tract. May lead to sensitization of respiratory system or asthma in predisposed individuals.

Effects on ingestion : May cause gastrointestinal irritation or ulceration. May cause burns of mouth, throat and stomach. Swallowing will lead to a strong caustic effect on mouth and throat, and to the danger of perforation of the esophagus and/or stomach.

12- ECOLOGICAL INFORMATION :

Ecotoxicity: No data.

Environmental Fate: No data.

Additional Information: Waste from this product may present long term environmental hazards, thus landfill disposal must be considered less acceptable than incineration.

13- DISPOSAL CONSIDERATIONS

Dispose of the product by burning in a suitable incinerator or bury in an approved landfill following all applicable local, state, and federal regulations.

Empty containers may not be disposed of unless any remaining material adhering to the internal walls has been removed.

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6- ACCIDENTAL RELEASE MEASURES :

6-1 Individual protection :

Wearing of suitable protective clothing and protective equipment for face/eyes.

6-2 Environmental protection : Please see § 12**6-3 Decontamination procedures :**

- Contain spilt material in order to avoid its transfer to sewers or rivers and streams.
- Physically remove the material.
- Cover material with sand, earth or any other similar absorbent material in order to soak product up. The resulting mix may then be shoveled into cans and removed for disposal (Please see § 13).

7- HANDLING AND STORAGE :

7-1 Handling :

- Inform personnel of risks associated with the product, the precautions to be taken and procedures to follow where an accident occurs.
- Observe personal hygiene rules to avoid contact with eyes and skin.
- Avoid inhaling vapors produced by the material, especially when heated and/or sprayed.
- General ventilation in the area should be sufficient (fan-driven). Where vapors could possibly escape into the air in the workplace, local specific means of ventilation will be necessary.
- Install showers and eye baths ("fountain" type).
- Wash hands thoroughly at beginning of every work break and at the end of the working day.
- Work stations and the general working area must be kept perfectly clean.
- Avoid exposure to the material of persons having suffered from eczema or still suffering from any skin condition, wound, cut or irritation.

7-2 Storage :

- Keep the material hermetically sealed in its original packaging, protected from humidity and at a temperature between 59 and 77°F / 15 and 25°C in a well-ventilated storage facility.
- Ensure that the floor of the storage area is impermeable and concave in profile in order to provide effective containment.
- Reproduce labeling on all new packs where original packaging is divided.

8- EXPOSURE CONTROLS/PERSONAL PROTECTION :

8-1 Exposure controls :

Always maintain workplace airborne contaminants to the lowest possible levels.

8-2 Personal protection :

- respiratory protection : NO, when vapors are below PEL recommendations.
If product is heated and/or sprayed, respiratory protection is recommended.
- gloves : YES (butyl, pvc, nitrile rubber, or neoprene)
- eye protection : YES, safety glasses with sideshields

Do not mix work clothing and normal clothing. Wash hands thoroughly at beginning of every work break and at the end of the working day.

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14- TRANSPORT INFORMATION :

Proper shipping Name: **Amines, Liquid, Corrosive, N.O.S.**
(Diethylenetriamine)

UN No.: **2735**

Packing Group: **III**

Hazard class: **8- corrosive**

Internal Label: **H2265200**

15- REGULATORY INFORMATION :

US Federal Regulation

Toxic Substances Control Act (TSCA):

All components are included in the EPA Toxic Substances Control Act Chemical Substance Inventory.

OSHA Hazard Communication Standard hazard classes:

Corrosive. Sensitizer. Toxic by skin absorption.

OSHA PEL/TWA and ACGIH TLV/TWA: not established

EPA SARA Title III Section 312 hazard class:

Immediate Health hazard. Delayed Health Hazard.

EPA SARA Title III Section 313 Chemicals: none

HMIS Ratings:

| | |
|---------------|----------|
| Health - | 3 |
| Fire Hazard - | 1 |
| Reactivity - | 0 |

16- OTHER INFORMATION :

REVEALING MODIFICATION : A3

3/28/05 Previous Revision: 6/29/98

This sheet provides a complement to the product use instructions but does not replace them. The information it contains is based on our current knowledge of the product concerned at the date of drafting. That information is given in good faith and does not in any circumstances remove from the user his duty to be aware of and to follow all legal regulations and statutes covering his activities. The user takes sole responsibility for application of safety measures covering the use of the product he is aware of. We also draw the user's attention to the risks attached to any use of the product for applications for which it was not designed. 08/98
