

# VALPAC

## Safety Data Sheet

### SECTION 1: Product and Company Identification

#### 1.1. Product identifier

Product Number                      Cryobond 877 Part B  
Product Name                        Epoxy Curing Agent  
Product Class                        Amines

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

##### 1.2.1. Relevant identified uses

Use of the substance/preparation    Epoxy Curing Agent

##### 1.2.2. Uses advised against

No additional information available

#### 1.3. Details of the supplier of the safety data sheet

VALPAC, INC.  
1400 Industrial Park Road  
Federalsburg, MD 21632  
1-410-754-7390

#### 1.4. Emergency telephone number

Emergency number                      1-800-535-5053 (INFOTRAC)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification

<u>Hazard Class</u>	<u>Category</u>	<u>Hazard Statement</u>
Flammable Liquid	2	H225
Skin Irritation	3	H315
Eye Irritation	3	H319
Skin Sensitization	2	H317

If applicable, full text of H-phrases appear in "Label elements" below

##### Adverse physicochemical, human health and environmental effects

No additional information available

#### 2.2. Label elements

##### GHS Labeling Elements

Hazard pictograms



Signal word

**DANGER**

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Hazard statements	H225 – Highly flammable liquid and vapor H315 – Causes skin irritation H319 – Causes serious eye irritation H361d – Suspected of damaging the unborn child H336 – May cause drowsiness or dizziness H373 – May cause damage to central nervous system through prolonged or repeated exposure H304 – May be fatal if swallowed and enters airways
Precautionary statements (prevention)	P210 – Keep away from heat, sparks, open flames, hot surfaces. No smoking. P240 – Ground/bond container and receiving equipment P280 – Wear protective gloves/protective clothing/eye/face protection P264 – Wash thoroughly after handling P201 – Obtain special instructions before use. P202 – Do not handle until all safety precautions have been read and understood. P260 – Do not breathe fumes, mists or vapors. P271 – Use only outdoors or in a well-ventilated area
Response statements (response)	P370+P378 – In case of fire: Use chemical foam, carbon dioxide (CO <sub>2</sub> ), water fog or dry chemical P302+P352 – IF ON SKIN: Wash with plenty of soap and water. P332+P313 – If skin irritation occurs: Get medical advice/attention. P362 – Take off contaminated clothing and wash before reuse. P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313 – If eye irritation persists: Get medical advice/attention. P308+P313 – IF exposed or concerned: Get medical advice/attention. P304+P340 – IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P312 – Call a POISON CENTER or doctor/physician if you feel unwell. P301+P310 – IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. P331 – Do NOT induce vomiting.
Response statements (storage and disposal)	P403+P235 – Store in a well-ventilated place. Keep cool. P405 – Store locked up. P501 – Dispose of contents/container in accordance with federal, state and local regulations.

### 2.3. Other hazards/labeling information

None

## SECTION 3: Composition/information on ingredients

### Hazardous ingredients

Name	CAS #	%/wt.
Tetraethylenepentamine	68953-36-6	75
Diethylenetriamine	111-40-0	25

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### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

First-aid measures – if inhaled	Remove exposed person to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
First-aid measures – if on skin	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. IF irritation develops or persists, call a poison control center or doctor for treatment advice.
First-aid measures – if in eyes	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call poison control center or doctor for treatment advice if irritation develops or persists.
First-aid measures – if swallowed	Wash out mouth with water. Remove dentures if any. Move exposed person to fresh air. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Notes to physician	Treat symptomatically

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media	Material can be extinguished with carbon dioxide (CO <sub>2</sub> ), dry chemical, foam, water spray
Unsuitable extinguishing media	Not applicable

#### 5.2. Special hazards arising from the substance or mixture

Fire hazard	Yes
Explosion hazard	None known
Reactivity	Ammonia gas may be liberated at high temperatures. In case of incomplete combustion an increased formation of oxides of nitrogen (NO <sub>x</sub> ) is to be expected.  Incomplete combustion may form carbon monoxide. May generate ammonia gas. May generate toxic nitrogen oxide gases. Burning produces noxious and toxic fumes. Downwind personnel must be evacuated.

#### 5.3. Advice for firefighters

Firefighting instructions	Use positive pressure, self-contained breathing apparatus and protective clothing. Remove container from fire area if possible. Containers may be cooled with water fog or spray if not leaking.
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### SECTION 6: Accidental release measures

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### **6.1. Personal precautions, protective equipment and emergency procedures**

General measures                                Ventilate the area. Use appropriate personal protective equipment (PPE – See Section 8). Scoop or mop up spills. Absorb with sand, vermiculite, etc. Transfer to containers for discarding.

#### **6.1.1. For non-emergency personnel**

Protective equipment                                Wear appropriate personal protective equipment (PPE).

Emergency procedures                                Avoid contact with spilled material

#### **6.1.2. For emergency responders**

Protective equipment                                Wear appropriate personal protective equipment (PPE).

### **6.2. Environmental precautions**

Prevent material from entering sewers, waterways, or low areas.

### **6.3. Methods and material for containment and cleaning up**

Methods for cleaning up                                Scoop or mop up spills. Absorb with sand, vermiculite, etc. Transfer to containers for discarding.

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### SECTION 7: Handling and Storage

#### 7.1. Precautions for safe handling

Precautions for safe handling Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container

#### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions Store in original container. Store in a cool, dry place. Keep separated from incompatible substances. Store in a cool and well-ventilated room. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Keep out of the reach of children.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Personal protective equipment

Eye/Face Protection: To avoid contact with eyes, wear chemical goggles or shielded safety glasses. An emergency eyewash or water supply should be readily accessible to the work area.

Skin Protection: To avoid contact with skin, wear long pants, long-sleeved shirt, socks, shoes and chemical-resistant gloves. An emergency shower or water supply should be readily accessible to the work area.

Respiratory Protection: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirators. Respiratory protection programs must comply with 29 CFR § 1910.134.

General Hygiene Considerations: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

#### 8.2. Exposure controls

Ensure adequate ventilation, especially in confined areas.

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Engineering controls - Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

The level of respiratory protection needed should be based on the evaluation of chemical exposures by a health or safety professional. If required, use a NIOSH-approved air purifying respirator with organic vapor cartridge and particulate filter or supplied air respirator.

Diethylenetriamine(DETA)	Time Weighted Average (TWA): ACGIH	1 ppm	-
Diethylenetriamine(DETA)	Recommended exposure limit (REL): NIOSH	1 ppm	4 mg/m3
Diethylenetriamine(DETA)	Time Weighted Average (TWA): OSHA Z1A	1 ppm	4 mg/m3
Diethylenetriamine(DETA)	Time Weighted Average (TWA) Permissible Exposure Limit (PEL): US CA OEL	1 ppm	4 mg/m3

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	Liquid
Color	Amber
Odor	Ammonia
Odor threshold	No data available
pH	Not applicable
Relative evaporation rate (butyl acetate=1)	Not applicable
Melting point	No data available
Freezing point	No data available
Boiling point	No data available
Flash point	No data available
Self-ignition temperature	No data available
Decomposition temperature	No data available
Flammability (solid, gas)	Not flammable
Vapor pressure	No data available
Relative vapor density at 20 °C	No data available
Relative density	.95 g/mL
Solubility	No data available
Log Pow	No data available
Log Kow	No data available
Viscosity, kinematic	No data available
Viscosity, dynamic	No data available
Explosive properties	Non explosive
Oxidizing properties	None
Explosive limits	Not applicable

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### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

: N-Nitrosamines, known to be carcinogens, may be formed when the product comes in contact with nitrous acid, nitrites or atmospheres with high nitrous oxide concentrations.

Nitrous acid and other nitrosating agents.

Organic acids

Mineral acids

Sodium hypochlorit

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

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

Stable under normal conditions.

### 10.4. Conditions to avoid

N/A

### 10.5. Incompatible materials

No data available

### 10.6. Hazardous decomposition products

No data available

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Please contact the address listed on the first page of the SDS for toxicological information on this material/ its components.

Acute toxicity estimates	
LD50 oral rat	500 mg/kg
LD50 dermal rabbit	No data available
LC50 inhalation rat (mg/l)	No data available

Skin corrosion/irritation

Causes skin irritation

Serious eye damage/irritation

Causes severe eye irritation.

Respiratory or skin sensitization

May cause an allergic skin reaction

Germ cell mutagenicity

Not classified as a mutagen

Carcinogenicity

Not classified as a carcinogen by IARC, NTP, OSHA or IARC.

Reproductive toxicity

Not classified as a reproductive toxin

Specific target organ toxicity  
(single exposure)

May cause respiratory irritation

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Specific target organ toxicity  
(repeated exposure) Not classified per GHS criteria.

Aspiration hazard Not classified

### SECTION 12: Ecological information

#### 12.1. Toxicity

EC50: No data available. Expected to be toxic to aquatic organisms.

#### 12.2. Persistence and degradability

No additional information available.

#### 12.3. Bioaccumulative potential

None expected to bioaccumulate.

#### 12.4. Mobility in soil

No additional information available

#### 12.5. Results of PBT and vPvB assessment

No additional information available

#### 12.6. Other adverse effects

None.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Waste disposal Dispose of in compliance with federal, state and local regulations.

### SECTION 14: Transport information

#### Ground transport

Domestic (Land, D.O.T.) /IATA/IMDG

**Proper Shipping Name:** Amines, liquid, corrosive, n.o.s. (Aliphatic amine, Polyamidoamine)

**Hazard Class:** 8

**UN/NA:** UN2735

Packing Group: III



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### Additional Air, Sea and International Transportation Information

UN-No. 2735  
Proper Shipping Name Amines, liquid, corrosive, n.o.s., (Aliphatic amine, Polyamidoamine)  
Transport document description UN2259; Triethylenetetramine; 8; II  
Class (UN) 8  
Hazard labels (UN)



Packing group (UN) III  
Marine Pollutant (Y/N) Yes

## SECTION 15: Regulatory information

### TSCA Inventory:

All components in these products are listed on the TSCA Inventory or are exempt from listing thereunder. If you need more information on the inventory status of this material, contact Valpac at 1-410-754-7390

**SARA 313 Regulated Chemical(s):** This product contains toxic chemicals listed below which are subject to the reporting requirements of Section 313 of the Title II of SARA and 40 CFR Part 372.

### Title III hazard classification:

Acute Health Hazard: Yes  
Chronic Health Hazard: No  
Fire: No  
Reactivity/Physical hazard: No  
Pressure: No

### Canadian Regulatory Information:

The ingredients of this product are listed on the Domestic Substance List, non-domestic substance list or are exempt.

### Additional Regulatory Information:

This product may contain chemical substances that are regulated for export by various government agencies (such as the Environmental Protection Agency, the Bureau of Industry and Security, or the Drug Enforcement Administration, among others). Before exporting this product from the USA, we recommend you contact us at 1-410-754-7390 to request an export review.

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### SECTION 16: Other information

**NFPA:** Health: 3; Flammability: 1; Reactivity: 0; Specific:  
**HMIS:** Health: 3; Flammability: 1; Physical Hazard: 0; PPE: B  
MSDS US

**Prepared By:** Valpac, Inc.

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