

EPON(TM) Resin 813Version 14
Revision Date 06/16/2004

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SECTION 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Trade name : EPON(TM) Resin 813

Product code : K2157

MSDS Number : 20

Product Type : Modified epoxy resin.

Company : Resolution Performance Products LLC
P. O. Box 4500
Houston, TX 77210
USA

Telephone : (832) 486-6700

Emergency telephone number : CHEMTREC US Domestic (800) 424-9300
CHEMTREC International (703) 527-3887

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	Weight %
Bisphenol A/Epichlorohydrin Resin	25068-38-6	74 %
O-CRESYL GLYCIDYLETHER	2210-79-9	26 %

SECTION 3. HAZARDS IDENTIFICATION**Emergency Overview**

Human health hazards : May be slightly toxic and may be harmful if swallowed. May cause skin sensitization. May possibly cause pulmonary sensitization. May be irritating to the eyes and skin.

Safety hazards : Material will not burn unless preheated.

SECTION 4. FIRST AID MEASURES

Inhalation : Remove victim to fresh air and provide oxygen if breathing is difficult. Give artificial respiration if not breathing. Get medical

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	attention.
Skin contact	: Remove contaminated clothing/shoes and wipe excess from skin. Flush skin with water. Follow by washing with soap and water. If irritation occurs, get medical attention. Do not reuse clothing until cleaned. Contaminated leather articles, including shoes, cannot be decontaminated and should be destroyed to prevent reuse.
Eye contact	: Flush eyes with plenty of water for 15 minutes while holding eyelids open. Get medical attention.
Ingestion	: Do not induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Get medical attention.
Notes to physician	
Symptoms	: Irritation as noted above. Skin sensitization (allergy) may be evidenced by rashes, especially hives. Lung sensitization (e.g., allergy, asthma) may be evidenced by wheezing with shortness of breath and cough.
Treatment	: If more than 2.0 ml per kg has been ingested and vomiting has not occurred, emesis should be induced with supervision. Keep victim's head below hips to prevent aspiration. If symptoms such as loss of gag reflex, convulsions or unconsciousness occur before emesis, gastric lavage using a cuffed endotracheal tube should be considered.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	: Use water fog, "alcohol foam", dry chemical or carbon dioxide.
Specific hazards during fire fighting	: Material will not burn unless preheated. Cool fire exposed containers with water.
Special protective equipment for fire-fighters	: Do not enter confined fire space without full bunker gear (helmet with face shield, bunker coats, gloves and rubber boots). including a positive pressure NIOSH approved self-contained breathing apparatus.

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SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions : May burn although not readily ignitable.
Use cautious judgement when cleaning up large spills.
Shut off leaks, if possible without personal risk.
- Environmental precautions : Dike and contain.
Contain run-off and dispose of properly.
Prevent from entering into drains, ditches or rivers.
- Clean-up methods - small spillage : Take up with an absorbent material and dispose of properly.
- Clean-up methods - large spillage : Remove with vacuum trucks or pump to storage/salvage vessels.
Soak up residue with an absorbent such as clay, sand or other suitable material; place in non-leaking containers for proper disposal.
Flush area with water to remove trace residue.
- Additional advice : Notify authorities if any exposures to the general public or environment occurs or is likely to occur.
See Section 13 for information on disposal.

SECTION 7. HANDLING AND STORAGE

Handling

- Advice on safe handling : **WARNING.** May be slightly toxic if swallowed. May cause skin sensitization. May possibly cause pulmonary sensitization. Containers, even those that have been emptied, can contain hazardous product residues. Minimize skin contact. Wash with soap and water before eating, drinking, smoking, applying cosmetics, or using toilet facilities. Launder contaminated clothing before reuse. Contaminated leather articles, including shoes, cannot be decontaminated and should be destroyed to prevent reuse.

Storage

- Requirements for storage areas and containers : Store in a cool, dry place with adequate ventilation. Keep away from open flames and high temperatures.

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SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

- Protective measures : Wear appropriate respirator and protective clothing.
- Engineering measures : Use ventilation as required to control vapor concentrations. Eye wash fountains and safety showers should be available for emergency use.
- Eye protection : Avoid contact with eyes.
Wear chemical goggles if there is potential contact with eyes.
- Skin and body protection : Avoid prolonged or repeated contact with skin.
Wear chemical-resistant gloves and other clothing as required to minimize contact.
- Respiratory protection : Avoid breathing vapor or mists.
Use a NIOSH-approved respirator as required to prevent overexposure.
In accord with 29 CFR 1910.134,
Use either a full-face, atmosphere-supplying respirator or air-purifying respirator for organic vapors.

Exposure Guidelines

Components with workplace control parameters	Regulation	Exposure time	Value	Remarks
Bisphenol A/Epichlorohydrin Resin	ACGIH			None established.
O-CRESYL GLYCIDYLETHER	ACGIH TLV			None established.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Form : Liquid
- Colour : Yellow
- Flash point : > 93.33 °C (> 199.99 °F) (Setaflash)
- Vapour pressure : Negligible.
- Relative density : 1.14
- Relative vapour density : > 1

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Solubility in water : Negligible.

SECTION 10. STABILITY AND REACTIVITY

Materials to avoid : Can react vigorously with strong oxidizing agents, strong lewis or mineral acid, and strong mineral and organic bases, especially primary and secondary aliphatic amines. Reacts with considerable heat release with some curing agents.

Hazardous decomposition products : Carbon monoxide, aldehydes, and acids may be formed during combustion.

Hazardous reactions : Hazardous polymerization will not occur.

Stable under normal use conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute oral toxicity : Expected to be of low toxicity, LD50 > 2000 mg/kg.

Acute dermal toxicity : Expected to be of low toxicity, LD50 > 2000 mg/kg.

Chronic Health Hazard

Components	Concentration	Regulation	Value	Remarks
Bisphenol A/Epichlorohydrin Resin	74 %	US. IARC Monographs on Occupational Exposures to Chemical Agents		This component has not been classified by the International Agency for Research on Cancer (IARC).
O-CRESYL GLYCIDYLETHE R	26 %	US. IARC Monographs on Occupational Exposures to Chemical Agents		This component has not been classified by the International Agency for Research on Cancer (IARC).

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Potential Health Effects

- Inhalation : Not expected to be a relevant route of exposure, however, under conditions where exposure to vapors or mists is possible, could cause respiratory tract irritation. May possibly cause pulmonary sensitization.
- Skin : May be mildly irritating to the skin. Prolonged or repeated liquid contact can result in defatting and drying of the skin which may result in skin irritation and dermatitis. May cause skin sensitization.
- Eyes : May be irritating to the eyes.
- Ingestion : May be slightly toxic and may be harmful if swallowed.
- Aggravated Medical Condition : Preexisting eye, skin and respiratory disorders may be aggravated by exposure to this product. Preexisting skin or lung allergies may increase the chance of developing increased allergy symptoms from exposure.

SECTION 12. ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)

- Biodegradability : This section will be updated as ecological reviews are completed.

Ecotoxicity effects

- Toxicity to fish : This section will be updated as ecological reviews are completed.

SECTION 13. DISPOSAL CONSIDERATIONS

- Product disposal : If this material becomes a waste, it would not be a hazardous waste by RCRA criteria (40 CFR 261). Place in an appropriate disposal facility in compliance with local and federal regulations.

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SECTION 14. TRANSPORT INFORMATION

CFR_ROAD	NOT REGULATED FOR TRANSPORT
IMDG	NOT REGULATED FOR TRANSPORT
IATA_C	NOT REGULATED FOR TRANSPORT

SECTION 15. REGULATORY INFORMATION

Notification status

TSCA : All components listed.

EINECS : All components are listed or exempt

DSL : All components listed.

KECI (KR) : All components listed.

PICCS (PH) : All components listed.

ENCS (JP) : All components listed.

INV (CN) : All components listed.

AICS : All components listed.

US. EPA CERCLA Hazardous Substances (40 CFR 302)

Bisphenol A/Epichlorohydrin Resin No RQ

O-CRESYL GLYCIDYLETHER No RQ

SARA 311/312 Hazards

Acute Health Hazard

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required

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Bisphenol A/Epichlorohydrin Resin	No De minimis Concentration		
O-CRESYL GLYCIDYLEETHER	No De minimis Concentration		
US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A)			
Bisphenol A/Epichlorohydrin Resin	Threshold Planning Quantity: No TPQ		
O-CRESYL GLYCIDYLEETHER	Threshold Planning Quantity: Not Listed		
Bisphenol A/Epichlorohydrin Resin	Reportable quantity: No RQ		
O-CRESYL GLYCIDYLEETHER	Reportable quantity: Not Listed		
New Jersey Right-To-Know Chemical List			
Bisphenol A/Epichlorohydrin Resin	Not Listed		
O-CRESYL GLYCIDYLEETHER	Not Listed		
Additional Components Not Found In Section 2:			
Components	CAS-No.	Concentration	Remarks
Phenyl Glycidyl Ether	122-60-1	< 5 PPM	Not Listed
Pennsylvania Right-To-Know Chemical List			
Bisphenol A/Epichlorohydrin Resin	Not Listed		
O-CRESYL GLYCIDYLEETHER	Not Listed		
Additional Components Not Found In Section 2:			
Components	CAS-No.	Concentration	Remarks
Phenyl Glycidyl Ether	122-60-1	< 5 PPM	Not Listed
Massachusetts Right-To-Know Chemical List			

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Bisphenol A/Epichlorohydrin Resin Not Listed

O-CRESYL GLYCIDYLETHER Not Listed

Additional Components Not Found In Section 2:

Components	CAS-No.	Concentration	Remarks
Phenyl Glycidyl Ether	122-60-1	< 5 PPM	Not Listed

**US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)
Additional Components Not Found In Section 2:**

Components	Concentration	Regulation	Value	Remarks
Phenyl Glycidyl Ether	< 5 PPM	US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)	Listed: October 1, 1990	Carcinogenic.

HMIS Rating : Health: 2
Fire: 1
Reactivity: 0

SECTION 16. OTHER INFORMATION

Reference : Prepared in accordance with 29 CFR 1910.1200.

Other information : EPON is a Resolution trade mark.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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