1. PRODUCT AND COMPANY IDENTIFICATION

Product name: DB EPOXY ADH E-120HP 50 ML RES
IDH number: 702021
Product type: Epoxy resin
Item number: 29353_209547
Restriction of Use: None identified
Region: United States

Company address:
Henkel Corporation
One Henkel Way
Rocky Hill, Connecticut 06067

Contact information:
Telephone: (860) 571-5100
MEDICAL EMERGENCY Phone: Poison Control Center 1-877-671-4608 (toll free) or 1-303-592-1711
TRANSPORT EMERGENCY Phone: CHEMTREC 1-800-424-9300 (toll free) or 1-703-527-3887
Internet: www.henkelna.com

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
WARNING: CAUSES SKIN IRRITATION.
MAY CAUSE AN ALLERGIC SKIN REACTION.
CAUSES SERIOUS EYE IRRITATION.

HAZARD CLASS HAZARD CATEGORY
SKIN IRRITATION  2
EYE IRRITATION  2A
SKIN SENSITIZATION  1

PICTOGRAM(S)

Precautionary Statements
Prevention: Avoid breathing vapors, mist, or spray. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wear eye and face protection. Wear protective gloves.
Response: IF ON SKIN: Wash with plenty of soap and water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to remove. Continue rinsing. If skin irritation or rash occurs: Get medical attention. If eye irritation persists: Get medical attention. Take off contaminated clothing.
Storage: Not prescribed
Disposal: Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.


See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous Component(s)</th>
<th>CAS Number</th>
<th>Percentage*</th>
</tr>
</thead>
</table>

IDH number: 702021
4. FIRST AID MEASURES

Inhalation: Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. If symptoms develop and persist, get medical attention.

Skin contact: Immediately flush skin with plenty of water (using soap, if available). Remove contaminated clothing and footwear. If symptoms develop and persist, get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eye contact: Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Ingestion: DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.

Symptoms: See Section 11.

5. FIRE FIGHTING MEASURES

Extinguishing media: Water spray (fog), foam, dry chemical or carbon dioxide.

Special firefighting procedures: Wear self-contained breathing apparatus and full protective clothing, such as turnout gear.

Unusual fire or explosion hazards: Personnel in vicinity and downwind should be evacuated. Burning produces obnoxious and toxic fumes. In case of fire, keep containers cool with water spray. Closed containers may rupture (due to build up of pressure) when exposed to extreme heat.


6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions: Do not allow product to enter sewer or waterways.

Clean-up methods: Ensure adequate ventilation. Wear appropriate personal protective equipment. Refer to Section 8 "Exposure Controls / Personal Protection" prior to clean up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Scrape up spilled material and place in a closed container for disposal.
7. HANDLING AND STORAGE

Handling: Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Use only with adequate ventilation. Keep container closed.

Storage: Keep container tightly closed and in a cool, well-ventilated place away from incompatible materials. Keep away from heat, spark and flame.

For information on product shelf life contact Henkel Customer Service at (800) 243-4874.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

<table>
<thead>
<tr>
<th>Hazardous Component(s)</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>AIHA WEEL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epoxy resin</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Epoxy resin</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Substituted silane</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

Engineering controls:
Use local exhaust ventilation if the potential for airborne exposure exists.

Respiratory protection:
Use a NIOSH approved respirator if ventilation is inadequate.

Eye/face protection:
Safety goggles or safety glasses with side shields. Full face protection should be used if the potential for splashing or spraying of product exists.

Skin protection:
Use chemical resistant, impermeable clothing including gloves and either an apron or body suit to prevent skin contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid
Color: Pale yellow, to, Off white
Odor: Faint, Epoxy
Odor threshold: Not available.
pH: Not available.
Vapor pressure: Not available.
Boiling point/range: Not available.
Melting point/ range: Not available.
Specific gravity: 1.10
Vapor density: Not available.
Flash point: 96.11 °C (205°F) Setalash Closed Cup
Flammable/Explosive limits - lower: Not available.
Flammable/Explosive limits - upper: Not available.
Autoignition temperature: Not available.
Evaporation rate: Not available.
Solubility in water: Not miscible or difficult to mix
Partition coefficient (n-octanol/water): Not available.
VOC content: 0.0 % California SCAQMD Method 316B
Viscosity: Not available.
Decomposition temperature: Not available.
10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions of storage and use.

Hazardous reactions: Polymerization may occur at elevated temperature or in the presence of incompatible materials.


Reactivity: Not available.

Conditions to avoid: Keep away from heat, ignition sources and incompatible materials. Note: Heating the epoxy resin in this product above 148.9 °C (300 °F) in the presence of air may cause slow oxidative decomposition. Above 260 °C (500 °F) polymerization of the epoxy resin may occur. Aliphatic polyamines can produce exothermic reactions with epoxy resins which in large masses can cause runaway polymerization and charring of the reactants. Fumes and vapors from these thermal and chemical decompositions vary widely in composition and toxicity. Do not breathe fumes.

11. TOXICOLOGICAL INFORMATION

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects/Symptoms

Inhalation: Inhalation of vapors or mists of the product may be irritating to the respiratory system.

Skin contact: Causes skin irritation. May cause allergic skin reaction.

Eye contact: Causes serious eye irritation.

Ingestion: Not expected under normal conditions of use.

<table>
<thead>
<tr>
<th>Hazardous Component(s)</th>
<th>LD50s and LC50s</th>
<th>Immediate and Delayed Health Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epoxy resin</td>
<td>None</td>
<td>Allergen, Irritant</td>
</tr>
<tr>
<td>Epoxy resin</td>
<td>None</td>
<td>Allergen, Irritant</td>
</tr>
<tr>
<td>Substituted silane</td>
<td>None</td>
<td>Allergen, Irritant</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous Component(s)</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA Carcinogen (Specifically Regulated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epoxy resin</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Epoxy resin</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Substituted silane</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

Ecological information: Not available.
13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Follow all local, state, federal and provincial regulations for disposal.
Hazardous waste number: Not a RCRA hazardous waste.

14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

U.S. Department of Transportation Ground (49 CFR)
Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

International Air Transportation (ICAO/IATA)
Proper shipping name: Environmentally hazardous substance, liquid, n.o.s. (Epoxy resin)
Hazard class or division: 9
Identification number: UN 3082
Packing group: III

Water Transportation (IMO/IMDG)
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy resin)
Hazard class or division: 9
Identification number: UN 3082
Packing group: III
Marine pollutant: Epoxy resin

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12 (b) Export Notification: None above reporting de minimis
CERCLA/SARA Section 302 EHS: None above reporting de minimis
CERCLA/SARA Section 311/312: Immediate Health
CERCLA/SARA Section 313: None above reporting de minimis
California Proposition 65: This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Canada Regulatory Information

CEPA DSL/NDSL Status: All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: New Safety Data Sheet format.

Prepared by: Rena Petrides, Regulatory Affairs Specialist
Issue date: 08/20/2014
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1. PRODUCT AND COMPANY IDENTIFICATION

<table>
<thead>
<tr>
<th>Product name:</th>
<th>DB EPOXY ADH E-120HP 50 ML. HAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>IDH number:</td>
<td>702022</td>
</tr>
<tr>
<td>Product type:</td>
<td>Epoxy Hardener</td>
</tr>
<tr>
<td>Item number:</td>
<td>23353_209548</td>
</tr>
<tr>
<td>Region:</td>
<td>United States</td>
</tr>
<tr>
<td>Company address:</td>
<td>Henkel Corporation</td>
</tr>
<tr>
<td></td>
<td>One Henkel Way</td>
</tr>
<tr>
<td></td>
<td>Rocky Hill, Connecticut 06067</td>
</tr>
</tbody>
</table>

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER: CAUSES SEVERE SKIN BURNS AND EYE DAMAGE. MAY CAUSE AN ALLERGIC SKIN REACTION.

<table>
<thead>
<tr>
<th>HAZARD CLASS</th>
<th>HAZARD CATEGORY</th>
</tr>
</thead>
<tbody>
<tr>
<td>SKIN CORROSION</td>
<td>1B</td>
</tr>
<tr>
<td>SERIOUS EYE DAMAGE</td>
<td>1</td>
</tr>
<tr>
<td>SKIN SENSITIZATION</td>
<td>1</td>
</tr>
</tbody>
</table>

PICTOGRAM(S)

Precautionary Statements

Prevention:
Do not breathe vapors, mist, or spray. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves, eye protection, and face protection.

Response:
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to remove. Continue rinsing. Immediately call a poison control center or physician. If skin irritation or rash occurs: Get medical attention. Wash contaminated clothing before reuse.

Storage:
Store locked up.

Disposal:
Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.


See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

IDH number: 702022

Product name: DB EPOXY ADH E-120HP 50 ML. HAR
**4. FIRST AID MEASURES**

**Inhalation:**
Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.

**Skin contact:**
Immediately flush skin with plenty of water (using soap, if available). Remove contaminated clothing and footwear. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

**Eye contact:**
Immediately flush eyes with plenty of water for at least 15 minutes. Get immediate medical attention.

**Ingestion:**
DO NOT induce vomiting unless directed to do so by medical personnel. Rinse the mouth. Drink 1-2 glasses of water. Never give anything by mouth to an unconscious person. Get immediate medical attention.

**Symptoms:**
See Section 11.

**5. FIRE FIGHTING MEASURES**

**Extinguishing media:**
Dry chemical. Carbon dioxide. Alcohol foam.

**Special firefighting procedures:**
Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.

**Unusual fire or explosion hazards:**
Personnel in vicinity and downwind should be evacuated. Burning produces obnoxious and toxic fumes. In case of fire, keep containers cool with water spray. Closed containers may rupture (due to build up of pressure) when exposed to extreme heat.

**Hazardous combustion products:**

**6. ACCIDENTAL RELEASE MEASURES**

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

**Environmental precautions:**
Do not allow product to enter sewer or waterways.

**Clean-up methods:**
Ensure adequate ventilation. Wear appropriate personal protective equipment. Refer to Section 8 "Exposure Controls / Personal Protection" prior to clean up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Scrape up spilled material and place in a closed container for disposal.
7. HANDLING AND STORAGE

Handling: Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Use only with adequate ventilation. Keep container closed.

Storage: For safe storage, store between 0 °C (32°F) and 32 °C (89.6 °F). Keep container tightly closed and in a cool, well-ventilated place away from incompatible materials. Keep away from heat, spark and flame. Protect from direct sunlight. Avoid moisture.

For information on product shelf life contact Henkel Customer Service at (800) 243-4874.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

<table>
<thead>
<tr>
<th>Hazardous Component(s)</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>AIHA WEEL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amine adduct</td>
<td>None</td>
<td>None</td>
<td>(SKIN) Aerosol.</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1 ppm (5 mg/m3)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>TWA Aerosol. (Skin sensitizer)</td>
<td></td>
</tr>
<tr>
<td>Tetraethylenepentamine</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1 ppm (6 mg/m3)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>TWA (SKIN)</td>
<td></td>
</tr>
<tr>
<td>Triethylenetetramine</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

Engineering controls: Use local ventilation if general ventilation is insufficient to maintain vapor concentration below established exposure limits.

Respiratory protection: Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

Eye/face protection: Safety goggles or safety glasses with side shields. Full face protection should be used if the potential for splashing or spraying of product exists.

Skin protection: Use chemical resistant, impermeable clothing including gloves and either an apron or body suit to prevent skin contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid
Color: Amber
Odor: Slight
Odor threshold: Not available.
pH: Not available.
Vapor pressure: Not available.
Boiling point/range: > 93 °C (> 199.4 °F) (1,013 hPa)
Melting point/range: Not available.
Vapor density: Not available.
Flash point: > 93 °C (> 199.4 °F) ; Estimated
Flammable/Explosive limits - lower: Not available.
Flammable/Explosive limits - upper: Not available.
Autoignition temperature: Not available.
Evaporation rate: Not available.
Solubility in water: Partially miscible
Partition coefficient (n-octanol/water): Not available.
VOC content: < 1.0 %; < 10 g/l Estimated
Viscosity: Not available.
Decomposition temperature: Not available.
10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions of storage and use.

Hazardous reactions: None under normal processing.


Reactivity: Not available.

Conditions to avoid: Keep away from heat, ignition sources and incompatible materials. Exposure to water vapour. Exposure to sunlight.

11. TOXICOLOGICAL INFORMATION

Relevant routes of exposure: Skin, Inhalation, Eyes, Ingestion

Potential Health Effects/Symptoms

Inhalation: Mists, vapors or liquid may cause severe irritation or burns.

Skin contact: Causes skin burns. May cause allergic skin reaction.

Eye contact: Causes serious eye damage.

Ingestion: If ingested, severe burns of the mouth and throat may occur, as well as perforation of the esophagus and the stomach.

<table>
<thead>
<tr>
<th>Hazardous Component(s)</th>
<th>LD50s and LC50s</th>
<th>Immediate and Delayed Health Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amine adduct</td>
<td>None</td>
<td>No Records</td>
</tr>
</tbody>
</table>
| Tetraethylene pentamine| Oral LD50 (RAT) = 3.99 g/kg  
                          | Oral LD50 (RAT) = 2.1 g/kg         
                          | Dermal LD50 (RABBIT) = 0.66 g/kg   |  Irritant, Mutagen, Allergen      |
| Triethylenetetramine   | None            | Allergen, Corrosive, Developmental, Irritant, Mutagen |

12. ECOLOGICAL INFORMATION

Ecological information: Not available.
13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of according to Federal, State and local governmental regulations.

Hazardous waste number: It is the responsibility of the user to determine if an item is hazardous as defined in the Resource Conservation and Recovery Act (RCRA) at the time of disposal. Product uses, transformations, mixtures, processes, etc., may render the resulting material hazardous, under the criteria of ignitability, corrosivity, reactivity and toxicity characteristics of the Toxicity Characteristics Leaching Procedure (TCLP) 40 CFR 261.20-24.

14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

U.S. Department of Transportation Ground (49 CFR)
Proper shipping name: Amines, liquid, corrosive, n.o.s. (Tetraethylene pentamine, Triethylenetetramine, dimer fatty acid(C18)poly amido amine resin)
Hazard class or division: 8
Identification number: UN 2735
Packing group: III

International Air Transportation (ICAO/IATA)
Proper shipping name: Amines, liquid, corrosive, n.o.s. (Tetraethylene pentamine, Triethylenetetramine, dimer fatty acid(C18)poly amido amine resin)
Hazard class or division: 8
Identification number: UN 2735
Packing group: III

Water Transportation (IMO/IMDG)
Proper shipping name: AMINES, LIQUID, CORROSIVE, N.O.S. (Tetraethylene pentamine, Triethylenetetramine, dimer fatty acid(C18)poly amido amine resin)
Hazard class or division: 8
Identification number: UN 2735
Packing group: III
Marine pollutant: dimer fatty acid(C18)poly amido amine resin

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12 (b) Export Notification: None above reporting de minimis
CERCLA/SARA Section 302 EHS: None above reporting de minimis
CERCLA/SARA Section 311/312: Immediate Health, Delayed Health
CERCLA/SARA Section 313: None above reporting de minimis
California Proposition 65: No California Proposition 65 listed chemicals are known to be present.

Canada Regulatory Information

CEPA DSL/NDSL Status: All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: New Safety Data Sheet format.
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