1. PRODUCT AND COMPANY IDENTIFICATION

Product name: TRABOND 2151 BIPAX 3 GR - R
Product type: Epoxy resin
Restriction of Use: None identified
Company address: Henkel Corporation
One Henkel Way
Rocky Hill, Connecticut 06067

IDH number: 1382560
Region: United States
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

DANGER:
CAUSES SKIN IRRITATION.
MAY CAUSE AN ALLERGIC SKIN REACTION.
CAUSES SERIOUS EYE IRRITATION.
MAY DAMAGE FERTILITY OR THE UNBORN CHILD.

HAZARD CLASS | HAZARD CATEGORY
-------------|-----------------
SKIN IRRITATION | 2
EYE IRRITATION | 2A
SKIN SENSITIZATION | 1
REPRODUCTIVE TOXICITY | 1B

PICTOGRAM(S)

Precautionary Statements

Prevention:
Obtain special instructions before use. Do not handle until all safety precautions have been
read and understood. 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. Use personal protective equipment as required.

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
exposed or concerned: Get medical attention. IF skin irritation or rash occurs: Get medical
attention. If eye irritation persists: Get medical attention. Take off contaminated clothing.

Storage:
Store locked up.

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

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the

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>
<tbody>
<tr>
<td>Aluminum oxide, fibrous</td>
<td>1344-28-1</td>
<td>60 - 100</td>
</tr>
<tr>
<td>Epoxy resin</td>
<td>Proprietary</td>
<td></td>
</tr>
<tr>
<td>Silica, amorphous, fumed, crystal-free</td>
<td>112945-52-5</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Butyl 2,3-epoxypropyl ether</td>
<td>2426-08-6</td>
<td>0.1 - 1</td>
</tr>
</tbody>
</table>

* Exact percentage is a trade secret. Concentration range is provided to assist users in providing appropriate protections.

4. FIRST AID MEASURES

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

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

**Eye contact:**
Rinse immediately with plenty of water, also under the eyelids, 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 turn-out gear. In case of fire, keep containers cool with water spray.

**Unusual fire or explosion hazards:**
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:**
Remove all sources of ignition. Evacuate and ventilate spill area; dike spill to prevent entry into water system; wear full protective equipment during clean-up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Scrape up as much material as possible. Store in a partly filled, closed container until disposal.
7. HANDLING AND STORAGE

Handling: Use only with adequate ventilation. Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Refer to Section 8.

Storage: For safe storage, store at or below 25 °C (77°F) Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

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>Aluminum oxide, fibrous</td>
<td>1 mg/m3 TWA Respirable fraction.</td>
<td>5 mg/m3 PEL Respirable fraction. 15 mg/m3 PEL Total dust.</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>Silica, amorphous, fumed, crystal-free</td>
<td>10 mg/m3 TWA Inhalable dust. 3 mg/m3 TWA Respirable fraction.</td>
<td>20 MPPCF TWA 0.8 mg/m3 TWA</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Butyl 2,3-epoxypropyl ether</td>
<td>3 ppm TWA (SKIN)</td>
<td>50 ppm (270 mg/m3) PEL</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

Engineering controls: Provide adequate local exhaust ventilation to maintain worker exposure below 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. Safety showers and eye wash stations should be available.

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, Paste               |
| Color:                                 | Blue                        |
| Odor:                                  | Slight                      |
| Odor threshold:                        | Not available.              |
| pH:                                    | Not available.              |
| Vapor pressure:                        | Not applicable              |
| Boiling point/range:                   | Not available.              |
| Melting point/range:                   | Not applicable              |
| Specific gravity:                      | 2.5                         |
| Vapor density:                         | Not applicable              |
| Flash point:                           | > 485 °F (> 251.67 °C)      |
| Flammable/Explosive limits - lower:    | Not available.              |
| Flammable/Explosive limits - upper:    | Not available.              |
| Autoignition temperature:              | Not available.              |
| Evaporation rate:                      | Not applicable              |
| Solubility in water:                   | Insoluble                   |
| Partition coefficient (n-octanol/water):| Not applicable              |
| VOC content:                           | 1.5 g/l                     |
| Viscosity:                             | Not available.              |
10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions of storage and use.

Hazardous reactions: None under normal processing. Polymerization may occur at elevated temperature or in the presence of incompatible materials.


Reactivity: Not available.

Conditions to avoid: Elevated temperatures. Heat, flames, sparks and other sources of ignition. Store away from incompatible materials. CAUTION! N-nitrosamines (many of which are known to be potent carcinogens) may be formed when the product comes in contact with nitrous acid, nitrates or atmospheres with high nitrous oxide concentrations.

11. TOXICOLOGICAL INFORMATION

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

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. Direct contact may cause temporary redness and discomfort.
- **Ingestion**: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

<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>Aluminum oxide, fibrous</td>
<td>None</td>
<td>Irritant, Nuisance dust, Corrosive</td>
</tr>
<tr>
<td>Epoxy resin</td>
<td>None</td>
<td>Allergen, Irritant</td>
</tr>
<tr>
<td>Silica, amorphous, fumed, crystal-free</td>
<td>None</td>
<td>Nuisance dust</td>
</tr>
<tr>
<td>Butyl 2,3-epoxypropyl ether</td>
<td>Oral LD50 (RAT) = 2,000 mg/kg</td>
<td>Irritant, Allergen, Central nervous system, Liver, Mutagen</td>
</tr>
<tr>
<td></td>
<td>Oral LD50 (RAT) = 2.05 g/kg</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dermal LD50 (RABBIT) = 0.788 g/kg</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Inhalation LC50 (RAT) = 670 mg/l</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Inhalation LC50 (RAT, 8 h) = &gt; 670 mg/l</td>
<td></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>Aluminum oxide, fibrous</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>Silica, amorphous, fumed, crystal-free</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Butyl 2,3-epoxypropyl ether</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: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

Water Transportation (IMO/IMDG)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

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: This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Aluminum oxide, fibrous (CAS# 1344-28-1).

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: Sheila Gines, Regulatory Affairs Specialist

Issue date: 04/16/2014
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