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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: HYSOL ES4212 PART B GAL
Product type: Epoxy Hardener
Company address:
Henkel Corporation
One Henkel Way
Rocky Hill, Connecticut 06067

Item No. : EB4212-B50 / IDH No. 497988
Region: United States
Contact Information:
Telephone: (860) 571-5100
Emergency telephone: (860) 571-5100
Internet: www.henkelna.com

2. COMPOSITION/INFORMATION ON INGREDIENTS

| <u>Hazardous components</u> | <u>%</u> | <u>ACGIH TLV</u> | <u>OSHA PEL</u> | <u>OTHER</u> |
|--|----------|---|---|---|
| Amine reacted fatty acid 68953-36-6 | 30-60 | None | None | None |
| Talc 14807-96-6 | 10-30 | 2 mg/m ³ TWA particulate matter containing no asbestos and <1% crystalline silica | = 20 mppcf TWA | 50 ppm |
| Tetraethylenepentamine 112-57-2 | 5-10 | None | None | 5 mg/m ³ , skin, dermal sensitizer TWA, (WEEL) |
| Calcium carbonate 1317-65-3 | 1-5 | 10 mg/m ³ TWA (particulate matter containing no asbestos and <1% crystalline silica) | 15 mg/m ³ TWA total 5 mg/m ³ TWA | None |
| Silica, quartz 14808-60-7 | 0.1-1 | 0.025 mg/m ³ TWA respirable fraction | 0.1mg/m ³ TWA (respirable) | None |

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

HMIS:

Physical state: Liquid
Color: Tan
Odor: Ammoniacal

HEALTH: 2*
FLAMMABILITY: 1
PHYSICAL HAZARD: 0
Personal Protection: See Section 8

WARNING: MAY CAUSE ALLERGIC SKIN REACTION.
MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION.

Relevant routes of exposure: Inhalation, Skin contact, Eye contact, Ingestion

Potential Health Effects

Inhalation: May cause respiratory tract irritation. Respirable crystalline silica (quartz) is classified as a carcinogen. The crystalline silica present in this product is encapsulated in the liquid mixture and could only be liberated by sanding or abrading, and then not a pure crystalline silica. Appropriate precautions should be taken if the product is sanded or abraded to preclude personnel from breathing the dust.

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

Eye contact: May cause irritation.

Ingestion: Not expected under normal conditions of use. Swallowing small amounts during normal handling is not likely to cause harmful effects; swallowing large amounts may be harmful.

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Existing conditions aggravated by exposure:

Eye, skin, and respiratory disorders.

See Section 11 for additional toxicological information.

4. FIRST AID MEASURES

| | |
|----------------------|--|
| Inhalation: | Remove 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 shoes. Get medical attention. Wash clothing before reuse. |
| Eye contact: | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Check for and remove any contact lenses. 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 immediately. |

5. FIRE-FIGHTING MEASURES

| | |
|--|--|
| Flash point: | 101.66°C (215°F) Closed cup |
| Autoignition temperature: | Not determined |
| Flammable/Explosive limits-lower %: | Not available |
| Flammable/Explosive limits-upper %: | Not available |
| Extinguishing media: | Dry chemical. Carbon dioxide (CO2). Water spray. |
| Special fire fighting procedures: | Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear. |
| Unusual fire or explosion hazards: | None |
| Hazardous combustion products: | Oxides of carbon, oxides of nitrogen, irritating organic vapors. |

6. ACCIDENTAL RELEASE MEASURES

| | |
|-----------------------------------|---|
| Environmental precautions: | Prevent product from entering drains or open waters. |
| Clean-up methods: | 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). Keep in suitable and closed containers for disposal. |

7. HANDLING AND STORAGE

| | |
|-------------------------------|--|
| Handling: | Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Avoid all ignition sources in storing and handling this material. Keep cool in accordance with label instructions. Wear protective equipment when handling. |
| Storage: | Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use. |
| Incompatible products: | Refer to Section 10. |

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

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

| | |
|--------------------------------|--|
| Engineering controls: | Use local exhaust ventilation if the potential for airborne exposure exists. |
| Respiratory protection: | Use NIOSH approved respirator if there is potential to exceed exposure limit(s). |

Skin protection: Neoprene, Butyl-rubber, or nitrile-rubber gloves. Cover as much of the exposed skin area as possible with appropriate clothing.

Eye/face protection: Chemical splash goggles or safety glasses with side shields. In a splash hazard environment, chemical goggles should be used in combination with a full face shield.

See Section 2 for exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid
Color: Tan
Odor: Ammoniacal
Vapor pressure: Not determined
pH: Alkaline
Boiling point/range: Not determined
Melting point/range: Not available
Specific gravity: 1.45
Vapor density: Not available
Evaporation rate: Slower than butyl acetate
Solubility in water: Partly soluble
Partition coefficient (n-octanol/water): Not available
VOC content: 0%; 0 grams/liter (estimated)

10. STABILITY AND REACTIVITY

Stability: Stable at normal conditions

Hazardous polymerization: None under normal processing.

Hazardous decomposition products: None reasonably foreseeable

Incompatibility: Strong oxidizing agents.

Conditions to avoid: Storage with incompatible materials. Keep away from open flames, hot surfaces and sources of ignition.

11. TOXICOLOGICAL INFORMATION

Carcinogen Status

| Hazardous components | NTP Carcinogen | IARC Carcinogen | OSHA Carcinogen |
|--|------------------|-----------------|-----------------|
| Amine reacted fatty acid 68953-36-6 | No | No | No |
| Talc 14807-96-6 | No | No | No |
| Tetraethylenepentamine 112-57-2 | No | No | No |
| Calcium carbonate 1317-65-3 | No | No | No |
| Silica, quartz 14808-60-7 | Known Carcinogen | Group 1 | Yes |

Literature Referenced Target Organ & Other Health Effects

| Hazardous components | Health Effects/Target Organs |
|--|---|
| Amine reacted fatty acid 68953-36-6 | No Records |
| Talc 14807-96-6 | Some evidence of carcinogenicity, Lung, Irritant |
| Tetraethylenepentamine 112-57-2 | Mutagen, Irritant, Allergen |
| Calcium carbonate 1317-65-3 | Nuisance dust |
| Silica, quartz 14808-60-7 | Some evidence of carcinogenicity, Lung, Immune system |

12. ECOLOGICAL INFORMATION

Ecological information: Not available

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of in accordance with Federal, State and local regulations.

EPA hazardous waste number: Not a RCRA hazardous waste.

14. TRANSPORT INFORMATION

The shipping classifications in this section are for non-bulk packaging only (unless otherwise specified). Shipping classification may be different for bulk packaging.

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.

CERCLA/SARA Section 302 EHS: None.
CERCLA/SARA Section 311/312: Immediate Health Hazard, Delayed Health Hazard
CERCLA/SARA 313: None.

California Proposition 65: This product contains a chemical known to the State of California to cause cancer.

Canada Regulatory Information

CEPA DSL/NDL Status: All components are listed on or are exempt from listing on the Domestic Substances List.
WHMIS hazard class: D.2.A, D.2.B

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: 9

Prepared by: Regulatory Affairs

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