

Material Safety Data Sheet



Revision Number: 004.0

Issue date: 12/29/2010

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: 3508 30cc EFD M/L
Product type: Underfill

IDH number: 1047433
Item number: 42355
Region: United States

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

Contact information:
Telephone: 860.571.5100
Emergency telephone: 860.571.5100
Internet: www.henkeln.com

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

| | | | |
|------------------------|---------------|-----------------------------|--------------------|
| Physical state: | Liquid, Paste | HEALTH: | *2 |
| Color: | Black | FLAMMABILITY: | 1 |
| Odor: | Slight, Epoxy | PHYSICAL HAZARD: | 0 |
| | | Personal Protection: | See MSDS Section 8 |

WARNING: MAY CAUSE ALLERGIC SKIN REACTION.
MAY BE HARMFUL IF SWALLOWED OR INHALED.
MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION.

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

Potential Health Effects

| | |
|----------------------|---|
| Inhalation: | Moderate respiratory tract irritation. May be harmful if inhaled. May cause central nervous system depression. May injure lung. |
| Skin contact: | Moderate skin irritation. May cause allergic skin reaction. Prolonged contact with skin may cause dermatitis. Rash. Dryness. |
| Eye contact: | Moderate eye irritation. May cause transient eye irritation. |
| Ingestion: | May be harmful if swallowed. |

Existing conditions aggravated by exposure: Eye, skin, and respiratory disorders. Skin allergies. Eczema. Asthma.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

| Hazardous components | CAS NUMBER | % |
|--|-------------|----------|
| Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) | 9003-36-5 | 60 - 100 |
| 2,2'-[Methylenebis(phenyleneoxymethylene)]bisoxirane | 39817-09-9 | 10 - 30 |
| Acrylonitrile, polymer with 1,3-butadiene and styrene | 9003-56-9 | 5 - 10 |
| Silica, amorphous, treated | 68909-20-6 | 5 - 10 |
| Iodonium, [4-(octyloxy)phenyl]phenyl-, (OC-6-11)- | 121239-75-6 | 1 - 5 |
| 1-Chloro-2,3-epoxypropane, polymer with polypropyleneglycol | 9072-62-2 | 1 - 5 |
| Carbon black | 1333-86-4 | 0.1 - 1 |

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4. FIRST AID MEASURES

| | |
|----------------------|---|
| Inhalation: | Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If symptoms develop and persist, get medical attention. |
| Skin contact: | Remove contaminated clothing and footwear. Immediately flush skin with plenty of water (using soap, if available). Wash clothing before reuse. Thoroughly clean shoes before reuse. If symptoms develop and persist, get medical attention. |
| 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. Give a conscious person several glasses of water. Never give anything by mouth to an unconscious person. If symptoms develop and persist, get medical attention. |

5. FIRE FIGHTING MEASURES

| | |
|--|--|
| Flash point: | > 100 °C (> 212°F) Setaflash Closed Cup |
| Autoignition temperature: | Not available |
| Flammable/Explosive limits - lower: | Not available |
| Flammable/Explosive limits - upper: | Not available |
| 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: | None |
| Hazardous combustion products: | Oxides of carbon. Oxides of nitrogen. Formaldehyde. Aldehydes. Acids. Hydrogen fluoride. Toxic fluorine compounds. Hydrocarbons. |

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 suitable protective clothing, gloves and eye/face protection. Scrape up as much material as possible. Store in a closed container until ready for disposal. |

7. HANDLING AND STORAGE

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|------------------|--|
| Handling: | Use only with adequate ventilation. Avoid contact with eyes, skin and clothing. Do not taste or swallow. Avoid breathing vapors or mists of this product. Keep container closed. Wash thoroughly after handling. |
| Storage: | For safe storage, store at or above 5 °C (41°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.

| Hazardous components | ACGIH TLV | OSHA PEL | AIHA WEEL | OTHER |
|--|---------------------------------|---------------|-----------|-------|
| Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) | None | None | None | None |
| 2,2'-[Methylenebis(phenyleneoxymethylene)]bisoxirane | None | None | None | None |
| Acrylonitrile, polymer with 1,3-butadiene and styrene | None | None | None | None |
| Silica, amorphous, treated | 10 mg/m3 TWA Inhalable dust. | 6 mg/m3 TWA | None | None |
| Iodonium, [4-(octyloxy)phenyl]phenyl-, (OC-6-11)- | None | None | None | None |
| 1-Chloro-2,3-epoxypropane, polymer with polypropyleneglycol | None | None | None | None |
| Carbon black | 3.5 mg/m3 TWA | 3.5 mg/m3 TWA | None | None |

| | |
|--------------------------------|--|
| Engineering controls: | Local exhaust ventilation is recommended when general ventilation is not sufficient to control airborne contamination. |
| 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. |
| Skin protection: | Use impermeable gloves and protective clothing as necessary to prevent skin contact. |

9. PHYSICAL AND CHEMICAL PROPERTIES

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|---|--|
| Physical state: | Liquid, Paste |
| Color: | Black |
| Odor: | Slight, Epoxy |
| Odor threshold: | Not available |
| pH: | Not available |
| Vapor pressure: | 0.00007 mbar (20 °C (68°F)) |
| Boiling point/range: | Not available |
| Melting point/ range: | Not available |
| Specific gravity: | 1.3 |
| Vapor density: | Heavier than air. |
| Flash point: | > 100 °C (> 212°F) Setafash 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 g/l (calculated) |

10. STABILITY AND REACTIVITY

| | |
|--|---|
| Stability: | Stable at normal conditions. |
| Hazardous reactions: | None under normal processing. |
| Hazardous decomposition products: | Oxides of carbon. Oxides of nitrogen. Formaldehyde. Acids. Hydrogen fluoride. Toxic fluorine compounds. Hydrocarbons. |
| Incompatible materials: | Strong oxidizing agents. Strong acids and strong bases. Amines. |
| Conditions to avoid: | Store away from incompatible materials. Heat, flames, sparks and other sources of ignition. |

11. TOXICOLOGICAL INFORMATION

| Hazardous components | NTP Carcinogen | IARC Carcinogen | OSHA Carcinogen (Specifically Regulated) |
|--|----------------|-----------------|---|
| Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) | No | No | No |
| 2,2'-[Methylenebis(phenyleneoxymethylene)]bisoxirane | No | No | No |
| Acrylonitrile, polymer with 1,3-butadiene and styrene | No | No | No |
| Silica, amorphous, treated | No | No | No |
| Iodonium, [4-(octyloxy)phenyl]phenyl-, (OC-6-11)- | No | No | No |
| 1-Chloro-2,3-epoxypropane, polymer with polypropyleneglycol | No | No | No |
| Carbon black | No | Group 2B | No |

| Hazardous components | Health Effects/Target Organs |
|--|---|
| Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) | Irritant, Allergen |
| 2,2'-[Methylenebis(phenyleneoxymethylene)]bisoxirane | No Target Organs |
| Acrylonitrile, polymer with 1,3-butadiene and styrene | No Target Organs |
| Silica, amorphous, treated | No Target Organs |
| Iodonium, [4-(octyloxy)phenyl]phenyl-, (OC-6-11)- | No Records |
| 1-Chloro-2,3-epoxypropane, polymer with polypropyleneglycol | Allergen, Blood, Bone Marrow, Immune system, Irritant, Reproductive |
| Carbon black | Respiratory, Some evidence of carcinogenicity |

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 shipping classifications in this sections 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 (Up to 6 oz. max per inner/primary package when shipped as originally packaged only)
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. (Bisphenol F diglycidyl ether, Bisphenol-F Epichlorhydrine resin) (Up to 6 oz. max per inner/primary package when shipped as originally packaged only)
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. (Bisphenol F diglycidyl ether, Bisphenol-F Epichlorhydrine resin) (Up to 6 oz. max per inner/primary package when shipped as originally packaged only)
Hazard class or division: 9
Identification number: UN 3082
Packing group: III

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 minimus
CERCLA/SARA Section 302 EHS: None above reporting de minimus
CERCLA/SARA Section 311/312: Immediate Health, Delayed Health
CERCLA/SARA 313: None above reporting de minimus
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: One or more components are not listed on, and are not exempt from listing on either the Domestic Substances List or the Non-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: 4,11

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