

IDH# 1188149



\*\*\* MATERIAL SAFETY DATA SHEET \*\*\*

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: ECCOBOND™ 286 WHITE, PART B  
Epoxy Adhesive (Hardener)

COMPANY ADDRESS: Henkel Electronic Materials LLC  
14000 Jamboree Road  
Irvine, CA 92606

EMERGENCY CONTACT NUMBERS:  
 MEDICAL: 1-877-671-4608 (toll free) or 1-303-592-1711  
 (24 hours - Poison Control Center)  
 TRANSPORT: CHEMTREC: 1-800-424-9300 (24 hours)  
 CHEMTREC International: 1-703-527-3887 (call collect)  
 Contact Information: 1-888-9-HENKEL (1-888-943-6535)  
 Internet: www.henkel.com/electronics

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER!  
 Possible cancer hazard.  
 CORROSIVE. CAUSES SEVERE OR PERMANENT DAMAGE TO EYES.  
 SEVERE SKIN IRRITANT. MAY CAUSE PERMANENT DAMAGE.  
 HARMFUL IF INHALED.  
 EYE IRRITANT.  
 HARMFUL IF SWALLOWED.  
 RESPIRATORY SENSITIZER.  
 SKIN SENSITIZER.  
 White Paste Amine Odor

EYE: Extremely severe irritant/corrosive. May cause severe burns which could lead to permanent damage or total loss of vision. The vapor and the liquid may cause burning, intense irritation and excessive watering of the eye.

SKIN CONTACT: Severely irritating; may cause permanent skin damage. Can be rapidly absorbed through skin. Repeated and/or prolonged contact may cause skin sensitization.

INHALATION: Vapor or aerosol, if generated, can cause irritation of the eyes, nose and respiratory tract. Possible respiratory sensitizer. Avoid breathing vapors or mists. Exposure to high concentrations may produce lung damage.

INGESTION: Severe irritation to mouth, throat, and stomach.

3. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL FAMILY: Formulated Epoxy Resin

COMPONENT	CAS NUMBER	CONCENTRATION (% by weight)
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Aluminum oxide	1344-28-1	>50
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	4246-51-9	10 - 20
Epoxy resin	PROPRIETARY	5 - 10
Silicon dioxide, crystalline free	112945-52-5	1 - 5
Titanium dioxide	13463-67-7	<0.5

**4. FIRST-AID MEASURES**

EYE	Immediately irrigate with eyewash solution or clean water, holding the eyelids apart, for at least 15 minutes. Obtain immediate medical attention.
SKIN CONTACT	Immediately flush with large amounts of water; use soap if available. Remove contaminated clothing, including shoes, after flushing has begun. Obtain immediate medical attention.
INHALATION	Remove to fresh air. If breathing is difficult, give oxygen. If breathing has stopped, give artificial respiration. Get medical attention.
INGESTION	If individual is conscious, give water to dilute stomach contents. Get prompt medical attention. DO NOT attempt to give anything by mouth to an unconscious person.

**5. FIREFIGHTING MEASURES**

AUTOIGNITION	Not available
FLASH POINT	> 200 °F
EXTINGUISHING MEDIA	CO2; Dry Chemical; Water Spray
SPECIAL FIREFIGHTING PROCEDURES	Fire fighters should be equipped with self-contained breathing apparatus to protect against potentially toxic and irritating fumes.
FIRE & EXPLOSION HAZARDS	A self contained breathing apparatus and suitable protective clothing should be worn in fire conditions.
HAZARDOUS COMBUSTION PRODUCTS	Carbon dioxide, carbon monoxide, oxides of nitrogen and unknown organics.
LOWER EXPLOSION LIMIT (%)	Aldehydes Not applicable
UPPER EXPLOSION LIMIT (%)	Not applicable

**6. ACCIDENTAL RELEASE MEASURES**

SPILL AND LEAK PROCEDURES	Absorb spillages onto sand, earth or any suitable absorbent material. Sweep up and shovel into waste drums. Wash the spillage area with water.
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For safety and environmental precautions, please review entire Material Safety Data Sheet for necessary information.

**7. HANDLING AND STORAGE**

STORAGE TEMPERATURE	25 °C
SHELF LIFE, (Days)	365
HANDLING/STORAGE	Store in cool, dry place. Keep in a well ventilated place.
SENSITIVITY TO STATIC ELECTRICITY	No
SPECIAL SENSITIVITY	Keep away from heat.
SENSITIVITY TO MECHANICAL IMPACT	No

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

COMPONENT	EXPOSURE LIMITS		
	ACGIH	OSHA	Mfg Working Standard
Aluminum oxide	10 mg/m3 PEL (total dust); 5 mg/m3 PEL (respirable)	15 mppcf TWA (respirable fraction); 5	Manufacturer: 6 mg/m3

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	fraction, listed under Particulates not otherwise regulated).	mg/m3 TWA (respirable fraction); 50 mppcf TWA (total dust); 15 mg/m3 TWA (total dust) 15 mppcf TWA
Silicon dioxide, crystalline free	10 mg/m3 PEL (total dust); 5 mg/m3 PEL (respirable fraction, listed under Particulates not otherwise regulated).	5 mg/m3 TWA (respirable fraction); 50 mppcf TWA (total dust); 15 mg/m3 TWA (total dust) 15 mppcf TWA
Titanium dioxide	10 mg/m3 TWA.	15 mg/m3 TWA (total dust)

  

VENTILATION REQUIREMENTS	Local exhaust.
EYE PROTECTION REQUIREMENTS	Wear safety glasses with side shields.
GLOVE REQUIREMENTS	The use of chemically resistant gloves is recommended.
CLOTHING REQUIREMENTS	Employee must wear appropriate protective clothing and equipment to prevent any possibility of skin contact with this substance.
CHANGE/REMOVAL OF CLOTHING	Remove contaminated clothing and launder before reuse.
WASH REQUIREMENTS	Wash before eating, drinking, or using toilet facilities.
RESPIRATOR REQUIREMENTS	Local exhaust.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

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PURE SUBSTANCE OR MIXTURE	Mixture
PHYSICAL FORM	Paste
COLOR	White
ODOR	Amine
ODOR THRESHOLD	Not available
OXIDIZING PROPERTIES	Not applicable
SOLUBILITY IN WATER	Soluble
PARTITION COEFFICIENT (n-octanol/water)	Not determined.
SPECIFIC GRAVITY (WATER=1)	2.000
EVAPORATION RATE	Not applicable
VAPOR PRESSURE (mmHg)	Negligible @ 25°C
VAPOR DENSITY (air = 1)	Not applicable
VOLATILES	Negligible
VOLATILE ORGANIC COMPOUNDS	Negligible
AUTOIGNITION	Not available
FLASH POINT	> 200 °F

**10. STABILITY AND REACTIVITY**

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STABILITY	Stable
STABILITY DETAIL	Material is stable under normal temperatures and pressures.
MATERIALS TO AVOID	Strong oxidizers, Strong Lewis acids, Mineral acids
CONDITIONS TO AVOID	Elevated temperatures
HAZARDOUS DECOMPOSITION PRODUCTS	Carbon dioxide, carbon monoxide, oxides of nitrogen and unknown organics. Aldehydes

**11. TOXICOLOGICAL INFORMATION**

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ROUTE OF ENTRY	Skin Contact; Eye Contact; Ingestion
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<b>CARCINOGEN</b>	<u>IARC</u> <u>(group)</u>	<u>NTP</u>	<u>OSHA Substance</u> <u>Specific Regulation</u>
COMPONENT Titanium dioxide	Yes (2B)	No	Not Listed

**CHRONIC (LONG TERM) EFFECTS OF EXPOSURE**

TARGET ORGANS	Eyes; Skin; Respiratory system
RESPIRATORY SENSITIZATION	Sensitizer. May cause allergic reaction.
SKIN SENSITIZATION	Sensitizer. May cause allergic reaction.

**PRODUCT TOXICOLOGY**

PRODUCT INFORMATION	This health hazard assessment is based on a consideration of the composition of this product.
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COMPONENT	ORAL TOXICITY	NOTES ON ORAL TOXICITY
Aluminum oxide		No hazard in normal industrial use. Ingestion may cause irritation of the gastrointestinal tract. Non-toxic.
3,3'- Oxybis(ethyleneoxy)bis(propylamine)	Oral LD50: Rat 3160 mg/kg	Corrosive to mouth, throat and stomach.
Epoxy resin	Oral LD50: Rat > 5000 mg/kg	Unlikely to be hazardous if swallowed.
Titanium dioxide	Oral LD50: Rat > 10000 mg/kg	Unlikely to be hazardous if swallowed.
COMPONENT	DERMAL TOXICITY	NOTES ON DERMAL TOXICITY
Aluminum oxide		Slight/mild irritant.
3,3'- Oxybis(ethyleneoxy)bis(propylamine)	Dermal LD50: Rabbit 2500 mg/kg Dermal LD50: Rat > 2150 mg/kg	Corrosive.
Epoxy resin	Dermal LD50: Rabbit > 6000 mg/kg	Repeated or prolonged skin contact may result in moderate irritation. Repeated and/or prolonged contact may cause skin sensitization.
Titanium dioxide	Dermal LD50: Rabbit > 10000 mg/kg	May cause mechanical irritation.
COMPONENT	INHALATION TOXICITY	NOTES ON INHALATION TOXICITY
Aluminum oxide		Dust may cause irritation.
3,3'- Oxybis(ethyleneoxy)bis(propylamine)		Inhalation of dust or vapor may cause severe irritation to the nasal passages and/or the respiratory system.
Epoxy resin		Unlikely to be hazardous by inhalation because of the low vapor pressure of the material at ambient temperature.
Titanium dioxide	Inhalation LC50 (4hr): Rat 6.8 mg/l	Exposure to high concentrations may produce lung damage.

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COMPONENT	NOTES ON EYE IRRITATION
Aluminum oxide	Slight/mild irritant. Particulates may scratch eye surfaces and cause mechanical irritation.
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	Extremely severe irritant/corrosive. May cause severe burns which could lead to permanent damage or total loss of vision.
Epoxy resin	May cause eye irritation.
Titanium dioxide	Particulates may scratch eye surfaces and cause mechanical irritation.

**12. ECOLOGICAL INFORMATION**

POTENTIAL TO BIOACCUMULATE	Unknown.
AQUATIC TOXICITY	None Established

**13. DISPOSAL CONSIDERATIONS**

WASTE DISPOSAL METHODS	Disposal should be in accordance with local, state or national legislation.
EMPTY CONTAINER WARNINGS	Empty containers may contain product residue; follow MSDS and label warnings even after they have been emptied.

**14. TRANSPORTATION INFORMATION**

This section provided for general information only. The shipping description below may not represent requirements for all modes of transportation, packaging, shipping methods or locations outside of the United States.

FOR MORE COMPLETE TRANSPORTATION REGULATORY INFORMATION PLEASE REFER TO THE SHIPPING DOCUMENTS ACCOMPANYING THE SHIPMENT OF THIS PRODUCT.

**DOT CLASSIFICATION** Not Regulated

The information provided herein may not include the impact of additional regulatory requirements (eg, for materials meeting the definition of a hazardous waste under RCRA, hazardous substances under CERCLA, and/of marine pollutants under CWA or other similar federal, state or local laws) or any associated exceptions or exemptions under regulations applicable to the transport of this material.

**15. REGULATORY INFORMATION**

TSCA	All components are on the TSCA inventory.
Canadian Domestic Substance List (DSL)	Is on DSL
China (IECSC)	On the IECSC Inventory.
Philippines (PICCS)	On the PICCS Inventory.
EINECS	All components of this product are listed in EINECS or ELINCS, or are otherwise exempt from EU notification requirements.

SARA - Section 313 (Superfund Amendments and Reauthorization Act of 1986 - 40CFR 372)

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Aluminum oxide 1344-28-1

**CALIFORNIA PROPOSITION 65**

WARNING: This product contains the following chemicals that are known to the State of California to cause cancer, birth defects or other reproductive harm.

Unless a concentration is specified in Section 2 of the MSDS, the below chemical/s are present in trace amounts.

COMPONENT	CAS NUMBER
Phenyl glycidyl ether	122-60-1
Epichlorohydrin	106-89-8

**16. OTHER INFORMATION**

HMIS® Hazard Ratings

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs by OSHA's 29 CFR 1910.1200, we choose to provide them as a service to our customers using HMIS®. These ratings are to be used only with a fully implemented HMIS® program. To deal adequately with the safe handling of this material, all the information contained in this MSDS must be considered.

NPCA recommends that employers must determine appropriate PPE for the actual conditions under which this product is used in their workplace. For information on PPE codes, consult the HMIS® Implementation Manual.

When two ratings are provided for Health, the first represents the material 'as supplied', and the second represents the material 'in use'.

\* = chronic health hazard

HMIS® is a registered trademark of the National Paint and Coatings Association (NPCA).

<u>Health</u>	<u>Flammability</u>	<u>Physical Hazard</u>
*3	1	0

RECOMMENDED USE

Adhesive

PREPARED BY:

Regulatory Affairs

Henkel Electronic Materials

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