

Henkel Corporation

PRODUCT NUMBER: EC800281

ISSUE DATE: 01-March-2009



*** MATERIAL SAFETY DATA SHEET ***

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: TRA-BOND F112 RESIN
Epoxy Resin

COMPANY ADDRESS: Henkel Corporation
46 Manning Road
Billerica, MA 01821

EMERGENCY CONTACT NUMBERS:
MEDICAL: 1.866-359-5657 (Health & Safety Call Center-24 hours)
TRANSPORT: CHEMTREC: 1.800.424.9300 (24 hours)
CHEMTREC International: 1.703.527.3887 (call collect)
Customer Service: 1.781.828.3300

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING.
EYE IRRITANT.
HARMFUL IF SWALLOWED.
SKIN IRRITANT.
SKIN SENSITIZER.
Light yellow Liquid Slight Odor

EYE: Irritating, but does not injure eye tissue. Contact with eyes causes redness and discomfort which is transient.

SKIN CONTACT: Irritating to the skin. Repeated and/or prolonged contact may cause skin sensitization.

INHALATION: Unlikely to be hazardous by inhalation because of the low vapor pressure of the material at ambient temperature. Vapor or aerosol, if generated, can cause irritation of the eyes, nose and respiratory tract. Avoid breathing vapors or mists.

INGESTION: Low oral toxicity. Ingestion may cause irritation of the gastrointestinal tract. May cause nausea, vomiting and diarrhea.

3. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL FAMILY	Formulated Epoxy Resin		
COMPONENT	CAS NUMBER	CONCENTRATION (% by weight)	
2,2'[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane	1675-54-3	>50	
Phenol-formaldehyde polymer glycidyl ether	28064-14-4	35 - 50	

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.

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SKIN CONTACT	Wash skin with soap and water. If symptoms develop, obtain medical attention.
INHALATION	Remove to fresh air. If breathing is difficult, give oxygen. If breathing has stopped, give artificial respiration. Get medical attention.
INGESTION	DO NOT attempt to give anything by mouth to an unconscious person. DO NOT induce vomiting. If individual is conscious, give milk or water to dilute stomach contents. Keep warm and quiet. Get prompt medical attention.

5. FIREFIGHTING MEASURES

AUTOIGNITION	Not available
FLASH POINT	484 °F (Pensky-Martens Closed Tester)
EXTINGUISHING MEDIA	Foam; Water spray or fog, CO ₂ , Dry Chemical; Do not use direct water stream on burning liquid.
SPECIAL FIREFIGHTING PROCEDURES	A self contained breathing apparatus and suitable protective clothing should be worn in fire conditions.; Cool exposed equipment with water spray.
FIRE & EXPLOSION HAZARDS	Combustible at high temperatures. Combustion will evolve toxic and irritant vapors. Polymerization may take place at elevated temperatures.
HAZARDOUS COMBUSTION PRODUCTS	Carbon monoxide, carbon dioxide, chlorine compounds, hydrocarbons of indeterminate nature (depending on conditions).
LOWER EXPLOSION LIMIT (%)	Not applicable
UPPER EXPLOSION LIMIT (%)	Not applicable

6. ACCIDENTAL RELEASE MEASURES

SPILL AND LEAK PROCEDURES	Ventilate area. May cause allergic skin reaction. Use suitable protective clothing. Absorb spillages onto sand, earth or any suitable absorbent material. Do not allow to enter drains, sewers or watercourses. Scrape absorbed material into proper waste containers. Wash area with soap and water; prevent entry of wash water into drains or other waterways. Dispose of wastes and water in accordance with all applicable federal, state and local regulations.
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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)	180
HANDLING/STORAGE	Keep containers properly sealed and store indoors in a well ventilated area. Keep away from heat and sources of ignition. Keep away from oxidizing agents. Keep away from acids.
SENSITIVITY TO STATIC ELECTRICITY	No
SPECIAL SENSITIVITY	Store away from amines.
SENSITIVITY TO MECHANICAL IMPACT	No
OTHER PRECAUTIONS	This material should not be spilled, dumped, or flushed into sewers or public waterways.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

VENTILATION REQUIREMENTS	Use in a well-ventilated area. Vent curing oven to outdoors.
EYE PROTECTION REQUIREMENTS	Wear safety glasses with side shields. Eye washing equipment must be

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GLOVE REQUIREMENTS	provided at handling points. Employee must wear appropriate protective gloves to prevent contact with this substance. Impervious neoprene or rubber gloves are recommended. Wear thermal insulating gloves when handling hot masses.
CLOTHING REQUIREMENTS	Employee must wear appropriate protective clothing and equipment to prevent any possibility of skin contact with this substance. Uniforms, coveralls, or a lab coat should be worn.
CHANGE/REMOVAL OF CLOTHING	Remove contaminated clothing and launder before reuse. Discard shoes, belts, wallets, and any other contaminated leather items.
WASH REQUIREMENTS	Wash exposed areas with soap and water.
RESPIRATOR REQUIREMENTS	None required under normal handling conditions. Use NIOSH approved respirator if vapor or mist levels are irritating.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL FORM	Liquid
COLOR	Light yellow
ODOR	Slight
ODOR THRESHOLD	Not available
PH AS IS	Not applicable
pH IN (1%) SOLUTION	Not applicable
OXIDIZING PROPERTIES	Not applicable
BOILING POINT	> 500 °F
SOLUBILITY IN WATER	Insoluble
PARTITION COEFFICIENT (n-octanol/water)	Not applicable
VISCOSITY	11000 - 15000 cPs
SPECIFIC GRAVITY (WATER=1)	1.2
BULK DENSITY	9.76 lb/gal
EVAPORATION RATE	Not applicable
VAPOR PRESSURE (mmHg)	0.03 @ 25°C
VAPOR DENSITY (air = 1)	Not applicable
VOLATILES	Negligible
VOLATILE ORGANIC COMPOUNDS	Approximately 0.25 g/liter
AUTOIGNITION	Not available
FLASH POINT	484 °F (Pensky-Martens Closed Tester)

10. STABILITY AND REACTIVITY

STABILITY	Stable
STABILITY DETAIL	Material is stable under normal temperatures and pressures.
MATERIALS TO AVOID	Oxidizers, Bases, Acids, Amines
CONDITIONS TO AVOID	Avoid excessive heat.
HAZARDOUS DECOMPOSITION PRODUCTS	Thermal decomposition products are hazardous and/or toxic. Carbon monoxide, carbon dioxide, chlorine compounds, hydrocarbons of indeterminate nature (depending on conditions).
HAZARDOUS POLYMERIZATION CONDITIONS	Heat may cause hazardous polymerization.
REACTIVITY	May polymerize with amine compounds.

11. TOXICOLOGICAL INFORMATION

ROUTE OF ENTRY Eye Contact; Skin Contact; Inhalation

CARCINOGEN

IARC
(group)

NTP

OSHA Substance
Specific Regulation

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COMPONENT

There is no evidence that this product poses a carcinogenic risk under normal conditions of handling and use.

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

The toxicological properties of this product have not been fully evaluated. Use of good industrial hygiene practices is required. Avoid direct contact with skin or eyes. Do not ingest or inhale.

TARGET ORGANS SKIN SENSITIZATION

Skin; Eyes
Sensitizer. May cause allergic reaction.

PRODUCT TOXICOLOGY PRODUCT INFORMATION

Low acute toxicity under normal conditions of handling and use.

EYE IRRITATION

Slightly irritant to skin and eyes. Vapor released during hot processing may be irritant to the respiratory system.

COMPONENT

2,2'[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis oxirane

ORAL TOXICITY

Oral LD50: Rat > 4 g/kg
Oral LD50: Rat 11 g/kg

NOTES ON ORAL TOXICITY

Low oral toxicity.

COMPONENT

2,2'[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis oxirane

DERMAL TOXICITY

NOTES ON DERMAL TOXICITY

Repeated and/or prolonged contact may cause skin sensitization. Repeated or prolonged skin contact may result in mild irritation.

COMPONENT

2,2'[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis oxirane

INHALATION TOXICITY

NOTES ON INHALATION TOXICITY

Vapors and/or aerosols which may be formed at elevated temperatures may be irritating to eyes and respiratory tract. Unlikely to be hazardous by inhalation because of the low vapor pressure of the material at ambient temperature.

COMPONENT

2,2'[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis oxirane

NOTES ON EYE IRRITATION

Irritating, but does not injure eye tissue.

12. ECOLOGICAL INFORMATION

POTENTIAL EFFECT ON ENVIRONMENT

Do not allow to enter drains, sewers or watercourses.

MOBILITY

Insoluble

PERSISTENCE AND DEGRADABILITY

Not readily biodegradable.

POTENTIAL TO BIOACCUMULATE

Unknown.

AQUATIC TOXICITY

None Established

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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
ICAO/IATA CLASSIFICATION	Not classified as dangerous.

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.
Australia (AICS)	On the AICS Inventory.
Korea (KECI)	On the KECI 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)	CAS NUMBER
Contains no substances at or above the reporting threshold under Section 313.	

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
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

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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).

Health

/2

Flammability

1

Physical Hazard

1

PREPARED BY:

Regulatory Affairs
Henkel Corporation

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