

IDH# 1187993



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

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME:	CATALYST 15 CLEAR Catalyst for Epoxy Resin
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

WARNING.
SEVERE EYE IRRITANT.
TOXIC IF SWALLOWED.
TOXIC IN CONTACT WITH SKIN.
HARMFUL IF SWALLOWED.
SKIN IRRITANT.
RESPIRATORY SENSITIZER.
SKIN SENSITIZER.
Colorless Liquid Amine Odor

EYE	Severe/very severe irritant.
SKIN CONTACT	Irritating to the skin. Can be absorbed through skin causing systemic toxic effects. 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.
INGESTION	Moderately toxic. Irritant and may cause nausea and vomiting.

3. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL FAMILY	Polyamide Resin		
COMPONENT	CAS NUMBER	CONCENTRATION (% by weight)	
Fatty acids, C18-unsatd., dimers, polymers with tall-oil fatty acids and triethylenetetramine	68082-29-1	>50	
Triethylenetetramine	112-24-3	5 - 10	
Terphenyl, hydrogenated	61788-32-7	5 - 10	

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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	Flush exposed areas thoroughly with soap and water until all chemical is removed. Remove contaminated clothing and laundry before reuse. Obtain immediate medical attention.
INHALATION	Remove to fresh air. Administer oxygen to aid breathing. Get medical attention.
INGESTION	DO NOT attempt to give anything by mouth to an unconscious person.

5. FIREFIGHTING MEASURES

AUTOIGNITION	Not available
FLASH POINT	> 170 °C (Pensky-Martens Closed Tester)
EXTINGUISHING MEDIA	CO ₂ ; Dry Chemical; Foam
SPECIAL FIREFIGHTING PROCEDURES	Fire fighters should be equipped with self-contained breathing apparatus to protect against potentially toxic and irritating fumes.; Cool exposed equipment with water spray.
FIRE & EXPLOSION HAZARDS	Combustible at high temperatures.
HAZARDOUS COMBUSTION PRODUCTS	Thermal decomposition products are hazardous and/or toxic. Carbon monoxide, carbon dioxide. Nitrogen oxides. Ammonia
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)	365
HANDLING/STORAGE	Store in a cool, dry area away from heat, sparks or fire. Keep containers properly sealed when not in use.
SENSITIVITY TO STATIC ELECTRICITY	No
SPECIAL SENSITIVITY	Keep away from acids, oxidising agents, flammable and combustible materials.
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

COMPONENT	EXPOSURE LIMITS		
	<u>ACGIH</u>	<u>OSHA</u>	<u>Mfg Working Standard</u>

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Terphenyl, hydrogenated 0.5 ppm TWA (non-irradiated).

VENTILATION REQUIREMENTS	Local mechanical ventilation. Sufficient to keep vapors below TLV exposure limits.
EYE PROTECTION REQUIREMENTS	Safety glasses, goggles or face shield to protect against splashing.
GLOVE REQUIREMENTS	The use of chemically resistant gloves is recommended. PVC is recommended.
CLOTHING REQUIREMENTS	Wear protective equipment to comply with good occupational hygiene practice.
CHANGE/REMOVAL OF CLOTHING	Remove contaminated clothing and launder before reuse. Discard shoes, belts, wallets, and any other contaminated leather items.
WASH REQUIREMENTS	Wash before eating, drinking, or using toilet facilities.
RESPIRATOR REQUIREMENTS	Respiratory protection required if the exposure level is unknown or has been measured and found to exceed the published exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

PURE SUBSTANCE OR MIXTURE	Mixture
PHYSICAL FORM	Liquid
COLOR	Colorless
ODOR	Amine
ODOR THRESHOLD	Not available
OXIDIZING PROPERTIES	Not applicable
BOILING POINT	> 176 °C
SOLUBILITY IN WATER	Slightly Soluble
PARTITION COEFFICIENT (n-octanol/water)	Not determined.
SPECIFIC GRAVITY (WATER=1)	0.96
EVAPORATION RATE	Not applicable
VAPOR PRESSURE (mmHg)	< 10.34 mm Hg @ 21°C
VAPOR DENSITY (air = 1)	Not applicable
VOLATILES	Negligible
VOLATILE ORGANIC COMPOUNDS	Negligible
AUTOIGNITION	Not available
FLASH POINT	> 170 °C (Pensky-Martens Closed Tester)

10. STABILITY AND REACTIVITY

STABILITY	Stable
STABILITY DETAIL	Material is stable under normal temperatures and pressures.
MATERIALS TO AVOID	Mineral acids, Organic acids, Sodium hypochlorite, Calcium hypochlorite, Strong oxidizers
HAZARDOUS DECOMPOSITION PRODUCTS	Thermal decomposition products are hazardous and/or toxic. Carbon monoxide, carbon dioxide. Nitrogen oxides. Ammonia
HAZARDOUS POLYMERIZATION CONDITIONS	Hazardous polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

ROUTE OF ENTRY Eye Contact; Skin Contact; Inhalation

CARCINOGEN	<u>IARC</u>	<u>NTP</u>	<u>OSHA Substance</u>
	<u>(group)</u>		<u>Specific Regulation</u>

COMPONENT
There is no evidence that this product poses a carcinogenic

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risk under normal conditions
of handling and use.

CHRONIC (LONG TERM) EFFECTS OF EXPOSURE

TARGET ORGANS Eyes; Skin; Kidneys; Liver; Central nervous 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.
This material causes irritation following skin contact and can cause serious damage to the eyes.

COMPONENT	ORAL TOXICITY	NOTES ON ORAL TOXICITY
Fatty acids, C18-unsatd., dimers, polymers with tall-oil fatty acids and triethylenetetramine		Moderately toxic. Irritant and may cause nausea and vomiting.
Triethylenetetramine	Oral LD50: Rat 4340 mg/kg Oral LD50: Rabbit 5500 mg/kg Oral LD50: Mouse 1600 mg/kg	Slightly toxic. Corrosive to mouth, throat and stomach.
Terphenyl, hydrogenated		No hazard in normal industrial use.
COMPONENT	DERMAL TOXICITY	NOTES ON DERMAL TOXICITY
Fatty acids, C18-unsatd., dimers, polymers with tall-oil fatty acids and triethylenetetramine		Irritating to the skin. Repeated and/or prolonged contact may cause skin sensitization.
Triethylenetetramine	Dermal LD50: Rabbit 800 mg/kg	Corrosive. Slightly toxic. Skin sensitizer.
Terphenyl, hydrogenated		Irritating to the skin.
COMPONENT	INHALATION TOXICITY	NOTES ON INHALATION TOXICITY
Fatty acids, C18-unsatd., dimers, polymers with tall-oil fatty acids and triethylenetetramine		Vapor or aerosol, if generated, can cause irritation of the eyes, nose and respiratory tract. Possible respiratory sensitizer.
Triethylenetetramine		Respiratory irritant. Possible respiratory sensitizer.
Terphenyl, hydrogenated	Inhalation LC50 (4hr): Rat > 11.1 mg/l	Irritating and/or toxic vapors may be released at elevated temperatures.
COMPONENT		NOTES ON EYE IRRITATION
Fatty acids, C18-unsatd., dimers, polymers with tall-oil fatty acids and triethylenetetramine		Severe/very severe irritant.
Triethylenetetramine		Corrosive.

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Terphenyl, hydrogenated

Irritating, but does not injure eye tissue.

12. ECOLOGICAL INFORMATION

POTENTIAL EFFECT ON ENVIRONMENT	Unknown.
PERSISTENCE AND DEGRADABILITY	Unknown.
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.
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)
Contains no substances at or above the reporting threshold under Section 313.

CAS NUMBER

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.

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COMPONENT	CAS NUMBER
Benzene	71-43-2

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

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

RECOMMENDED USE

Hardener.

PREPARED BY:

Regulatory Affairs

Henkel Electronic Materials

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