

IDH# 1188133



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

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: STYCAST™ 2850GT BLACK  
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.  
 Possible cancer hazard.  
 Suspected of causing genetic defects.  
 EYE IRRITANT.  
 HARMFUL IF SWALLOWED.  
 SKIN IRRITANT.  
 SKIN SENSITIZER.  
 Black Liquid Slight Odor

EYE: Will cause eye irritation. May cause permanent damage if eye is not immediately irrigated.

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. If the cured product is to be sanded or ground, wet sanding is recommended to eliminate airborne dust. Appropriate respiratory protection is suggested.

INGESTION: Irritant and may cause nausea and vomiting.

3. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL FAMILY	Epoxy Resin		
COMPONENT	CAS NUMBER	CONCENTRATION (% by weight)	
Aluminum oxide	1344-28-1	>50	
Epoxy resin	PROPRIETARY	20 - 35	
Diatomaceous earth, calcined	91053-39-3	1 - 5	

**Henkel**

PRODUCT NUMBER: EC150015

ISSUE DATE: 14-December-2010

IDH# 1188133

Silica, crystalline	14464-46-1	1 - 5
Butyl glycidyl ether	2426-08-6	1 - 5
Carbon black	1333-86-4	<0.5
Silica, crystalline	14808-60-7	<0.5

**4. FIRST-AID MEASURES**

EYE	Immediately irrigate with eyewash solution or clean water, holding the eyelids apart, for at least 10 minutes.
SKIN CONTACT	Wash skin with soap and water. If symptoms develop, obtain medical attention.
INHALATION	Remove to fresh air. Administer oxygen to aid breathing. Get medical attention.
INGESTION	If individual is conscious, give water to dilute stomach contents. Get prompt medical attention.

**5. FIREFIGHTING MEASURES**

AUTOIGNITION	Not available
FLASH POINT	> 200 °F
EXTINGUISHING MEDIA	Water spray or fog, CO2, dry chemical
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	Carbon monoxide, carbon dioxide, unknown hydrocarbons.
LOWER EXPLOSION LIMIT (%)	Not determined.
UPPER EXPLOSION LIMIT (%)	Not determined.

**6. ACCIDENTAL RELEASE MEASURES**

SPILL AND LEAK PROCEDURES	Evacuate immediate area and dike area to contain spill. Extinguish open flames and ignition sources in the immediate area. Wear proper protective clothing, gloves, and splash goggles. Absorb as much of spilled material as possible with rags, sand, vermiculite or other absorbent material. Scrape absorbed material into designated waste containers. Wash area thoroughly with detergent and rinse, taking care to prevent runoff into drains or other waterways. All spilled material, absorbed waste and wash water must be disposed of in accordance with all 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	Keep containers properly sealed and store indoors in a well ventilated area. Keep away from heat and sources of ignition.
SENSITIVITY TO STATIC ELECTRICITY	No
SPECIAL SENSITIVITY	No
SENSITIVITY TO MECHANICAL IMPACT	No

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

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

**Henkel**

PRODUCT NUMBER: EC150015

ISSUE DATE: 14-December-2010

IDH# 1188133

Aluminum oxide	10 mg/m3 PEL (total dust); 5 mg/m3 PEL (respirable fraction, listed under Particulates not otherwise regulated).	15 mppcf TWA (respirable fraction); 5 mg/m3 TWA (respirable fraction); 50 mppcf TWA (total dust); 15 mg/m3 TWA (total dust)	Manufacturer: 6 mg/m3
Silica, crystalline	ACGIH-TWA: 0.05 mg/m3.	OSHA-PEL: 0.05 mg/m3	
Butyl glycidyl ether	Skin - potential significant contribution to overall exposure by the cutaneous route 3 ppm TWA.	50 ppm TWA; 270 mg/m3 TWA	
Carbon black	3.5 mg/m3 TWA.	3.5 mg/m3 TWA	
Silica, crystalline	0.025 mg/m3 TWA (respirable fraction).	((250)/(%SiO2 + 5) mppcf TWA (respirable)); ((10)/(%SiO2 + 2) mg/m3 TWA (respirable)); ((30)/(%SiO2 + 2) mg/m3 TWA (total dust))	

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	Neoprene or natural rubber 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.
WASH REQUIREMENTS	Showers and eye washing equipment must be provided at handling points.
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	Black
ODOR	Slight
ODOR THRESHOLD	None Established
MOLECULAR WEIGHT	Not applicable
OXIDIZING PROPERTIES	Not applicable
BOILING POINT	Not determined.
SOLUBILITY IN WATER	Insoluble
PARTITION COEFFICIENT (n-octanol/water)	Not determined.
SPECIFIC GRAVITY (WATER=1)	2.35
EVAPORATION RATE	Not determined.
VAPOR PRESSURE (mmHg)	< 0.1
VAPOR DENSITY (air = 1)	Not applicable
VOLATILES	< 2 %

**Henkel**

PRODUCT NUMBER: EC150015

ISSUE DATE: 14-December-2010

IDH# 1188133

VOLATILE ORGANIC COMPOUNDS	< 0.8 g/liter
AUTOIGNITION	Not available
FLASH POINT	> 200 °F

**10. STABILITY AND REACTIVITY**

STABILITY	Stable
STABILITY DETAIL	When heated to very high temperatures, material may emit toxic or irritating fumes.
MATERIALS TO AVOID	Amines, Acids, Oxidizers, Polyamide resins, Alcohols
HAZARDOUS DECOMPOSITION PRODUCTS	Carbon dioxide, carbon monoxide, oxides of nitrogen and unknown organics. Aldehydes
HAZARDOUS POLYMERIZATION CONDITIONS	Hazardous polymerization has not been reported to occur under normal temperatures and pressures.

**11. TOXICOLOGICAL INFORMATION**

ROUTE OF ENTRY	Eye Contact; Skin Contact; Inhalation; Ingestion		
<b>CARCINOGEN</b>	<u>IARC</u>	<u>NTP</u>	<u>OSHA Substance</u>
COMPONENT	<u>(group)</u>		<u>Specific Regulation</u>
Silica, cristobalite	Yes (1)	No	Not Listed
Carbon black	Yes (2B)	No	Not Listed
Silica, crystalline	Yes (1)	Known Human Carcinogen	Not Listed

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

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

**PRODUCT TOXICOLOGY**  
PRODUCT INFORMATION

This data sheet is based on a consideration of the properties of the constituents.

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.
Epoxy resin	Oral LD50: Rat > 5000 mg/kg	Unlikely to be hazardous if swallowed.
Diatomaceous earth, calcined		No hazard in normal industrial use.
Silica, crystalline		Ingestion may cause irritation of the gastrointestinal tract.
Butyl glycidyl ether	Oral LD50: Rat 1000 mg/kg	May cause nausea, vomiting and diarrhea.
Carbon black	Oral LD50: Rat > 8000 mg/kg	Unlikely to be hazardous if swallowed. Ingestion may cause irritation of the gastrointestinal tract.
Silica, crystalline		No hazard in normal industrial use.

COMPONENT	DERMAL TOXICITY	NOTES ON DERMAL TOXICITY
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**Henkel**

PRODUCT NUMBER: EC150015

ISSUE DATE: 14-December-2010

IDH# 1188133

Aluminum oxide		Slight/mild irritant.
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.
Diatomaceous earth, calcined		Repeated or prolonged skin contact may result in moderate irritation.
Silica, crystalline		Non-irritant.
Butyl glycidyl ether	Dermal LD50: Rabbit 788 mg/kg	Severely irritating; may cause permanent skin damage. Repeated and/or prolonged contact may cause irritation and skin sensitization.
Carbon black		Non-irritant.
Silica, crystalline		Non-irritant.
COMPONENT	INHALATION TOXICITY	NOTES ON INHALATION TOXICITY
Aluminum oxide		Dust may cause irritation.
Epoxy resin		Unlikely to be hazardous by inhalation because of the low vapor pressure of the material at ambient temperature.
Diatomaceous earth, calcined		High concentrations of dust are irritating to the respiratory tract. Dust generated during product use is in the respirable range.
Silica, crystalline		Dust is irritant to the respiratory tract. Exposure to high concentrations may produce lung damage. Dust generated during product use is in the respirable range.
Butyl glycidyl ether	Inhalation LC50 (8hr): Rat 1030 ppm	Vapor or aerosol, if generated, can cause irritation of the eyes, nose and respiratory tract.
Carbon black	Inhalation LC50 (1hr): Rat 6750 mg/m3	Inhalation of high concentrations of dust may cause mechanical irritation and discomfort. Repeated exposure to dusts may aggravate pre-existing respiratory conditions. Prolonged or frequent breathing of excess dust may cause an adverse respiratory effect.
Silica, crystalline		Dust is irritant to the respiratory tract. Exposure to high concentrations may produce lung damage. Dust generated during product use is in the respirable range.
COMPONENT		NOTES ON EYE IRRITATION
Aluminum oxide		Slight/mild irritant. Particulates may scratch eye surfaces and cause mechanical irritation.
Epoxy resin		May cause eye irritation.

**Henkel**

PRODUCT NUMBER: EC150015

ISSUE DATE: 14-December-2010

IDH# 1188133

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Diatomaceous earth, calcined	Will cause eye irritation. May cause permanent damage if eye is not immediately irrigated.
Silica, crystalline	Particulates may scratch eye surfaces and cause mechanical irritation.
Butyl glycidyl ether	Severe/very severe irritant.
Carbon black	Particulates may scratch eye surfaces and cause mechanical irritation.
Silica, crystalline	Particulates may scratch eye surfaces and cause mechanical irritation.

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**12. ECOLOGICAL INFORMATION**

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POTENTIAL EFFECT ON ENVIRONMENT	Unknown.
POTENTIAL TO BIOACCUMULATE	Unknown.
ECOTOXICITY	Unknown.
AQUATIC TOXICITY	None Established

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**13. DISPOSAL CONSIDERATIONS**

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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.

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**14. TRANSPORTATION INFORMATION**

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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.

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**15. REGULATORY INFORMATION**

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TSCA	All components are on the TSCA inventory.
Canadian Domestic Substance List (DSL)	Is on DSL
China (IECSC)	On the IECSC 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.

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

<b>COMPONENT</b>	<b>CAS NUMBER</b>
Carbon black	1333-86-4
Silica, crystalline	14808-60-7
Phenyl glycidyl ether	122-60-1
Epichlorohydrin	106-89-8

**16. OTHER INFORMATION**

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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>
*2	1	0

PREPARED BY:	Regulatory Affairs Henkel Electronic Materials
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