



Revision Number: 003.0

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**1. PRODUCT AND COMPANY IDENTIFICATION**

<b>Product name:</b> Ablebond 84-1LMISR8 (45g),	<b>IDH number:</b> 1205650
<b>Product type:</b> Epoxy resin	<b>Item number:</b> 1205650
	<b>Region:</b> United States
<b>Company address:</b> Henkel Electronic Materials LLC 14000 Jamboree Road Irvine, CA 92606	<b>Contact information:</b> Telephone: 1.888.9.HENKEL (1.888.943.6535) MEDICAL EMERGENCY Phone: Poison Control Center 1-877-671-4608 (toll free) or 1-303-592-1711 TRANSPORT EMERGENCY Phone: CHEMTREC 1-800-424-9300 (toll free) or 1-703-527-3887 Internet: www.henkelna.com

**2. HAZARDS IDENTIFICATION**

**EMERGENCY OVERVIEW**

<b>Physical state:</b> Paste	<b>HEALTH:</b> *2
<b>Color:</b> Silver	<b>FLAMMABILITY:</b> 1
<b>Odor:</b> Slight	<b>PHYSICAL HAZARD:</b> 1
	<b>Personal Protection:</b> See MSDS Section 8

**WARNING:** CAUSES EYE AND SKIN IRRITATION.  
MAY CAUSE ALLERGIC SKIN REACTION.  
MAY CAUSE RESPIRATORY TRACT IRRITATION.

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

**Potential Health Effects**

<b>Inhalation:</b>	Inhalation of vapors or mists of the product may be irritating to the respiratory system.
<b>Skin contact:</b>	Causes skin irritation. May cause allergic skin reaction. Argyria (a non-toxic, cosmetic blue-gray discoloration of the skin and mucous membranes that is irreversible).
<b>Eye contact:</b>	Causes eye irritation. This product may cause severe irritation, redness, or blurred vision.
<b>Ingestion:</b>	Not expected under normal conditions of use. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

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

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	%
Silver	7440-22-4	60 - 100
Epoxy resin	Proprietary	5 - 10
Epoxy resin modifier	Proprietary	1 - 5
Epoxy resin	Proprietary	1 - 5
Aromatic polyamine	Proprietary	1 - 5

#### 4. FIRST AID MEASURES

<b>Inhalation:</b>	Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
<b>Skin contact:</b>	Immediately flush skin with plenty of water (using soap, if available). Remove contaminated clothing and footwear. Wash clothing before reuse. Get medical attention.
<b>Eye contact:</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
<b>Ingestion:</b>	DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.

#### 5. FIRE FIGHTING MEASURES

<b>Flash point:</b>	> 93 °C (> 199.4 °F)
<b>Autoignition temperature:</b>	Not available.
<b>Flammable/Explosive limits - lower:</b>	Not applicable
<b>Flammable/Explosive limits - upper:</b>	Not applicable
<b>Extinguishing media:</b>	Foam, dry chemical or carbon dioxide.
<b>Special firefighting procedures:</b>	Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.
<b>Unusual fire or explosion hazards:</b>	Closed containers may rupture (due to build up of pressure) when exposed to extreme heat. In case of fire, keep containers cool with water spray. This product is combustible at high temperatures.
<b>Hazardous combustion products:</b>	Oxides of carbon, oxides of nitrogen, irritating organic vapors.

#### 6. ACCIDENTAL RELEASE MEASURES

<b>Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.</b>	
<b>Environmental precautions:</b>	Do not allow product to enter sewer or waterways.
<b>Clean-up methods:</b>	Evacuate and ventilate spill area; dike spill to prevent entry into water system; wear full protective equipment during clean-up. Scrape or shovel material into recovery container. Store in a partly filled, closed container until disposal.

#### 7. HANDLING AND STORAGE

<b>Handling:</b>	Use only with adequate ventilation. Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Refer to Section 8.
<b>Storage:</b>	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
Silver	0.1 mg/m <sup>3</sup> TWA Dust and fume.	0.01 mg/m <sup>3</sup> TWA (as Ag)	None	None
Epoxy resin	None	None	None	None
Epoxy resin modifier	None	None	None	None
Epoxy resin	None	None	None	None
Aromatic polyamine	None	None	None	None

<b>Engineering controls:</b>	Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.
<b>Respiratory protection:</b>	Use NIOSH approved respirator if there is potential to exceed exposure limit(s).
<b>Eye/face protection:</b>	Safety goggles or safety glasses with side shields. Full face protection should be used if the potential for splashing or spraying of product exists. Safety showers and eye wash stations should be available.
<b>Skin protection:</b>	Use impermeable gloves and protective clothing as necessary to prevent skin contact.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state:</b>	Paste
<b>Color:</b>	Silver
<b>Odor:</b>	Slight
<b>Odor threshold:</b>	Not available.
<b>pH:</b>	Not available.
<b>Vapor pressure:</b>	Not applicable
<b>Boiling point/range:</b>	Not available.
<b>Melting point/ range:</b>	Not applicable
<b>Specific gravity:</b>	4.53
<b>Vapor density:</b>	Not applicable
<b>Flash point:</b>	> 93 °C (> 199.4 °F)
<b>Flammable/Explosive limits - lower:</b>	Not applicable
<b>Flammable/Explosive limits - upper:</b>	Not applicable
<b>Autoignition temperature:</b>	Not available.
<b>Evaporation rate:</b>	Not available.
<b>Solubility in water:</b>	Insoluble
<b>Partition coefficient (n-octanol/water):</b>	Not applicable
<b>VOC content:</b>	< 1 %

## 10. STABILITY AND REACTIVITY

<b>Stability:</b>	Stable under normal conditions of storage and use.
<b>Hazardous reactions:</b>	None under normal processing. Polymerization may occur at elevated temperature or in the presence of incompatible materials.
<b>Hazardous decomposition products:</b>	Carbon dioxide. Carbon monoxide. Oxides of nitrogen. Hydrocarbons.
<b>Incompatible materials:</b>	Amines.
<b>Conditions to avoid:</b>	Elevated temperatures.

## 11. TOXICOLOGICAL INFORMATION

<b>Acute dermal product toxicity:</b>	Prolonged or repeated skin contact with silver and its salts may cause a blue-gray discoloration of the skin and mucous membranes that is irreversible (Argyria).
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Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Silver	No	No	No
Epoxy resin	No	No	No
Epoxy resin modifier	No	No	No
Epoxy resin	No	No	No
Aromatic polyamine	No	No	No

Hazardous components	Health Effects/Target Organs
Silver	Allergen, Eyes, Irritant, Respiratory, Skin
Epoxy resin	Irritant, Allergen
Epoxy resin modifier	Irritant, Allergen
Epoxy resin	Irritant
Aromatic polyamine	Allergen, Blood, Eyes, Irritant, Kidney, Nervous System, Skin

## 12. ECOLOGICAL INFORMATION

**Ecological information:** Do not empty into drains / surface water / ground water.

## 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:** This product contains a component or components identified as hazardous under 40 CFR 261.24. D011: Silver (Check TCLP Level).

## 14. TRANSPORT INFORMATION

The shipping classification in this section is the substance classification. The actual shipping classification may be different as exceptions may apply based upon size of package and mode of shipment. Please refer to shipping documents for package specific transportation classification.

### U.S. Department of Transportation Ground (49 CFR)

**Proper shipping name:** Environmentally hazardous substances, liquid, n.o.s.  
**Hazard class or division:** 9  
**Identification number:** UN 3082  
**Packing group:** III  
**DOT Reportable quantity:** Silver

### International Air Transportation (ICAO/IATA)

**Proper shipping name:** Environmentally hazardous substance, liquid, n.o.s.  
**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.  
**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:** This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Silver (CAS# 7440-22-4).  
**CERCLA Reportable quantity:** Silver (CAS# 7440-22-4) 1,000 lbs. (454 kg)  
**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:** Contains one or more components listed on the Non-Domestic Substances List. All other components are listed on or are exempt from listing on the Domestic Substances List. Components listed on the NDSL must be tracked by all Canadian Importers of Record as required by Environment Canada. They may be imported into Canada in limited quantities. Please contact Regulatory Affairs for additional details.  
**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:** New Material Safety Data Sheet format., Updated HMIS rating in Section 2., This Material Safety Data Sheet contains changes from the previous version in Section(s): 1,2,9,11,14,15

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