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**1. PRODUCT AND COMPANY IDENTIFICATION**

<b>Product name:</b>	<b>LOCTITE STYCAST ES 4512 PTA known as HYSOL ES4512 PART A GAL</b>	<b>IDH number:</b>	497808
<b>Product type:</b>	Epoxy resin	<b>Item number:</b>	EA4512-B50
<b>Restriction of Use:</b>	None identified	<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) 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.henkel.com/electronics

**2. HAZARDS IDENTIFICATION**

**EMERGENCY OVERVIEW**

**WARNING:** CAUSES SKIN IRRITATION.  
MAY CAUSE AN ALLERGIC SKIN REACTION.  
CAUSES SERIOUS EYE IRRITATION.  
MAY CAUSE RESPIRATORY IRRITATION.

HAZARD CLASS	HAZARD CATEGORY
SKIN IRRITATION	2
EYE IRRITATION	2A
SKIN SENSITIZATION	1
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE	3

**PICTOGRAM(S)**



**Precautionary Statements**

<b>Prevention:</b>	Avoid breathing vapors, mist, or spray. Wash affected area thoroughly after handling. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves, eye protection, and face protection.
<b>Response:</b>	IF ON SKIN: Wash with plenty of water. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If skin irritation or rash occurs: Get medical attention. If eye irritation persists: Get medical attention. Take off contaminated clothing.
<b>Storage:</b>	Store in a well-ventilated place. Keep container tightly closed. Store locked up.
<b>Disposal:</b>	Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Component(s)	CAS Number	Percentage*
Aluminium hydroxide	21645-51-2	40 - 50
Epoxy resin	Proprietary	40 - 50
Epoxy Resin	Proprietary	5 - 10
Carbon black	1333-86-4	0.1 - 1

\* Exact percentages may vary or are trade secret. Concentration range is provided to assist users in providing appropriate protections.

### 4. FIRST AID MEASURES

<b>Inhalation:</b>	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.
<b>Skin contact:</b>	Wash with soap and water. Remove contaminated clothing and footwear. If symptoms develop and persist, get medical attention. Wash clothing before reuse.
<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. Never give anything by mouth to an unconscious person. Get medical attention.
<b>Symptoms:</b>	See Section 11.

### 5. FIRE FIGHTING MEASURES

<b>Extinguishing media:</b>	Water spray (fog), 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.
<b>Hazardous combustion products:</b>	Oxides of carbon. Oxides of aluminum. Halogenated compounds. Irritating organic vapours.

### 6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

<b>Environmental precautions:</b>	Do not allow product to enter sewer or waterways.
<b>Clean-up methods:</b>	Ensure adequate ventilation. Isolate area. Keep unnecessary personnel away. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Store in a partly filled, closed container until disposal. Refer to Section 8 "Exposure Controls / Personal Protection" prior to clean up.

## 7. HANDLING AND STORAGE

- Handling:** Use only with adequate ventilation. Wear suitable protective clothing, gloves and eye/face protection. Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling.
- Storage:** 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 Component(s)	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Aluminium hydroxide	1 mg/m3 TWA Respirable fraction. 10 mg/m3 TWA (as Al) Total dust.	15 mg/m3 TWA (as Al) Total dust. 5 mg/m3 TWA (as Al) Respirable fraction. 15 MPPCF TWA Respirable fraction. 15 mg/m3 TWA Total dust. 5 mg/m3 TWA Respirable fraction. 50 MPPCF TWA Total dust.	None	None
Epoxy resin	None	None	None	None
Epoxy Resin	None	None	None	None
Carbon black	3 mg/m3 TWA Inhalable fraction.	3.5 mg/m3 PEL	None	None

- Engineering controls:** Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.
- Respiratory protection:** Use a NIOSH approved air-purifying respirator if the potential to exceed established exposure limits exists.
- Eye/face protection:** 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.
- Skin protection:** Use chemical resistant, impermeable clothing including gloves and either an apron or body suit to prevent skin contact.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical state:** Viscous, liquid
- Color:** Black
- Odor:** Aromatic
- Odor threshold:** Not available.
- pH:** Not applicable
- Vapor pressure:** Not available.
- Boiling point/range:** Not available.
- Melting point/ range:** Not available.
- Specific gravity:** 1.6
- Vapor density:** Not available.
- Flash point:** > 93 °C (> 199.4 °F) ; Estimated
- Flammable/Explosive limits - lower:** Not available.
- Flammable/Explosive limits - upper:** Not available.
- Autoignition temperature:** Not available.
- Flammability:** Not applicable

**Evaporation rate:** < 1.0  
**Solubility in water:** Not miscible or difficult to mix  
**Partition coefficient (n-octanol/water):** Not available.  
**VOC content:** < 1 %; < 10 g/l (estimated value for resin and hardener mixed together)  
**Viscosity:** Not available.  
**Decomposition temperature:** Not available.

## 10. STABILITY AND REACTIVITY

**Stability:** Stable at normal conditions.  
**Hazardous reactions:** None under normal processing. Polymerization may occur at elevated temperature or in the presence of incompatible materials.  
**Hazardous decomposition products:** Oxides of carbon. Oxides of aluminum. Halogenated compounds. Irritating organic vapours.  
**Incompatible materials:** Strong oxidizing agents. Strong acids and strong bases. Amines. Reacts with considerable heat release with some curing agents.  
**Reactivity:** Not available.  
**Conditions to avoid:** Store away from incompatible materials. Keep away from open flames, hot surfaces and sources of ignition.

## 11. TOXICOLOGICAL INFORMATION

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

### Potential Health Effects/Symptoms

**Inhalation:** May cause respiratory tract irritation.  
**Skin contact:** Causes skin irritation. May cause allergic skin reaction.  
**Eye contact:** Causes serious eye irritation.  
**Ingestion:** May cause irritation to the gastrointestinal tract, mouth and mucous membranes.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Aluminium hydroxide	Oral LD50 (Rat) = > 5,000 mg/kg	Irritant, Lung, Respiratory
Epoxy resin	None	Allergen, Irritant
Epoxy Resin	None	No Data
Carbon black	Oral LD50 (Rat) = > 8,000 mg/kg	Respiratory, Some evidence of carcinogenicity

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Aluminium hydroxide	No	No	No
Epoxy resin	No	No	No
Epoxy Resin	No	No	No
Carbon black	No	Group 2B	No

## 12. ECOLOGICAL INFORMATION

**Ecological information:** Not available.

## 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:** Not a RCRA hazardous waste.

## 14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

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

**Proper shipping name:** Not regulated  
**Hazard class or division:** None  
**Identification number:** None  
**Packing group:** None

### International Air Transportation (ICAO/IATA)

**Proper shipping name:** Environmentally hazardous substance, liquid, n.o.s. (Bisphenol-A Epichlorhydrin resin)  
**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. (Bisphenol-A Epichlorhydrin resin)  
**Hazard class or division:** 9  
**Identification number:** UN 3082  
**Packing group:** III  
**Marine pollutant:** Bisphenol-A Epichlorhydrin resin

## 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 minimis  
**CERCLA/SARA Section 302 EHS:** None above reporting de minimis.  
**CERCLA/SARA Section 311/312:** Immediate Health, Delayed Health  
**CERCLA/SARA Section 313:** None above reporting de minimis.  
**California Proposition 65:** This product contains a chemical known in the State of California to cause cancer.

### Canada Regulatory Information

**CEPA DSL/NDSL Status:** All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

## 16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: 2, 3, 5, 10, 11

**Prepared by:** Debbie Friday, Regulatory Affairs Specialist

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