

Revision Date: 05/28/2008

Issue date: 05/28/2008

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: HYSOL ES4412 PART A GAL
Product type: Epoxy Resin
Company address:
 Henkel Corporation
 211 Franklin Street
 Olean, New York 14760

Item No. : EA4412-B50 / IDH No. 427431
Region: United States
Contact Information:
 Telephone: 716.372.6300
 Emergency Telephone: 860.571.5100
 Internet: www.electronics.henkel.us

2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous components</u>	<u>%</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>	<u>OTHER</u>
Barium sulfate 7727-43-7	30-60	0.5 mg/m ³ TWA 10 mg/m ³ TWA	0.5 mg/m ³ TWA 0.5 mg/m ³ TWA as Ba 15 mg/m ³ TWA total dust 5 mg/m ³ TWA respirable fraction	None
Epichlorohydrin-4,4'-isopropylidene diphenol resin 25068-38-6	30-60	None	None	None
Epoxy resin Proprietary	5-10	None	None	None
Carbon black 1333-86-4	0.1-1	3.5 mg/m ³ TWA	3.5 mg/m ³ TWA	None

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

HMIS:

Physical state: Liquid	HEALTH:	2*
Color: Black	FLAMMABILITY:	1
Odor: Aromatic	PHYSICAL HAZARD:	0
	Personal Protection:	See Section 8

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

Relevant routes of exposure: Inhalation, Skin contact, Eye contact

Potential Health Effects

Inhalation: May cause respiratory tract irritation.
Skin contact: May cause allergic skin reaction. May cause skin irritation.
Eye contact: May cause irritation.
Ingestion: Not expected under normal conditions of use.

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

See Section 11 for additional toxicological information.

4. FIRST AID MEASURES

Inhalation:	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If symptoms develop and persist, get medical attention.
Skin contact:	Wash with soap and water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Eye contact:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
Ingestion:	Do not induce vomiting. If individual is conscious, wash out mouth with water. Never give anything by mouth to an unconscious person. Obtain medical attention.

5. FIRE-FIGHTING MEASURES

Flash point:	232.22°C (450°F) Closed cup
Autoignition temperature:	Not available
Flammable/Explosive limits-lower %:	Not available
Flammable/Explosive limits-upper %:	Not available
Extinguishing media:	Water spray (fog), foam, dry chemical or carbon dioxide.
Special fire fighting procedures:	Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.
Unusual fire or explosion hazards:	Closed containers may rupture (due to build up of pressure) when exposed to extreme heat. In the event of fire, cool tanks with water spray.
Hazardous combustion products:	Oxides of carbon. Irritating organic vapors. Phenolics. Hydrogen chloride.

6. ACCIDENTAL RELEASE MEASURES

Environmental precautions:	Prevent product from entering drains or open waters.
Clean-up methods:	Evacuate and ventilate spill area; dike spill to prevent entry into water system; wear full protective equipment during clean-up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable and closed containers for disposal.

7. HANDLING AND STORAGE

Handling:	Use only with adequate ventilation. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Keep away from heat, spark and flame.
Storage:	Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.
Incompatible products:	Refer to Section 10.

For information on product shelf life contact Henkel Customer Service at 1-716-372-6300.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls:	Use local exhaust ventilation to maintain airborne concentrations below established exposure limits.
Respiratory protection:	Use NIOSH approved respirator if there is potential to exceed exposure limit(s).
Skin protection:	Chemical resistant, impermeable gloves.
Eye/face protection:	Chemical splash goggles or safety glasses with side shields. Full face protection should be used if the potential for splashing or spraying of product exists.

See Section 2 for exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Color:	Black
Odor:	Aromatic
Vapor pressure:	Not available
pH:	Not applicable
Boiling point/range:	Not available
Melting point/range:	Not available
Specific gravity:	1.6
Vapor density:	Not available
Evaporation rate:	> 1.0
Solubility in water:	Insoluble.
Partition coefficient (n-octanol/water):	Not available
VOC content:	0%; 0 grams/liter (estimated)

10. STABILITY AND REACTIVITY

Stability:	Stable at normal conditions
Hazardous polymerization:	Will not occur.
Hazardous decomposition products:	None reasonably foreseeable
Incompatibility:	Strong oxidizing agents. Strong acids and strong bases. Amines.
Conditions to avoid:	High temperatures. Heat, flames and sparks. Storage with incompatible materials.

11. TOXICOLOGICAL INFORMATION

Carcinogen Status

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen
Barium sulfate 7727-43-7	No	No	No
Epichlorohydrin-4,4'-isopropylidene diphenol resin 25068-38-6	No	No	No
Epoxy resin Proprietary	No	No	No
Carbon black 1333-86-4	No	Group 2B	Yes

Literature Referenced Target Organ & Other Health Effects

Hazardous components	Health Effects/Target Organs
Barium sulfate 7727-43-7	Lung
Epichlorohydrin-4,4'-isopropylidene diphenol resin 25068-38-6	Allergen, Irritant
Epoxy resin Proprietary	Allergen, Irritant
Carbon black 1333-86-4	Respiratory, Some evidence of carcinogenicity

12. ECOLOGICAL INFORMATION

Ecological information:	Not available
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13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of in accordance with Federal, State and local regulations.

EPA hazardous waste number: Not a RCRA hazardous waste.

14. TRANSPORT INFORMATION

The shipping classifications in this section are for non-bulk packaging only (unless otherwise specified). Shipping classification may be different for bulk packaging.

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: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

Water Transportation (IMO/MDG):

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

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.

CERCLA/SARA Section 302 EHS: None.

CERCLA/SARA Section 311/312: Immediate Health Hazard, Delayed Health Hazard

CERCLA/SARA 313: None.

California Proposition 65: This product contains a chemical known to 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 Domestic Substances List.

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: First issue.

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