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1. PRODUCT AND COMPANY IDENTIFICATION

Product name:	LOCTITE ABLESTIK 281 BK known as	IDH number:	1188106
	ECCOBOND 281 BLK 2LB		
Product type:	Epoxy resin	Region:	United States
Restriction of Use:	None identified	Contact information:	
Company address:		Telephone: +1 (888) 943-6535	
Henkel Electronic Materials LLC		MEDICAL EMERGENCY Phone: Poison Control Center	
14000 Jamboree Road		1-877-671-4608 (toll free) or 1-303-592-1711	
Irvine, CA 92606		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.

HAZARD CLASS	HAZARD CATEGORY
SKIN IRRITATION	2
EYE IRRITATION	2A
SKIN SENSITIZATION	1

PICTOGRAM(S)



Precautionary Statements

Prevention:	Avoid breathing vapors, mist, or spray. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wear eye and face protection. Wear protective gloves.
Response:	IF ON SKIN: Wash with plenty of soap and water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to remove. Continue rinsing. If skin irritation or rash occurs: Get medical attention. If eye irritation persists: Get medical attention. Take off contaminated clothing.
Storage:	Not prescribed
Disposal:	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*
Aluminum oxide, fibrous	1344-28-1	60 - 100
Epoxy resin	Proprietary	10 - 30
Diuron	330-54-1	1 - 5
Silica, amorphous, fumed, crystal-free	112945-52-5	1 - 5
Butyl 2,3-epoxypropyl ether	2426-08-6	1 - 5
Carbon black	1333-86-4	0.1 - 1

* Exact percentage is a trade secret. Concentration range is provided to assist users in providing appropriate protections.

4. FIRST AID MEASURES

Inhalation:	Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Skin contact:	Immediately flush skin with plenty of water (using soap, if available). Remove contaminated clothing and footwear. Wash clothing before reuse. Get medical attention.
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 unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.
Symptoms:	See Section 11.

5. FIRE FIGHTING MEASURES

Extinguishing media:	Water spray (fog), foam, dry chemical or carbon dioxide.
Special firefighting procedures:	Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear. In case of fire, keep containers cool with water spray.
Unusual fire or explosion hazards:	Closed containers may rupture (due to build up of pressure) when exposed to extreme heat.
Hazardous combustion products:	Oxides of carbon. Oxides of nitrogen. Toxic and irritating vapors.

6. ACCIDENTAL RELEASE MEASURES

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

Environmental precautions:	Do not allow product to enter sewer or waterways.
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). Wash spillage site thoroughly with soap and water or detergent solution. Store in a partly filled, closed container until disposal.

7. HANDLING AND STORAGE

Handling: 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.

Storage: For safe storage, store at or below 25 °C (77°F)
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
Aluminum oxide, fibrous	1 mg/m3 TWA Respirable fraction.	5 mg/m3 PEL Respirable fraction. 15 mg/m3 PEL Total dust.	None	None
Epoxy resin	None	None	None	None
Diuron	10 mg/m3 TWA	None	None	None
Silica, amorphous, fumed, crystal-free	10 mg/m3 TWA Inhalable dust. 3 mg/m3 TWA Respirable fraction.	20 MPPCF TWA 0.8 mg/m3 TWA	None	None
Butyl 2,3-epoxypropyl ether	3 ppm TWA (SKIN) (Dermal sensitization)	50 ppm (270 mg/m3) PEL	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 NIOSH approved respirator if there is potential to exceed exposure limit(s).

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 impermeable gloves and protective clothing as necessary to prevent skin contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Color:	Black
Odor:	Slight
Odor threshold:	Not available.
pH:	Not available.
Vapor pressure:	< 0.1 mm hg
Boiling point/range:	Not determined
Melting point/ range:	Not applicable
Specific gravity:	2.35
Vapor density:	Not applicable
Flash point:	> 93.3 °C (> 199.94 °F)
Flammable/Explosive limits - lower:	Not available.
Flammable/Explosive limits - upper:	Not available.
Autoignition temperature:	Not available.
Evaporation rate:	Not determined

Solubility in water: Insoluble
Partition coefficient (n-octanol/water): Not determined
VOC content: Negligible
Viscosity: Not available.
Decomposition temperature: Not available.

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions of storage and use.
Hazardous reactions: Will not occur.
Hazardous decomposition products: Oxides of carbon. Oxides of nitrogen. Irritating organic vapours.
Incompatible materials: Strong oxidizing agents. Strong acids and strong bases.
Reactivity: Not available.
Conditions to avoid: High temperatures. Heat, flames, sparks and other sources of ignition. Store away from incompatible materials.

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. Redness. Tearing.
Ingestion: May cause gastrointestinal tract irritation if swallowed.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Aluminum oxide, fibrous	None	Irritant, Nuisance dust, Corrosive
Epoxy resin	None	Allergen, Irritant
Diuron	Oral LD50 (RAT) = 3,400 mg/kg Oral LD50 (RAT) = 1,017 mg/kg	Irritant, Developmental, Liver
Silica, amorphous, fumed, crystal-free	None	Nuisance dust
Butyl 2,3-epoxypropyl ether	Oral LD50 (RAT) = 2,000 mg/kg Oral LD50 (RAT) = 2.05 g/kg Dermal LD50 (RABBIT) = 0.788 g/kg Inhalation LC50 (RAT) = 670 mg/l Inhalation LC50 (RAT, 8 h) = > 670 mg/l	Irritant, Allergen, Central nervous system, Liver, Mutagen
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)
Aluminum oxide, fibrous	No	No	No
Epoxy resin	No	No	No
Diuron	No	No	No
Silica, amorphous, fumed, crystal-free	No	No	No
Butyl 2,3-epoxypropyl ether	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: RQ, Environmentally hazardous substances, liquid, n.o.s.
Hazard class or division: 9
Identification number: UN 3082
Packing group: III
DOT Hazardous Substance(s): Diuron

International Air Transportation (ICAO/IATA)

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

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: 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). Aluminum oxide, fibrous (CAS# 1344-28-1). Diuron (CAS# 330-54-1).
CERCLA Reportable quantity: Diuron (CAS# 330-54-1) 100 lbs. (45.4 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/NDL Status: One or more components are not listed on, and are not exempt from listing on either the Domestic Substances List or the Non-Domestic Substances List.

16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: New Safety Data Sheet format.

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