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## 1. PRODUCT AND COMPANY IDENTIFICATION

<b>Product name:</b>	<b>LOCTITE EDAG 440B E&amp;C known as ELECTRODAG 440B 1.0 KG</b>	<b>IDH number:</b>	1398694
<b>Product type:</b>	Conductive dry film product	<b>Region:</b>	United States
<b>Restriction of Use:</b>	None identified	<b>Contact information:</b>	
<b>Company address:</b>	Henkel Corporation One Henkel Way Rocky Hill, Connecticut 06067	Telephone: +1 (860) 571-5100	
		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

**WARNING:** CAUSES SKIN IRRITATION.  
CAUSES SERIOUS EYE IRRITATION.

HAZARD CLASS	HAZARD CATEGORY
SKIN IRRITATION	2
EYE IRRITATION	2A

### PICTOGRAM(S)



### Precautionary Statements

<b>Prevention:</b>	Wash affected area thoroughly after handling. Wear protective gloves, eye protection, and face protection.
<b>Response:</b>	IF ON SKIN: Wash with plenty of water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If skin irritation occurs: Get medical attention. If eye irritation persists: Get medical attention. Take off contaminated clothing.
<b>Storage:</b>	Not prescribed
<b>Disposal:</b>	Not prescribed

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*
Dimethyl glutarate	1119-40-0	40 - 50
Dimethyl succinate	106-65-0	20 - 30

Graphite	7782-42-5	10 - 20
Carbon black	1333-86-4	1 - 5

\* 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 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. If symptoms develop and persist, get medical attention. Wash clothing before reuse. Thoroughly clean shoes 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 unless directed to do so by medical personnel. 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. In case of fire, keep containers cool with water spray.
<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. 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.

<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. Refer to Section 8 "Exposure Controls / Personal Protection" prior to clean up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Scrape up spilled material and place in a closed container for 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. Keep container closed.
<b>Storage:</b>	For safe storage, store between 4 °C (39.2 °F) and 8 °C (46.4 °F) Keep container tightly closed and in a cool, well-ventilated place away from incompatible materials. Keep away from heat, spark and flame. Protect from direct sunlight.

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
Dimethyl glutarate	None	None	None	None
Dimethyl succinate	None	None	None	None
Graphite	2 mg/m3 TWA Respirable fraction.	5 mg/m3 PEL Respirable fraction. 15 mg/m3 PEL Total dust. 15 MPPCF TWA	None	None
Carbon black	3 mg/m3 TWA Inhalable fraction.	3.5 mg/m3 PEL	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 chemical resistant, impermeable clothing including gloves and either an apron or body suit to prevent skin contact.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state:</b>	Paste
<b>Color:</b>	Black
<b>Odor:</b>	Characteristic
<b>Odor threshold:</b>	Not available.
<b>pH:</b>	Not available.
<b>Vapor pressure:</b>	0.1 mm hg
<b>Boiling point/range:</b>	225.0 °C (437°F)
<b>Melting point/ range:</b>	Not available.
<b>Specific gravity:</b>	1.378
<b>Vapor density:</b>	1.0000
<b>Flash point:</b>	100 °C (212°F)
<b>Flammable/Explosive limits - lower:</b>	0.9 %
<b>Flammable/Explosive limits - upper:</b>	8 %
<b>Autoignition temperature:</b>	Not available.
<b>Flammability:</b>	Not applicable
<b>Evaporation rate:</b>	1 (Butyl acetate = 1)
<b>Solubility in water:</b>	Insoluble
<b>Partition coefficient (n-octanol/water):</b>	Not available.
<b>VOC content:</b>	849 g/l
<b>Viscosity:</b>	Not available.
<b>Decomposition temperature:</b>	Not available.

## 10. STABILITY AND REACTIVITY

<b>Stability:</b>	Stable under normal conditions of storage and use.
<b>Hazardous reactions:</b>	None under normal processing.
<b>Hazardous decomposition products:</b>	Oxides of carbon. Toxic fumes. Irritating vapors.
<b>Incompatible materials:</b>	Strong oxidizing agents. Strong acids and strong bases.
<b>Reactivity:</b>	Not available.
<b>Conditions to avoid:</b>	Keep away from heat, ignition sources and incompatible materials. Protect from direct sunlight.

## 11. TOXICOLOGICAL INFORMATION

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

### Potential Health Effects/Symptoms

<b>Inhalation:</b>	May cause respiratory tract irritation. Coughing. Shortness of breath.
<b>Skin contact:</b>	Causes skin irritation.
<b>Eye contact:</b>	Causes serious eye irritation. Redness. Tearing.
<b>Ingestion:</b>	May cause gastrointestinal tract irritation if swallowed.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Dimethyl glutarate	None	Olfactory
Dimethyl succinate	None	Irritant
Graphite	None	Lung
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)
Dimethyl glutarate	No	No	No
Dimethyl succinate	No	No	No
Graphite	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:** Not regulated  
**Hazard class or division:** None  
**Identification number:** None  
**Packing group:** None

### Water Transportation (IMO/IMDG)

**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 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. 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:** 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: 3,4,6,7,8,10,15

**Prepared by:** Rena Petrides, Regulatory Affairs Specialist

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