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Safety Data Sheet

Revision Number: 008.0

Issue date: 08/26/2025

1. IDENTIFICATION

Product name: **LOCTITE ABLESTIK ECF 561E-1-004**
Product type/ Recommended use: Conductive dry film product
Restriction of Use: None identified
Company address:
Henkel Corporation
One Henkel Way
Rocky Hill, Connecticut 06067

IDH number: 2872460
Region: United States
Contact information:
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
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1-800-424-9300 (toll free) or 1-703-527-3887
Internet: www.henkelna.com

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING:
H315 - CAUSES SKIN IRRITATION.
H317 - MAY CAUSE AN ALLERGIC SKIN REACTION.
H319 - CAUSES SERIOUS EYE IRRITATION.
H361 - SUSPECTED OF DAMAGING FERTILITY OR THE UNBORN CHILD.

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

PICTOGRAM(S)



Precautionary Statements

Prevention:
P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P261 - Avoid breathing dust or fumes.
P264 - Wash affected area thoroughly after handling.
P272 - Contaminated work clothing should not be allowed out of the workplace.
P280 - Wear protective gloves, clothing, eye and face protection.

Response:
P302+P352 - IF ON SKIN: Wash with plenty of water.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 - IF exposed or concerned: Get medical attention.
P333+P313 - If skin irritation or rash occurs: Get medical attention.
P337+P313 - If eye irritation persists: Get medical attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.

Storage:
P405 - Store locked up.

Disposal:
P501 - Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.

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Other hazards Not available.

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	Weight %*
Silver	7440-22-4	60 - 80
Modified epoxy resin	Proprietary	10 - 30
Glass, oxide, chemicals	65997-17-3	10 - 30
Epoxy resin	Proprietary	0.1 - 1
4,4'-Isopropylidenediphenol	80-05-7	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

First Aid Measures by likely routes of exposure

Inhalation: Move 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: Remove contaminated clothing and footwear. Immediately flush skin with plenty of water (using soap, if available). If symptoms develop and persist, get medical attention. Wash clothing before reuse.

Eye contact: Immediately flush eyes with plenty of water for at least 15 minutes. If symptoms develop and persist, 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. If symptoms develop and persist, get medical attention.

Most important symptoms and effects (acute and delayed): The most important known symptoms and effects, both acute and delayed, are described in Section 11: Toxicological Information.

Indication of any immediate medical attention / special treatment needed: Not available.

5. FIRE FIGHTING MEASURES

Extinguishing media: Water spray (fog), foam, dry chemical or carbon dioxide.

Improper extinguishing agents: Not available.

Special firefighting procedures: Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.

Unusual fire or explosion hazards: May liberate large quantities of dense, foul-smelling smoke which may contain unidentified toxic gasses.

Hazardous combustion products: Oxides of carbon and nitrogen, aldehydes, acids and undetermined organics.

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: Wear suitable protective clothing, gloves and eye/face protection. Sweep up or gather material and place in appropriate container for disposal. Refer to Section 8 "Exposure Controls / Personal Protection" prior to clean up.

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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: Store in a cool, dry, well-ventilated area. Store in original container until ready to 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
Silver	0.1 mg/m3 TWA Dust and fume.	0.01 mg/m3 PEL (as Ag)	None	None
Glass, oxide, chemicals	5 mg/m3 TWA Inhalable fraction. 10 mg/m3 TWA Inhalable dust. 3 mg/m3 TWA Respirable fraction. 3 mg/m3 TWA Respirable particles. 10 mg/m3 TWA Inhalable particles.	15 mg/m3 TWA Total dust. 5 mg/m3 TWA Respirable fraction. 50 MPPCF TWA Total dust. 15 mg/m3 TWA Total dust. 15 MPPCF TWA Respirable fraction. 5 mg/m3 TWA Respirable fraction.	None	None

Engineering controls: Local exhaust ventilation is recommended when general ventilation is not sufficient to control airborne contamination.

Respiratory protection: Use a NIOSH approved respirator if ventilation is inadequate.

Eye/face protection: Safety goggles or safety glasses with side shields.

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: Film, Solid
Color: Gray / Grey
Odor: Mild
Odor threshold: Not available.
pH: Not applicable, Product is non-soluble (in water).
Vapor pressure: < 1 mbar (20 °C (68°F))
Boiling point/range: Not applicable, Polymerizes before boiling point is reached.
Melting point/ range: Not applicable, Determination technically not possible
Density/Relative density: 3.3
Relative vapor density: Not applicable, Product is a solid
Flash point: > 100 °C (> 212°F) ; Product is a solid
Flammable/Explosive limits - lower: Not available.
Flammable/Explosive limits - upper: Not available.
Autoignition temperature: Not available.
Flammability: Noncombustible Solid in bulk form
Evaporation rate: Not determined
Solubility: Insoluble Water
Partition coefficient n-octanol/water (logarithmic value): Not available.
VOC content: < 0.1 %
Dynamic viscosity: Not available.
Kinematic viscosity: Not available.
Particle characteristics: Not applicable, Product is not powder.
Decomposition temperature: > 150 °C

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10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions of storage and use.

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 and nitrogen, aldehydes, acids and undetermined organics.

Incompatible materials: Keep away from strong oxidizing agents, strong Lewis or mineral acids.

Reactivity: Not available.

Conditions to avoid: Elevated temperatures.

11. TOXICOLOGICAL INFORMATION

Likely routes of exposure: Skin, Inhalation, Eyes, Ingestion

Potential Health Effects/Symptoms

Inhalation: Inhalation of processing fumes may be harmful. Inhalation of vapors or mists of the product may be irritating to the respiratory system.
Skin contact: Causes skin irritation. May cause allergic skin reaction.
Eye contact: Causes serious eye irritation.
Ingestion: Not expected under normal conditions of use.

Hazardous Component(s)	LD50s and LC50s
Silver	Oral LD50 (Rat) = > 5,000 mg/kg Dermal LD50 (Rat) = > 2,000 mg/kg Inhalation LC50 (Rat, 4 h) = 750 µg/m3 Inhalation LC50 (Rat, 4 h) = > 5.16 mg/l
Modified epoxy resin	None
Glass, oxide, chemicals	None
Epoxy resin	None
4,4'-Isopropylidenediphenol	Oral LD50 (Rat) = 4,100 mg/kg Oral LD50 (Rat) = 3,300 mg/kg

Hazardous Component(s)	Immediate Health Effects	Delayed Health Effects	Chronic Health Effects
Silver	Irritant	Allergen	Eyes Respiratory Skin
Modified epoxy resin	Irritant	Allergen	
Glass, oxide, chemicals		Allergen	Respiratory
Epoxy resin	Irritant	Allergen	
4,4'-Isopropylidenediphenol	Irritant	Allergen	Blood Kidney Reproductive Spleen

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Silver	No	No	No
Modified epoxy resin	No	No	No
Glass, oxide, chemicals	Reasonably Anticipated to be a Human Carcinogen.	Group 2B	No
Epoxy resin	No	No	No
4,4'-Isopropylidenediphenol	No	No	No

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: Follow all local, state, federal and provincial regulations for disposal.

14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any 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:	RQ, Environmentally hazardous substance, solid, n.o.s. (Silver)
Hazard class or division:	9
Identification number:	UN 3077
Packing group:	III

Water Transportation (IMO/IMDG)

Proper shipping name:	RQ, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Silver)
Hazard class or division:	9
Identification number:	UN 3077
Packing group:	III
Marine pollutant:	Silver

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status:	All components are listed as active or are exempt from listing on the Toxic Substances Control Act (TSCA) 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:	Please refer to the GHS classification in Section 2
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). 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.

16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: 3,8,9,11,13,15

Prepared by: Product Safety and Regulatory Affairs

Issue date: 08/26/2025

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