



Revision Number: 006.0

Issue date: 01/25/2021

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: LOCTITE M 4100 POL E&C known as M-4100-POL
Product type/use: Conductive adhesive
Restriction of Use: None identified
Company address: Henkel Corporation
 One Henkel Way
 Rocky Hill, Connecticut 06067

IDH number: 1223881
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
 Internet: www.henkelna.com

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER: FLAMMABLE LIQUID AND VAPOR.
 HARMFUL IN CONTACT WITH SKIN.
 CAUSES SKIN IRRITATION.
 MAY CAUSE AN ALLERGIC SKIN REACTION.
 CAUSES SERIOUS EYE IRRITATION.
 SUSPECTED OF CAUSING GENETIC DEFECTS.
 CAUSES DAMAGE TO ORGANS.
 MAY CAUSE DAMAGE TO ORGANS THROUGH PROLONGED OR REPEATED EXPOSURE.

HAZARD CLASS	HAZARD CATEGORY
FLAMMABLE LIQUID	3
ACUTE TOXICITY DERMAL	4
SKIN IRRITATION	2
EYE IRRITATION	2A
SKIN SENSITIZATION	1
GERM CELL MUTAGENICITY	2
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE	1
SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE	2

PICTOGRAM(S)



Precautionary Statements

Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, sparks, open flames, hot surfaces - no smoking. Keep container tightly closed. No release into water. Use explosion-proof equipment. Use non-sparking tools. Take action to prevent static discharges. Do not breathe vapors, mist, or spray. Wash affected area thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves, clothing, eye and face protection.

Response: If on skin (or hair): Take off immediately all contaminated clothing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If exposed: Call a poison center or physician. If skin irritation or rash occurs: Get medical attention. If eye irritation persists: Get medical attention. Take off contaminated clothing. In case of fire: Use foam, dry chemical or carbon dioxide to extinguish.

Storage: Store in a well-ventilated place. Keep cool. Store locked up.

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

1 % of the mixture consists of ingredient(s) of unknown acute toxicity.

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*
Silver	7440-22-4	60 - 80
Diethyleneglycol monoethyl ether	111-90-0	10 - 30
Synthetic resin	Proprietary	5 - 10
Methanol	67-56-1	5 - 10
Phenol	108-95-2	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

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. If symptoms develop and persist, get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.
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. Avoid using a direct stream of water.
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. Vapors are heavier than air and may travel along the ground or be moved by ventilation and subsequently ignited by heat, pilot lights or other ignition sources at locations distant from the material handling point. Vapors may form explosive mixtures with air.
Hazardous combustion products:	Oxides of carbon. Oxides of Metals in Section 3. Formaldehyde. Toxic fumes. 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.
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Clean-up methods:

Remove all sources of ignition. Ensure adequate ventilation. Isolate area. Keep unnecessary personnel away. Use non-sparking tools for clean-up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, saw dust). Store in a closed container until ready for disposal. Refer to Section 8 "Exposure Controls / Personal Protection" prior to clean up.

7. HANDLING AND STORAGE

Handling:

During use and until all vapors are gone: Keep area ventilated - do not smoke; extinguish all flames, pilot lights, and heaters; turn off stoves, electrical tools and appliances, and any other sources of ignition. Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Use proper bonding and/or grounding procedures. Keep container closed.

Storage:

For safe storage, store between 18 °C (64.4 °F) and 25 °C (77°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
Silver	0.1 mg/m3 TWA Dust and fume.	0.01 mg/m3 PEL (as Ag)	None	None
Diethyleneglycol monoethyl ether	None	None	25 ppm (140 mg/m3) TWA	None
Synthetic resin	None	None	None	None
Methanol	200 ppm TWA 250 ppm STEL (SKIN)	200 ppm (260 mg/m3) PEL	None	None
Phenol	5 ppm TWA (SKIN)	5 ppm (19 mg/m3) PEL (SKIN)	None	None

Engineering controls:

Use explosion-proof mechanical ventilation and local exhaust to control contaminants to within their occupational exposure limits during the use of this product.

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. Cover as much of the exposed skin area as possible with appropriate clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:

Paste

Color:

Silver

Odor:

Pungent

Odor threshold:

Not available.

pH:

Not applicable

pH:

Not applicable

Vapor pressure:

> 1.0000000 mbar

Boiling point/range:

> 65.0 °C (> 149°F)

Melting point/range:

Not determined

Specific gravity:

2.674 (Water = 1)

Vapor density:

Heavier than air.

Flash point:

43.9 °C (111.02 °F) Closed cup

Flammable/Explosive limits - lower:

1.2 %

Flammable/Explosive limits - upper:

36 %

Autoignition temperature:	> 204.00 °C (> 399.2 °F)
Flammability:	Not applicable
Evaporation rate:	Not determined
Solubility in water:	Not available.
Partition coefficient (n-octanol/water):	Not available.
VOC content:	Not available.
Viscosity:	Not available.
Decomposition temperature:	Not available.

10. STABILITY AND REACTIVITY

Stability:	Stable under normal conditions of storage and use.
Hazardous reactions:	None under normal processing.
Hazardous decomposition products:	Oxides of carbon. Oxides of Metals in Section 3. Formaldehyde. Toxic fumes. Irritating vapors.
Incompatible materials:	Strong acids, alkalis and oxidizing agents. Amines. Ammonia.
Reactivity:	Not available.
Conditions to avoid:	Keep away from heat, ignition sources and incompatible materials. Protect from direct sunlight.

11. TOXICOLOGICAL INFORMATION

Relevant routes of exposure:	Skin, Inhalation, Eyes
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Potential Health Effects/Symptoms

Inhalation:	May cause respiratory tract irritation. May cause central nervous system effects. Drowsiness. Dizziness.
Skin contact:	Causes skin irritation. May cause allergic skin reaction. Harmful in contact with skin. Argyria (a non-toxic, cosmetic blue-gray discoloration of the skin and mucous membranes that is irreversible).
Eye contact:	Causes serious eye irritation. May cause irreversible damage.
Ingestion:	May cause gastrointestinal tract irritation if swallowed.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Silver	Oral LD50 (Rat) = > 5,000 mg/kg Dermal LD50 (Rat) = > 2,000 mg/kg Inhalation LC50 (Rat, 4 h) = > 5.16 mg/l Inhalation LC50 (Rat, 4 h) = 750 µg/m3	Allergen, Eyes, Irritant, Respiratory, Skin
Diethyleneglycol monoethyl ether	Oral LD50 (Rat) = 1,920 mg/kg Oral LD50 (Rat) = 5.54 g/kg Oral LD50 (Rat) = 5,900 mg/kg Oral LD50 (Mouse) = 6.58 g/kg Oral LD50 (Rabbit) = 3,620 mg/kg Oral LD50 (Rat) = 6,500 mg/kg Oral LD50 (Mouse) = 7,863 mg/kg Oral LD50 (Mouse) = 12,400 mg/kg Oral LD50 (Rabbit) = 4,450 mg/kg Oral LD50 (Rat) = 7,500 mg/kg Oral LD50 (Mouse) = 7,248 mg/kg Dermal LD50 (Mouse) = 6,000 mg/kg Dermal LD50 (Rabbit) = 10,300 mg/kg Dermal LD50 (Rat) = 6,000 mg/kg Dermal LD50 (Rabbit) = 11,176 mg/kg Dermal LD50 (Rabbit) = 8,500 mg/kg Dermal LD50 (Rabbit) = 8,476 mg/kg	Blood, Central nervous system, Irritant, Kidney
Synthetic resin	None	Allergen, Corrosive, Irritant, Kidney, Respiratory, Skin
Methanol	Oral LD50 (Rat) = 5,628 mg/kg Oral LD50 (Mouse) = 7,300 mg/kg Oral LD50 (Rabbit) = 14.4 g/kg Dermal LD50 (Rabbit) = 15,800 mg/kg	Eyes, Irritant, Metabolic, Nervous System
Phenol	Oral LD50 (Mouse) = 270 mg/kg Oral LD50 (Rat) = 317 mg/kg Oral LD50 (Rat) = 530 mg/kg Dermal LD50 (Rat) = 669 mg/kg Dermal LD50 (Rabbit) = 850 mg/kg	Blood, Cardiac, Corrosive, Developmental, Eyes, Irritant, Kidney, Liver, Mutagen, Nervous System, Skin, Vascular

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Silver	No	No	No
Diethyleneglycol monoethyl ether	No	No	No
Synthetic resin	No	No	No
Methanol	No	No	No
Phenol	No	No	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.

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: Combustible liquid, n.o.s. (Methanol)
Hazard class or division: Combustible Liquid
Identification number: NA 1993
Packing group: III
DOT Hazardous Substance(s): Silver

International Air Transportation (ICAO/IATA)

Proper shipping name: Printing ink
Hazard class or division: 3
Identification number: UN 1210
Packing group: III

Water Transportation (IMO/IMDG)

Proper shipping name: PRINTING INK (Silver)
Hazard class or division: 3
Identification number: UN 1210
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: Phenol (CAS# 108-95-2).
CERCLA/SARA Section 311/312: Fire, 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). Silver (CAS# 7440-22-4). Diethyleneglycol monoethyl ether (CAS# 111-90-0). Methanol (CAS# 67-56-1). Phenol (CAS# 108-95-2).
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/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: 2, 3, 11

Prepared by: Product Safety and Regulatory Affairs

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