

**00L1**

Version 8.0

Issue Date : 11/18/2022  
Revision Date : 04/28/2025

Ref. 130000001616

This SDS adheres to the standards and regulatory requirements of the United States and may not meet the regulatory requirements in other countries.

**SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**

Product name : 00L1  
Product Use : For industrial use only., Paste for electronic industry

Restrictions on use : Do not use product for anything outside of the above specified uses.  
Manufacturer/Supplier : Celanese Sales U.S. Ltd.  
222 West Las Colinas Boulevard Suite 900N  
Irving, TX 75039

Product Information : +1 972-443-4000  
Transport Emergency : HazCom@celanese.com

**SECTION 2. HAZARDS IDENTIFICATION****Product hazard category**

Flammable liquids	Category 4
Skin irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Skin sensitisation	Category 1

**Label content**

Pictogram :



Signal word : Warning

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Hazardous warnings : Combustible liquid.  
Causes skin irritation.  
May cause an allergic skin reaction.  
Causes serious eye irritation.

Hazardous prevention measures : Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.  
Avoid breathing mist or vapours.  
Wash skin thoroughly after handling.  
Contaminated work clothing should not be allowed out of the workplace.  
Wear protective gloves/ eye protection/ face protection.  
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 do. Continue rinsing.  
If skin irritation or rash occurs: Get medical advice/ attention.  
If eye irritation persists: Get medical advice/ attention.  
Take off contaminated clothing and wash before reuse.  
In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.  
Store in a well-ventilated place. Keep cool.  
Dispose of contents/ container to an approved waste disposal plant.

**Other hazards**

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity: 60 - 70 %

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Component	CAS-No.	Concentration
Silver powder	7440-22-4	20 - 30 %
Terpineol	8000-41-7	20 - 30 %
Modified Epichlorohydrin Resin	25068-38-6	1 - 10 %

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Nonylphenol Ethoxylate	68412-53-3	1 - 10 %
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The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

Glass or Ceramic ingredient(s) Barium.		10 - 20 %
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**SECTION 4. FIRST AID MEASURES**

General advice	: No applicable data available.
Inhalation	: If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.
Skin contact	: Wash off with soap and water. Get medical attention if irritation develops and persists. Wash contaminated clothing before re-use.
Eye contact	: Immediately flush eyes for at least 15 minutes. Get medical attention.
Ingestion	: If swallowed Rinse mouth with water. Call a physician or poison control centre immediately. DO NOT induce vomiting unless directed to do so by a physician or poison control center.
Most important symptoms/effects, acute and delayed	: No applicable data available.
Protection of first-aiders	: No applicable data available.
Notes to physician	: No applicable data available.

**SECTION 5. FIREFIGHTING MEASURES**

Suitable extinguishing media	: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water spray, Dry chemical, Carbon dioxide (CO2)
Unsuitable extinguishing media	: No applicable data available.

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- Specific hazards : Hazardous decomposition products formed under fire conditions. (see also section 10) Avoid breathing decomposition products.
- Special protective equipment for firefighters : Exposure to decomposition products may be a hazard to health. Wear self-contained breathing apparatus for firefighting if necessary.
- Further information : Evacuate personnel to safe areas. Stop spill/release if it can be done with minimal risk. Do not allow run-off from fire fighting to enter drains or water courses.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

- Safeguards (Personnel) : Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. Wear suitable protective equipment.
- Environmental precautions : Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Clean contaminated floors and objects thoroughly while observing environmental regulations.
- Spill Cleanup : Contain spill. Soak up with inert absorbent material. Collect and contain contaminated absorbent and dike material for disposal. Keep in suitable, closed containers for disposal. Ventilate the area. Clean contaminated surface thoroughly.
- Accidental Release Measures : Dispose of in accordance with local regulations.

**SECTION 7. HANDLING AND STORAGE**

- Handling (Personnel) : Avoid inhalation, ingestion and contact with skin and eyes. Do not use in areas without adequate ventilation. Keep container closed when not in use. Take care to avoid waste and spillage when weighing, loading and mixing the product.  
Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing. Contaminated work clothing should not be allowed out of the workplace. Remove contaminated clothing and

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protective equipment before entering eating areas. Remove and wash contaminated clothing before re-use.

Handling (Physical Aspects) : Avoid formation of dust and aerosols. Keep away from heat and sources of ignition.

Dust explosion class : No applicable data available.

Storage : Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from sources of ignition - No smoking. Do not store or consume food, drink or tobacco in areas where they may become contaminated with this material. Keep container closed when not in use. Do not reuse empty container.  
Stable under normal conditions.

Storage period : No applicable data available.

Storage temperature : No applicable data available.

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Engineering controls : Local exhaust or a laboratory hood should be used when handling the materials. Maintain air concentrations below occupational exposure standards.

Personal protective equipment  
Respiratory protection : Provide adequate ventilation. No personal respiratory protective equipment normally required. Where there is potential for airborne exposures in excess of applicable limits, wear approved respiratory protection with dust/mist cartridge. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Consult the respirator manufacturer to determine the appropriate type of equipment for a given application. Observe respirator use limitations specified by the manufacturer. Persons performing maintenance or repairs on exhaust system equipment (e.g. ducts) may need to use respirators and protective clothing to prevent exposure to any accumulated residues.

Hand protection : Material: Impervious gloves  
Additional protection: Gloves must be inspected prior to use., Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough., The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other., The exact break through time can be obtained from the protective glove producer and this has to be observed., Please

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observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.

Eye protection : Wear safety glasses with side shields.

Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.  
Lightweight protective clothing  
Safety shoes

Exposure Guidelines  
Exposure Limit Values

<b>Silver powder</b>			
TLV	(ACGIH)	0.1 mg/m3	TWA Dust and fume
REL	(NIOSH)	0.01 mg/m3	Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek Dust
PEL (Permissible Exposure Limit)	(OSHA)	0.01 mg/m3	TWA

**Terpineol**

No applicable data available.

**Modified Epichlorohydrin Resin**

No applicable data available.

**Nonylphenol Ethoxylate**

No applicable data available.

**Barium**

TLV	(ACGIH)	0.5 mg/m3	TWA Barium
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**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

## Appearance

Physical state : liquid  
Form : paste  
Color : black

Odor : aromatic

Odor threshold : No applicable data available.

pH : No applicable data available.

Melting point/range : No applicable data available.

Boiling point/boiling range : No applicable data available.

Flash point : 92 °C  
Method: Setaflash closed cup - SCC

Evaporation rate : No applicable data available.

Flammability (solid, gas) : No applicable data available.

Upper explosion limit : No applicable data available.

Lower explosion limit : No applicable data available.

Vapour Pressure : No applicable data available.

Vapour density : No applicable data available.

Density : 2.29 g/cm<sup>3</sup>

Specific gravity (Relative density) : No applicable data available.

Water solubility : at 20 °C (68 °F)  
slightly soluble

Solubility(ies) : No applicable data available.

Partition coefficient: n- : No applicable data available.

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octanol/water

Auto-ignition temperature : No applicable data available.

Decomposition temperature : No applicable data available.

Viscosity, kinematic : No applicable data available.

Viscosity, dynamic : 50 - 200 Pa.s at 25 °C (77 °F)

**SECTION 10. STABILITY AND REACTIVITY**

Reactivity : No applicable data available.

Chemical stability : Stable at normal temperatures and storage conditions.

Possibility of hazardous reactions : Polymerization will not occur.

Conditions to avoid : None reasonably foreseeable.

Incompatible materials : Acids, bases and strong oxidizing agents

Hazardous decomposition products : No decomposition if stored and applied as directed.  
Under fire conditions:  
Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).,  
Metal oxides

**SECTION 11. TOXICOLOGICAL INFORMATION**

Silver powder

Inhalation 4 h LC50 : &gt; 5.16 mg/l , Rat

Dermal LD50 : &gt; 2,000 mg/kg , Rat

Oral LD50 : &gt; 2,000 mg/kg , Rat

Skin irritation : Slight or no skin irritation, Rabbit  
Minimal effects that do not meet the threshold for classification.

Eye irritation : No eye irritation, Rabbit

Skin sensitization : Does not cause skin sensitisation., Guinea pig  
Information given is based on data obtained from similar substances.



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Repeated dose toxicity : Ingestion  
Rat  
- 90 d  
NOAEL: 30 mg/kg  
LOAEL: 125 mg/kg Method: OECD Test Guideline 408  
No toxicological effects warranting significant target organ toxicity classification were seen below the recommended guidance values for classification.

Inhalation  
Rat  
- 90 d  
dust/mist Method: OECD Test Guideline 413  
No toxicological effects warranting significant target organ toxicity classification were seen below the recommended guidance values for classification.

Mutagenicity : Weight of evidence does not support classification as a germ cell mutagen.  
Did not cause genetic damage in cultured bacterial cells.  
Genetic damage in cultured mammalian cells was observed in some laboratory tests but not in others.  
Genetic damage in animals was observed in some laboratory tests but not in others.  
Information given is based on data obtained from similar substances.

Reproductive toxicity : No toxicity to reproduction  
Animal testing showed no reproductive toxicity.

Teratogenicity : Animal testing showed no developmental toxicity.

**Terpineol**

Inhalation : no data available

Inhalation :

Dermal LD50 : > 2,000 mg/kg , Rabbit

Oral LD50 : > 2,000 mg/kg , Rat

Skin irritation : Skin irritation, Rabbit

Eye irritation : Eye irritation, animals (unspecified species)

Skin sensitization : Did not cause sensitisation on laboratory animals., Guinea pig

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Repeated dose toxicity	: Oral Rat - No toxicologically significant effects were found.
Carcinogenicity	: Not classifiable as a human carcinogen. Overall weight of evidence indicates that the substance is not carcinogenic.
Mutagenicity	: Tests on bacterial or mammalian cell cultures did not show mutagenic effects. Evidence suggests this substance does not cause genetic damage in animals.
Reproductive toxicity	: Animal testing showed effects on reproduction at levels equal to or above those causing parental toxicity.
Modified Epichlorohydrin Resin Inhalation	: An LC50/inhalation/4h/rat could not be determined because no mortality of rats was observed at the maximum achievable concentration.
Dermal LD50	: > 2,000 mg/kg , Rat
Oral LD50	: > 2,000 mg/kg , Rat
Skin irritation	: Severe skin irritation, Rabbit
Eye irritation	: Irritation to eyes, reversing within 7 days, Rabbit
Skin sensitization	: May cause sensitisation by skin contact., Mouse
Repeated dose toxicity	: Ingestion Rat - 90 d NOAEL: > 1,000 mg/kgMethod: OECD Test Guideline 408 No toxicologically significant effects were found.  Skin contact Mouse - 90 d NOAEL: 100 mg/kgMethod: OECD Test Guideline 411 No toxicologically significant effects were found.

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Carcinogenicity : Animal testing did not show any carcinogenic effects.

Mutagenicity : Animal testing did not show any mutagenic effects.  
Did not cause genetic damage in cultured bacterial cells.  
Genetic damage in cultured mammalian cells was observed in some laboratory tests but not in others.

Reproductive toxicity : No toxicity to reproduction  
Animal testing showed no reproductive toxicity.  
No effects on or via lactation

Teratogenicity : Animal testing showed no developmental toxicity.

Nonylphenol Ethoxylate

Oral LD50 : 4,450 mg/kg , Rat

Skin irritation : Severe skin irritation, Rabbit  
Information given is based on data obtained from similar substances.

Eye irritation : Risk of serious damage to eyes., Rabbit  
Information given is based on data obtained from similar substances.

Skin sensitization : Does not cause skin sensitisation., human  
Information given is based on data obtained from similar substances.

**Barium**

Oral LD50 : 132 mg/kg , Rat  
Target Organs: Cardio-vascular system  
Symptoms: cardiovascular system effects

Skin irritation : Mild skin irritation, animals (unspecified species)  
irritant

Eye irritation : Severe eye irritation, Rabbit  
irritant

Repeated dose toxicity : Oral  
multiple species  
-  
Kidney effects

**Carcinogenicity**

The carcinogenicity classifications for this product and/or its ingredients have been determined according to HazCom 2012, Appendix A.6. The classifications may differ from those listed in the National Toxicology

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Program (NTP) Report on Carcinogens (latest edition) or those found to be a potential carcinogen in the International Agency for Research on Cancer (IARC) Monographs (latest edition).

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, or OSHA, as a carcinogen.

**SECTION 12. ECOLOGICAL INFORMATION****Aquatic Toxicity****Silver powder**

- |           |   |  |
|-----------|---|--|
| 96 h LC50 | : | Pimephales promelas (fathead minnow) 0.016 mg/l<br>Information given is based on data obtained from similar substances.            |
| 96 h EC50 | : | Pseudokirchneriella subcapitata (green algae) 0.19 mg/l<br>Information given is based on data obtained from similar substances.    |
| 72 h EC10 | : | Pseudokirchneriella subcapitata (green algae) 0.03462 mg/l<br>Information given is based on data obtained from similar substances. |
| 48 h EC50 | : | Daphnia magna (Water flea) 0.0125 mg/l<br>Information given is based on data obtained from similar substances.                     |
| 32 d      | : | NOEC Oncorhynchus mykiss (rainbow trout) 0.0012 mg/l<br>Information given is based on data obtained from similar substances.       |
| 21 d      | : | NOEC Daphnia magna (Water flea) 0.00327 mg/l<br>Information given is based on data obtained from similar substances.               |

**Terpineol**

- |            |   |   |
|------------|---|---|
| 96 h LC50  | : | Danio rerio (zebra fish) 62 - 80 mg/l OECD Test Guideline 203                 |
| 72 h ErC50 | : | Pseudokirchneriella subcapitata (green algae) 68 mg/l OECD Test Guideline 201 |
| 72 h EbC50 | : | Pseudokirchneriella subcapitata (green algae) 17 mg/l OECD Test Guideline 201 |
| 48 h LC50  | : | Daphnia magna (Water flea) 73 mg/l OECD Test Guideline 202                    |

**Modified Epichlorohydrin Resin**

- |            |   |   |
|------------|---|---|
| 96 h LC50  | : | Oncorhynchus mykiss (rainbow trout) 1.2 mg/l            |
| 72 h ErC50 | : | Scenedesmus capricornutum (fresh water algae) > 11 mg/l |

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72 h NOEC : Scenedesmus capricornutum (fresh water algae) 4.2 mg/l  
48 h EC50 : Daphnia magna (Water flea) 1.1 mg/l OECD Test Guideline 202  
21 d : NOEC Daphnia magna (Water flea) 0.3 mg/l OECD Test Guideline 211

Nonylphenol Ethoxylate  
96 h LC50 : Danio rerio (zebra fish) 81 mg/l

**Environmental Fate****Silver powder**

Biodegradability : Not biodegradable  
Not applicable  
Bioaccumulation : Bioaccumulation is unlikely.  
Information given is based on data obtained from similar substances.

**Terpineol**

Biodegradability : 80 % OECD Test Guideline 301  
Readily biodegradable.  
Bioaccumulation : Bioconcentration factor (BCF) : 24.13  
Bioaccumulation is unlikely.

**Modified Epichlorohydrin Resin**

Bioaccumulation : The substance has the potential to bioaccumulate.

Additional ecological information : No data is available on the product itself.

**SECTION 13. DISPOSAL CONSIDERATIONS**

Waste disposal methods - Product : If recycling is not practicable, dispose of in compliance with local regulations.  
Never place unused product down any indoor or out door drain.

Waste disposal methods - Container : Do not reuse empty container.  
Contaminated/not cleaned containers should be treated/handled like product waste.  
Dispose of container properly.  
Refer to applicable Local, State/Provincial, and Federal Regulations, as well as industry Standards.

Contaminated packaging : No applicable data available.

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**SECTION 14. TRANSPORT INFORMATION**

IATA_C	UN number	: 3082
	Proper shipping name	: Environmentally hazardous substance, liquid, n.o.s. (Silver)
	Class	: 9
	Packing group	: III
IMDG	Labelling No.	: 9
	UN number	: 3082
	Proper shipping name	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Silver)
	Class	: 9
	Packing group	: III
	Labelling No.	: 9

Regulated by DOT/49CFR as Combustible Liquid when transported in a bulk package ( $\geq 119$  gallons(450 litres)).

Not regulated by DOT in non-bulk package.

Marine Pollutants assigned UN number 3077 and 3082 in single or combination packaging containing a net quantity per single or inner packaging of 5 L or less for liquids or having a net mass per single or inner packaging of 5 KG or less for solids may be transported as non-dangerous goods as provided in section 2.10.2.7 of IMDG code, IATA special provision A197, and ADR/RID special provision 375.

**SECTION 15. REGULATORY INFORMATION**

TSCA : In compliance with TSCA-active Inventory requirements for commercial purposes.

At least one or more components of this product is subject to a TSCA Significant New Use Rule (SNUR) at 40 CFR 721.10229.

SARA 311/312 Hazard classification : Flammable (gases, aerosols, liquids, or solids)  
Skin corrosion or irritation  
Serious eye damage or eye irritation  
Respiratory or skin sensitisation

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SARA 313 Regulated Chemical(s) : The following components are subject to reporting levels established by SARA Title III, Section 313: Silver powder, Diethylene glycol dibutyl ether

California Prop. 65 : This product can expose you to substances including 1,4-Dioxane, which is/are known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**SECTION 16. OTHER INFORMATION**

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Contact person :

Wilmington, DE 19803, USA

Product Information: +1 972-443-4000 E-mail address: [HazCom@celanese.com](mailto:HazCom@celanese.com)

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.