0070T

Version 8.0

Issue Date	:	11/18/2022	Ref. 130000001612
Revision Date	:	04/28/2025	

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	:	0070T
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
Germ cell mutagenicity	Category 2
Carcinogenicity	Category 2
Reproductive toxicity	Category 1A
Specific target organ toxicity - single exposure	Category 2
Specific target organ toxicity - repeated exposure	Category 1
Specific target organ toxicity - repeated exposure	Category 2

Celanese

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Label content

Pictogram :

Signal word : Danger

Hazardous warnings : Combustible liquid.
Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye irritation.
Suspected of causing genetic defects.
Suspected of causing cancer.
May damage fertility or the unborn child.
May cause damage to organs. (Respiratory system, Lungs)
Causes damage to organs through prolonged or repeated exposure. (Blood)
May cause damage to organs through prolonged or repeated exposure. (Respiratory system, Lungs)

Hazardous prevention measures : 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.
Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
Wash skin 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/ protective clothing/ 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 exposed or concerned: Call a POISON CENTER/doctor.
IF exposed or concerned: Get medical advice/ attention.
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.
Store locked up.
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
Terpineol	8000-41-7	20 - 30 %
Modified Epichlorohydrin Resin	25068-38-6	1 - 10 %
Disilver oxide	20667-12-3	0.1 - 1 %

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

Glass or Ceramic ingredient(s) Lead, Aluminum, Copper.		40 - 50 %

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.

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 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 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

Terpineol
No applicable data available.

Modified Epichlorohydrin Resin
No applicable data available.

Disilver oxide
No applicable data available.

Lead			
REL	(NIOSH)	0.05 mg/m3	Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek Lead
TLV	(ACGIH)	0.05 mg/m3	TWA Lead
PEL (Permissible Exposure Limit)	(OSHA)	0.05 mg/m3	8 hr. TWA Lead

Aluminum			
REL	(NIOSH)	5 mg/m3	Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek Respirable
REL	(NIOSH)	10 mg/m3	Time-weighted average concentration

			for up to a 10-hour workday during a 40-hour workweek total
PEL (Permissible Exposure Limit)	(OSHA)	15 mg/m3	8 hr. TWA total dust Aluminium
PEL (Permissible Exposure Limit)	(OSHA)	5 mg/m3	8 hr. TWA respirable fraction Aluminium
PEL (Permissible Exposure Limit)	(OSHA)	15 mg/m3	TWA Total dust Aluminium
PEL (Permissible Exposure Limit)	(OSHA)	5 mg/m3	TWA respirable dust fraction Aluminium
REL	(NIOSH)	5 mg/m3	Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek pyro powders Aluminium
TLV	(ACGIH)	1 mg/m3	TWA Respirable fraction Aluminium
REL	(NIOSH)	5 mg/m3	Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek welding fumes Aluminium
PEL (Permissible Exposure Limit)	(OSHA)	5 mg/m3	TWA Fumes

Copper			
TLV	(ACGIH)	1 mg/m3	TWA Dust and mist Copper
TLV	(ACGIH)	0.2 mg/m3	TWA Fumes Copper
REL	(NIOSH)	1 mg/m3	Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek Dust

			Copper
REL	(NIOSH)	1 mg/m3	Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek Mist Copper
PEL (Permissible Exposure Limit)	(OSHA)	1 mg/m3	8 hr. TWA dusts and mists Copper
PEL (Permissible Exposure Limit)	(OSHA)	0.1 mg/m3	8 hr. TWA Fumes Copper
PEL (Permissible Exposure Limit)	(OSHA)	0.1 mg/m3	TWA Fumes Copper
PEL (Permissible Exposure Limit)	(OSHA)	1 mg/m3	TWA Dust and mist Copper

Biological Exposure Indices

Lead			
BEI	(ACGIH)	200 µg/l	Lead/In blood Not critical

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance
- Physical state : liquid
- Form : paste
- Color : black

Odor : pine

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	:	85 °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	:	1.81 g/cm3
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-octanol/water	:	No applicable data available.
Auto-ignition temperature	:	No applicable data available.
Decomposition temperature	:	No applicable data available.
Viscosity, kinematic	:	> 20.5 mm2/s at 40 °C (104 °F) estimated
Viscosity, dynamic	:	> 100 Pa.s at 25 °C (77 °F)
Oxidizing Substance	:	The substance or mixture is not classified as oxidizing.

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

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
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 : Rat
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.

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.

Disilver oxide

Oral LD50 : > 5,000 mg/kg , Rat

Skin irritation : No skin irritation, Rabbit

Eye irritation : Severe eye irritation, Rabbit

Skin sensitization : Does not cause skin sensitisation., Guinea pig

Repeated dose toxicity : Oral
Rat
-
No toxicologically significant effects were found.

Inhalation
Rat
-
No toxicologically significant effects were found.

Mutagenicity : Animal testing did not show any mutagenic effects.

Teratogenicity : Animal testing showed no developmental toxicity.

Lead

Inhalation 4 h LC50 : > 5.05 mg/l , Rat
Information given is based on data obtained from similar substances.

Dermal LD50 : > 2,000 mg/kg , Rat
Information given is based on data obtained from similar substances.

Oral LD50 : > 5,000 mg/kg , Rat
Information given is based on data obtained from similar substances.

Skin irritation : No skin irritation, Rabbit
Information given is based on data obtained from similar substances.

Eye irritation	:	No eye irritation, Rabbit Information given is based on data obtained from similar substances.
Skin sensitization	:	Does not cause skin sensitisation., Guinea pig Information given is based on data obtained from similar substances.
Repeated dose toxicity	:	Oral Rat - LOAEL: 200, Target Organs: Blood The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 1. altered blood chemistry, Information given is based on data obtained from similar substances.
Carcinogenicity	:	Suspected human carcinogens An increased incidence of tumours was observed in laboratory animals. Information given is based on data obtained from similar substances.
Mutagenicity	:	In vitro tests showed mutagenic effects Genetic damage in cultured mammalian cells was observed in some laboratory tests but not in others.
Reproductive toxicity	:	Known human reproductive toxicant Reduced fertility Information given is based on data obtained from similar substances.
Teratogenicity	:	Delayed foetal development (variations) Information given is based on data obtained from similar substances.

Aluminum

Inhalation	:	Effects of breathing high concentration of respirable particles may include: Respiratory tract damage Lung damage
Repeated dose toxicity	:	Inhalation human - Respiratory tract damage, Lung damage

Copper

Inhalation	:	0.1 mg/l , animals (unspecified species)
Oral LD50	:	> 17,000 mg/kg , Rat
Eye irritation	:	animals (unspecified species) irritant
Skin sensitization	:	human May cause sensitisation of susceptible persons by skin contact.
Repeated dose toxicity	:	Inhalation Inhalation fume fever, Respiratory irritation, Immune system effects, Liver 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 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).

Material	IARC	NTP	OSHA
Lead	2B	X	X
Titanium dioxide	2B		

SECTION 12. ECOLOGICAL INFORMATION

Aquatic Toxicity

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
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

Disilver oxide

96 h LC50	:	Pimephales promelas (fathead minnow) 0.0012 mg/l
96 h EC50	:	Pseudokirchneriella subcapitata (green algae) 0.19 mg/l
48 h EC50	:	Daphnia magna (Water flea) 0.00022 mg/l
32 d	:	NOEC Pimephales promelas (fathead minnow) 0.00035 mg/l
21 d	:	NOEC Daphnia magna (Water flea) 0.0033 mg/l

Aluminum

96 h semi-static test NOEC	:	Salmo trutta (brown trout) > 100 mg/l OECD Test Guideline 203
72 h NOEC	:	Scenedesmus capricornutum (fresh water algae) > 100 mg/l OECD Test Guideline 201
48 h NOEC	:	Daphnia magna (Water flea) > 100 mg/l OECD Test Guideline 202

Copper

72 h EC50	:	Algae 0.0127 mg/l

Environmental Fate

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.

Disilver oxide
Bioaccumulation : Bioaccumulation is unlikely.

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.

SECTION 14. TRANSPORT INFORMATION

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

Regulated by DOT/49CFR as Combustible Liquid when transported in a bulk package (>=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	:	On the inventory, or in compliance with the inventory
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 Germ cell mutagenicity Carcinogenicity Reproductive toxicity Specific target organ toxicity (single or repeated exposure)
SARA 313 Regulated Chemical(s)	:	The following components are subject to reporting levels established by SARA Title III, Section 313: Diethylene glycol dibutyl ether, Copper
California Prop. 65	:	This product can expose you to substances including Titanium dioxide, which is/are known to the State of California to cause cancer, and Lead, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to 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

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.