



Revision Number: 005.0

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1. PRODUCT AND COMPANY IDENTIFICATION

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| Product name: LOCTITE GC 10 SAC305T4 885V BUL | IDH number: 1939507 |
| Product type: Solder Paste | Item number: MB0898 |
| Restriction of Use: None identified | Region: United States |
| Company address: Henkel Electronic Materials LLC 14000 Jamboree Road Irvine, CA 92606 | Contact information: Telephone: +1 (888) 943-6535 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.henkel.com/electronics |

Contains one or more components which are not included on the CEPA DSL or NDSL.

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER: CAUSES SKIN IRRITATION.
MAY CAUSE AN ALLERGIC SKIN REACTION.
CAUSES SERIOUS EYE IRRITATION.
MAY CAUSE ALLERGY OR ASTHMA SYMPTOMS OR BREATHING DIFFICULTIES IF INHALED.

| HAZARD CLASS | HAZARD CATEGORY |
|---------------------------|-----------------|
| SKIN IRRITATION | 2 |
| EYE IRRITATION | 2A |
| RESPIRATORY SENSITIZATION | 1 |
| SKIN SENSITIZATION | 1 |

PICTOGRAM(S)



Precautionary Statements

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| Prevention: | Avoid breathing dust or fumes. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wear eye and face protection. Wear protective gloves. In case of inadequate ventilation wear respiratory protection. |
| Response: | IF ON SKIN: Wash with plenty of soap and water. IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to remove. Continue rinsing. If skin irritation or rash occurs: Get medical attention. If eye irritation persists: Get medical attention. If experiencing respiratory symptoms: Call a poison center or physician. Take off contaminated clothing. |
| Storage: | Not prescribed |
| Disposal: | Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations. |

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* |
|------------------------------------|------------|-------------|
| Tin | 7440-31-5 | 60 - 100 |
| Silver | 7440-22-4 | 1 - 5 |
| Rosin | 8050-09-7 | 1 - 5 |
| Polyethylene glycol dibutyl ether | 31885-97-9 | 1 - 5 |
| Triethylene glycol monobutyl ether | 143-22-6 | 1 - 5 |
| Copper | 7440-50-8 | 0.1 - 1 |
| Dodecane-1-thiol | 112-55-0 | 0.1 - 1 |

* Exact percentage is a trade secret. Concentration range is provided to assist users in providing appropriate protections.

4. FIRST AID MEASURES

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| Inhalation: | Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. If symptoms develop and persist, get medical attention. |
| Skin contact: | Remove contaminated clothing and footwear. Immediately rinse with copious amounts of running water (for 10 minutes). Remove contaminated clothes. Put on a bandage with sterile gauze, seek medical attention in hospital. 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. 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. |
| Symptoms: | See Section 11. |

5. FIRE FIGHTING MEASURES

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| Extinguishing media: | Water spray (fog), foam, dry chemical or carbon dioxide. |
| Special firefighting procedures: | Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear. |
| Unusual fire or explosion hazards: | In case of fire, keep containers cool with water spray. |
| Hazardous combustion products: | High temperatures may produce heavy metal dust, fumes or vapors. The flux will give rise to irritating fumes. |

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

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| Environmental precautions: | Do not allow product to enter sewer or waterways. |
| Clean-up methods: | Ensure adequate ventilation. Wear suitable protective clothing, gloves and eye/face protection. Scrape up as much material as possible. Keep in suitable and closed containers for disposal. |

7. HANDLING AND STORAGE

Handling: Use only in well-ventilated areas. Wear suitable protective clothing, gloves and eye/face protection. Avoid contact with eyes, skin and clothing. When using do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product.

Storage: For safe storage, store between 5 °C (41°F) and 25 °C (77°F)
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 |
|------------------------------------|---|---|-----------|-------|
| Tin | 2 mg/m3 TWA | 2 mg/m3 PEL (as Sn) | None | None |
| Silver | 0.1 mg/m3 TWA Dust and fume. | 0.01 mg/m3 PEL (as Ag) | None | None |
| Rosin | Exposure by all routes should be carefully controlled to levels as low as possible. Included in the regulation but with no data values. See regulation for further details (Respiratory sensitization) (Dermal sensitization) | None | None | None |
| Polyethylene glycol dibutyl ether | None | None | None | None |
| Triethylene glycol monobutyl ether | None | None | None | None |
| Copper | 0.2 mg/m3 TWA (as Cu) Fume. 1 mg/m3 TWA (as Cu) Dust and mist. | 1 mg/m3 PEL (as Cu) Dust and mist. 0.1 mg/m3 PEL (as Cu) Fume. | None | None |
| Dodecane-1-thiol | 0.1 ppm TWA (Dermal sensitization) | None | None | None |

Engineering controls: Heat only in areas with appropriate exhaust ventilation. Local exhaust ventilation is recommended when general ventilation is not sufficient to control airborne contamination.

Respiratory protection: Where the potential exists for exposure to decomposition products due to heating or elevated temperatures, wear NIOSH approved respiratory protection as appropriate.

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

Skin protection: Heat and chemical resistant gloves.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Solid
Color: Gray
Odor: Mild
Odor threshold: Not available.
pH: Not available.
Vapor pressure: 0.83 Pa (50 °C (122°F))
Boiling point/range: Not available.

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|---|-------------------|
| Melting point/ range: | Not available. |
| Specific gravity: | 4.5 |
| Vapor density: | Not available. |
| Flash point: | 131 °C (267.8 °F) |
| Flammable/Explosive limits - lower: | Not available. |
| Flammable/Explosive limits - upper: | Not available. |
| Autoignition temperature: | Not available. |
| Evaporation rate: | Not available. |
| Solubility in water: | Not available. |
| Partition coefficient (n-octanol/water): | Not available. |
| VOC content: | 3.62 % |
| Viscosity: | Not available. |
| Decomposition temperature: | Not available. |

10. STABILITY AND REACTIVITY

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| Stability: | Stable under normal conditions of storage and use. |
| Hazardous reactions: | Will not occur. |
| Hazardous decomposition products: | Oxides of carbon. Oxides of Metals in Section 2. Thermal decomposition can lead to release of irritating gases and vapors. Formaldehyde. |
| Incompatible materials: | Strong oxidizing agents. Acids and bases. Reacts with alkalis: spontaneous decomposition and production of heat |
| Reactivity: | Not available. |
| Conditions to avoid: | Solder alloy will react with concentrated nitric acid to produce toxic fumes of nitrogen oxides. |

11. TOXICOLOGICAL INFORMATION

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| Relevant routes of exposure: | Skin, Inhalation, Eyes |
|-------------------------------------|------------------------|

Potential Health Effects/Symptoms

Inhalation: May cause respiratory tract irritation.
Skin contact: Causes skin irritation. May cause allergic skin reaction. Argyria (a non-toxic, cosmetic blue-gray discoloration of the skin and mucous membranes that is irreversible).
Eye contact: Causes serious eye irritation.
Ingestion: Not expected under normal conditions of use.

| Hazardous Component(s) | LD50s and LC50s | Immediate and Delayed Health Effects |
|------------------------------------|--|--|
| Tin | None | Gastrointestinal, Irritant, Kidney, Liver, Lung, Nervous System |
| Silver | Oral LD50 (RAT) = > 5,000 mg/kg Dermal LD50 (RAT) = > 2,000 mg/kg | Allergen, Eyes, Irritant, Respiratory, Skin |
| Rosin | None | Allergen, Irritant, Respiratory |
| Polyethylene glycol dibutyl ether | None | No Records |
| Triethylene glycol monobutyl ether | Oral LD50 (RAT) = 5,300 mg/kg | Central nervous system, Irritant |
| Copper | None | Allergen, Blood, Central nervous system, Developmental, Gastrointestinal, Immune system, Irritant, Kidney, Liver, Mutagen, Sensory, Skin |
| Dodecane-1-thiol | None | Allergen, Central nervous system, Irritant, Reproductive |

| Hazardous Component(s) | NTP Carcinogen | IARC Carcinogen | OSHA Carcinogen (Specifically Regulated) |
|------------------------------------|----------------|-----------------|--|
| Tin | No | No | No |
| Silver | No | No | No |
| Rosin | No | No | No |
| Polyethylene glycol dibutyl ether | No | No | No |
| Triethylene glycol monobutyl ether | No | No | No |
| Copper | No | No | No |
| Dodecane-1-thiol | 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.

Hazardous waste number: D011. Silver.

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: Glycol Ether (CAS# 31885-97-9).
CERCLA/SARA Section 302 EHS: None above reporting de minimis
CERCLA/SARA Section 311/312: 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). Triethylene glycol monobutyl ether (CAS# 143-22-6).
California Proposition 65: 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: New Safety Data Sheet format.

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