



Revision Number: 005.0

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1. PRODUCT AND COMPANY IDENTIFICATION

| | | | |
|----------------------------|---|-----------------------------|---|
| Product name: | LOCTITE MP 218 63S4ACP89V AU known as 63S4MP218ACP89V 500G JAR | IDH number: | 1051209 |
| Product type: | Solder Paste | Item number: | M00705 |
| Restriction of Use: | None identified | Region: | United States |
| Company address: | Henkel Corporation One Henkel Way Rocky Hill, Connecticut 06067 | 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: HARMFUL IF SWALLOWED OR IF INHALED.
MAY CAUSE AN ALLERGIC SKIN REACTION.
MAY CAUSE ALLERGY OR ASTHMA SYMPTOMS OR BREATHING DIFFICULTIES IF INHALED.
MAY CAUSE DROWSINESS OR DIZZINESS.
MAY DAMAGE FERTILITY OR THE UNBORN CHILD.
CAUSES DAMAGE TO ORGANS THROUGH PROLONGED OR REPEATED EXPOSURE.

| HAZARD CLASS | HAZARD CATEGORY |
|--|-----------------|
| ACUTE TOXICITY ORAL | 4 |
| ACUTE TOXICITY INHALATION | 4 |
| RESPIRATORY SENSITIZATION | 1 |
| SKIN SENSITIZATION | 1 |
| REPRODUCTIVE TOXICITY | 1A |
| SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE | 3 |
| SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE | 1 |

PICTOGRAM(S)



Precautionary Statements

Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust or fumes. Wash affected area thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves, clothing, eye and face protection. In case of inadequate ventilation wear respiratory protection.

Response: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN: Wash with plenty of water. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF exposed or concerned: Get medical attention. If skin irritation or rash occurs: Get medical attention. Wash contaminated clothing before reuse.

Storage: Store in a well-ventilated place. Keep container tightly closed. Store locked up.

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 | 50 - 60 |
| Lead | 7439-92-1 | 30 - 40 |
| Rosin | 8050-09-7 | 1 - 5 |
| Bis(2-butoxyethyl)ether | 112-73-2 | 1 - 5 |
| Polyethylene glycol dibutyl ether | 31885-97-9 | 1 - 5 |
| Silver | 7440-22-4 | 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

Inhalation: Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get immediate 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: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

Ingestion: Do not induce vomiting. 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

Extinguishing media: Foam, dry chemical or carbon dioxide.

Special firefighting procedures: Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear. Do not use water on fires where molten metal is present.

Unusual fire or explosion hazards: None

Hazardous combustion products:

Oxides of carbon. Oxides of silicon. Oxides of Metals in Section 3.
Formaldehyde. 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.

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 spilled material and place in a closed container for disposal. Refer to Section 8 "Exposure Controls / Personal Protection" prior to clean up.

7. HANDLING AND STORAGE

Handling:

Use only with adequate ventilation. Wear suitable protective clothing, gloves and eye/face protection. Avoid skin contact with molten resins. Avoid contact with eyes, skin and clothing. Do not wear contact lenses. Wash thoroughly after handling.

Storage:

Store in original container until ready to use. Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for 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 |
| Lead | 0.05 mg/m3 TWA (as Pb) | 0.05 mg/m3 TWA 0.03 mg/m3 OSHA_ACT | 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 |
| Bis(2-butoxyethyl)ether | None | None | None | None |
| Polyethylene glycol dibutyl ether | None | None | None | None |
| Silver | 0.1 mg/m3 TWA Dust and fume. | 0.01 mg/m3 PEL (as Ag) | None | None |

Engineering controls:

Use only with adequate ventilation. Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.

Respiratory protection:

Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

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

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|---|
| Physical state: | Solid, Paste |
| Color: | Gray |
| Odor: | Mild |
| Odor threshold: | Not available. |
| pH: | Not applicable |
| Vapor pressure: | Not determined |
| Boiling point/range: | > 200 °C (> 392°F)(solvent) |
| Melting point/ range: | 179 °C (354.2 °F) (solder alloy) |
| Specific gravity: | 4.66 |
| Vapor density: | Heavier than air. |
| Flash point: | 117 °C (242.6 °F) ; Product is a solid. |
| Flammable/Explosive limits - lower: | Not applicable |
| Flammable/Explosive limits - upper: | Not applicable |
| Autoignition temperature: | Not determined |
| Flammability: | Not applicable |
| Evaporation rate: | Not available. |
| Solubility in water: | Not miscible |
| Partition coefficient (n-octanol/water): | Not determined |
| VOC content: | 0 %; 0 g/l |
| Viscosity: | Not available. |
| Decomposition temperature: | Not available. |

10. STABILITY AND REACTIVITY

| | |
|--|--|
| Stability: | Stable under recommended storage conditions. |
| Hazardous reactions: | Will not occur. |
| Hazardous decomposition products: | Oxides of carbon. Formaldehyde. Metal oxide fumes. Thermal decomposition can lead to release of irritating gases and vapors. |
| Incompatible materials: | Oxidizing agents. Strong acids and strong bases. |
| Reactivity: | Not available. |
| Conditions to avoid: | Solder alloy will react with concentrated nitric acid to produce toxic fumes of nitrogen oxides. |

11. TOXICOLOGICAL INFORMATION

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects/Symptoms

Inhalation: Harmful if inhaled. May cause allergic respiratory reaction. Vapor overexposure may cause drowsiness. Dizziness. Lead is a cumulative poison and continuous exposure to small amounts over time can raise the body's content to toxic levels. Fumes and/or dust produced by this product may be hazardous in case of ingestion or inhalation. Rosin thermal decomposition product (as formaldehyde) is classified by NIOSH as a potential occupational carcinogen. Excessive exposure to tin fumes or dust may cause Stannosis, a chronic respiratory disease resulting in reduced lung capacity and benign tumors. Excessive inhalation of fumes from many metals can produce an acute reaction known as "metal fume fever". Symptoms consist of chills and fever (very similar to and easily confused with flu symptoms) which come on a few hours after large exposures.

Skin contact: May cause 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: May cause eye irritation.

Ingestion: Harmful if swallowed. Lead is a cumulative poison and continuous exposure to small amounts over time can raise the body's content to toxic levels. Symptoms of lead poisoning include abdominal pain, nausea, vomiting, and headache.

| Hazardous Component(s) | LD50s and LC50s | Immediate and Delayed Health Effects |
|-----------------------------------|--|--|
| Tin | None | Gastrointestinal, Irritant, Kidney, Liver, Lung, Nervous System |
| Lead | None | Behavioral, Blood, Developmental, Eyes, Gastrointestinal, Kidney, Liver, Muscle, Nervous System, Reproductive, Skin, Some evidence of carcinogenicity, Thyroid |
| Rosin | None | Allergen, Irritant, Respiratory |
| Bis(2-butoxyethyl)ether | None | Irritant, Reproductive |
| Polyethylene glycol dibutyl ether | None | No Records |
| Silver | Oral LD50 (Rat) = > 5,000 mg/kg Dermal LD50 (Rat) = > 2,000 mg/kg | Allergen, Eyes, Irritant, Respiratory, Skin |

| Hazardous Component(s) | NTP Carcinogen | IARC Carcinogen | OSHA Carcinogen (Specifically Regulated) |
|-----------------------------------|--|-----------------|--|
| Tin | No | No | No |
| Lead | Reasonably Anticipated to be a Human Carcinogen. | Group 2B | No |
| Rosin | No | No | No |
| Bis(2-butoxyethyl)ether | No | No | No |
| Polyethylene glycol dibutyl ether | No | No | No |
| Silver | 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. Do not dispose of in an uncontrolled manner.

Hazardous waste number: D011. Silver. D008: Lead

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: RQ, Environmentally hazardous substances, solid, n.o.s.
Hazard class or division: 9
Identification number: UN 3077
Packing group: III
DOT Hazardous Substance(s): Lead

International Air Transportation (ICAO/IATA)

Proper shipping name: RQ, Environmentally hazardous substance, solid, n.o.s. (Silver, Lead)
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, Lead)
Hazard class or division: 9
Identification number: UN 3077
Packing group: III
Marine pollutant: Silver, Lead

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: Bis(2-butoxyethyl)ether (CAS# 112-73-2). 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). Lead (CAS# 7439-92-1). Bis(2-butoxyethyl)ether (CAS# 112-73-2).

CERCLA Reportable quantity: Lead (CAS# 7439-92-1) 10 lbs. (4.54 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: New Safety Data Sheet format.

Prepared by: Product Safety and Regulatory Affairs

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