



Revision Number: 003.0

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1. PRODUCT AND COMPANY IDENTIFICATION

Product name:	LOCTITE HF 2W SN63T3 905V 56U	IDH number:	2080671
Product type:	Solder Paste	Region:	United States
Restriction of Use:	None identified	Contact information:	
Company address:	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		
Henkel Corporation One Henkel Way Rocky Hill, Connecticut 06067			

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER: HARMFUL IF SWALLOWED OR IF INHALED
 CAUSES SKIN IRRITATION.
 MAY CAUSE AN ALLERGIC SKIN REACTION.
 CAUSES SERIOUS EYE IRRITATION.
 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
SKIN IRRITATION	2
EYE IRRITATION	2A
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 IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Get medical attention. If skin irritation or rash occurs: Get medical attention. If eye irritation persists: Get medical attention. Take off contaminated clothing.

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
Resin acids and Rosin acids, ethoxylated	8050-33-7	1 - 5
Rosin	8050-09-7	0.1 - 1
Triethylene glycol monobutyl ether	143-22-6	0.1 - 1
Ethylene glycol monophenyl ether	122-99-6	0.1 - 1
Dodecane-1-thiol	112-55-0	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. If symptoms develop and persist, get 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 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

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 Metals in Section 3. Formaldehyde. High temperatures may produce heavy metal dust, fumes or vapours. The flux medium 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 contact with eyes, skin and clothing. Avoid skin contact with molten resins. Do not wear contact lenses. Wash thoroughly after handling.

Storage:

For safe storage, store between 2 °C (35.6 °F) and 8 °C (46.4 °F) 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
Resin acids and Rosin acids, ethoxylated	None	None	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
Triethylene glycol monobutyl ether	None	None	None	None
Ethylene glycol monophenyl ether	None	None	None	25 ppm (SKIN)
Dodecane-1-thiol	0.1 ppm TWA (Dermal sensitization)	None	None	None

Engineering controls:

Use adequate ventilation to remove molten vapors or fumes. 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.
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 available.
Vapor pressure:	< 0.1 mbar (50 °C (122°F)) Estimated
Boiling point/range:	244 °C (471.2 °F)(solvent)
Melting point/ range:	183 °C (361.4 °F) Solder alloy
Specific gravity:	5.1
Vapor density:	Not available.
Flash point:	126 °C (258.8 °F)
Flammable/Explosive limits - lower:	Not available.
Flammable/Explosive limits - upper:	Not available.
Autoignition temperature:	Not available.
Flammability:	Not applicable
Evaporation rate:	Not available.
Solubility in water:	Partially soluble
Partition coefficient (n-octanol/water):	Not available.
VOC content:	2.3 %
Viscosity:	Not available.
Decomposition temperature:	Not available.

10. STABILITY AND REACTIVITY

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 3. Formaldehyde. Thermal decomposition can lead to release of irritating gases and vapors.
Incompatible materials:	Oxidizing agents. Acids and bases.
Reactivity:	Not available.
Conditions to avoid:	Solder alloy will react with concentrated nitric acid to produce toxic fumes of nitrogen oxides. Store away from incompatible materials.

11. TOXICOLOGICAL INFORMATION

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

Inhalation: Harmful if inhaled. May cause allergic respiratory reaction. Vapor overexposure may cause drowsiness. Dizziness. Excessive exposure to tin fumes or dust may cause Stannosis, a chronic respiratory disease resulting in reduced lung capacity and benign tumors. 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 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: Causes skin irritation. May cause allergic skin reaction.

Eye contact: Causes serious 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
Resin acids and Rosin acids, ethoxylated	None	No Records
Rosin	None	Allergen, Irritant, Respiratory
Triethylene glycol monobutyl ether	Oral LD50 (Rat) = 5,300 mg/kg	Central nervous system, Irritant
Ethylene glycol monophenyl ether	Oral LD50 (Rat) = 1,260 mg/kg Oral LD50 (Rat) = 13,700 mg/kg Oral LD50 (Mouse) = 16,500 mg/kg	Blood, Central nervous system, Developmental, Irritant, Kidney, Reproductive
Dodecane-1-thiol	Oral LD50 (Mouse) = 4,225 mg/kg	Allergen, Central nervous system, Irritant, Reproductive

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
Resin acids and Rosin acids, ethoxylated	No	No	No
Rosin	No	No	No
Triethylene glycol monobutyl ether	No	No	No
Ethylene glycol monophenyl ether	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. Do not dispose of in an uncontrolled manner.

Hazardous waste number: 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. (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. (Lead)
Hazard class or division: 9
Identification number: UN 3077
Packing group: III
Marine pollutant: 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: None above reporting de minimis

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). Triethylene glycol monobutyl ether (CAS# 143-22-6). Ethylene glycol monophenyl ether (CAS# 122-99-6).

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/NDSL Status: Contains one or more components listed on the Non-Domestic Substances List. All other components are listed on or are exempt from listing on the Domestic Substances List. Components listed on the NDSL must be tracked by all Canadian Importers of Record as required by Environment Canada. They may be imported into Canada in limited quantities. Please contact Regulatory Affairs for additional details.

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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