



Revision Date: 01/07/2004

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**1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

<b>Product name:</b> C5-A® Copper Based Anti-Seize Lubricant	<b>Item number:</b> 51007
<b>Product type:</b> Lubricant	<b>Region:</b> United States
<b>Company address:</b> Henkel Loctite Corporation 1001 Trout Brook Crossing Rocky Hill, Connecticut 06067	<b>Contact Information:</b> Telephone: 860.571.5100 Emergency telephone: 860.571.5100 Internet: www.loctite.com

**2. COMPOSITION/INFORMATION ON INGREDIENTS**

<u>Hazardous components</u>	<u>%</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>	<u>OTHER</u>
Petroleum distillates	30-60	5 mg/m <sup>3</sup> TWA (mist) 10mg/m <sup>3</sup> STEL (mist)	5 mg/m <sup>3</sup> TWA (mist)	None
Copper 7440-50-8	10-30	0.2 mg/m <sup>3</sup> TWA (fume) 1 mg/m <sup>3</sup> TWA (dusts and mists, as Cu)	0.1 mg/m <sup>3</sup> TWA (fume) 1 mg/m <sup>3</sup> TWA (dusts and mists)	None
Graphite 7782-42-5	10-30	2 mg/m <sup>3</sup> TWA (respirable fraction, all forms except graphite fibers)	15 mg/m <sup>3</sup> (total), 5 mg/m <sup>3</sup> (respirable)	None
Silica, quartz 14808-60-7	1-5	0.05 mg/m <sup>3</sup> TWA (respirable fraction)	0.1mg/m <sup>3</sup> TWA (respirable)	None

**3. HAZARDS IDENTIFICATION**

<u>EMERGENCY OVERVIEW</u>		
<u>HMIS:</u>		
<b>Physical state:</b> Paste	<b>HEALTH:</b>	1
<b>Color:</b> Copper	<b>FLAMMABILITY:</b>	1
<b>Odor:</b> Mild petroleum	<b>PHYSICAL HAZARD:</b>	0
	<b>Personal Protection:</b>	See Section 8
<b>CAUTION: MAY CAUSE EYE AND SKIN IRRITATION.</b>		

**Relevant routes of exposure:** Skin, Eyes

Potential Health Effects

**Inhalation:** This product has low volatility and is not expected to cause respiratory tract irritation during normal conditions of use. May cause respiratory tract irritation. Inhalation of copper fumes may result in metal fume fever. Symptoms include metallic taste, discoloration of skin or hair.

**Skin contact:** Prolonged or repeated contact may cause irritation.

**Eye contact:** Contact with eyes will cause irritation.

**Ingestion:** Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Principal hazard of ingestion is aspiration into the lungs and subsequent pneumonitis.

**Existing conditions aggravated by exposure:** Eye, skin, and respiratory disorders.

See Section 11 for additional toxicological information.

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#### 4. FIRST AID MEASURES

<b>Inhalation:</b>	Remove to fresh air. If discomfort persists seek medical attention.
<b>Skin contact:</b>	Wash with soap and water. Get medical attention if symptoms develop and persist.
<b>Eye contact:</b>	Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.
<b>Ingestion:</b>	Do not induce vomiting. Aspiration may cause pulmonary edema and pneumonitis. Obtain medical attention.

#### 5. FIRE-FIGHTING MEASURES

<b>Flash point:</b>	Greater than 93°C (200°F) Pinsky Martens closed cup
<b>Autoignition temperature:</b>	Not determined
<b>Flammable/Explosive limits-lower %:</b>	Not determined
<b>Flammable/Explosive limits-upper %:</b>	Not determined
<b>Extinguishing media:</b>	Carbon dioxide (CO2). Dry chemical. Foam. Water spray.
<b>Special fire fighting procedures:</b>	None
<b>Unusual fire or explosion hazards:</b>	None
<b>Hazardous combustion products:</b>	Oxides of carbon.

#### 6. ACCIDENTAL RELEASE MEASURES

<b>Environmental precautions:</b>	Do not allow material to contaminate ground water system.
<b>Clean-up methods:</b>	Scrape up as much material as possible. Clean residue with soap and water. Dispose of in accordance with local and national regulations.

#### 7. HANDLING AND STORAGE

<b>Handling:</b>	Keep container closed. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.
<b>Storage:</b>	Keep in a cool, well ventilated area.
<b>Incompatible products:</b>	Oxidizing agents.

For information on product shelf life contact Henkel Loctite Customer Service at (800) 243-4874.

#### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>Engineering controls:</b>	Ensure adequate ventilation. Local exhaust ventilation is recommended when general ventilation is not sufficient to control airborne contamination below occupational exposure limits.
<b>Respiratory protection:</b>	Use NIOSH approved respirator if there is potential to exceed exposure limit(s). Observe OSHA regulations for respiratory use (29 CFR 1910.134).
<b>Skin protection:</b>	Cover as much of the exposed skin area as possible with appropriate clothing.

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**Eye/face protection:** Safety glasses with side-shields. Goggles.

See Section 2 for exposure limits.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical state:** Paste  
**Color:** Copper  
**Odor:** Mild petroleum  
**Vapor pressure:** Not determined  
**pH:** Not applicable  
**Boiling point/range:** 228-2324°C (550-4215°F)  
**Melting point/range:** Not available  
**Specific gravity:** 1.3017  
**Vapor density:** Heavier than air  
**Evaporation rate:** Not determined  
**Solubility in water:** Insoluble  
**Partition coefficient (n-octanol/water):** Not determined  
**VOC content:** Essentially Zero

## 10. STABILITY AND REACTIVITY

**Stability:** Stable at normal conditions  
**Hazardous polymerization:** Will not occur.  
**Hazardous decomposition products:** Oxides of carbon. Hydrocarbons  
**Incompatibility:** Oxidizing agents. Strong acids and strong bases.  
**Conditions to avoid:** Prolonged exposure to heat

## 11. TOXICOLOGICAL INFORMATION

### Carcinogen Status

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen
Petroleum distillates	No	No	No
Copper	No	No	No
Graphite	No	No	No
Silica, quartz	Known Carcinogen	Group 1	Yes

### Literature Referenced Target Organ & Other Health Effects

Hazardous components	Health Effects/Target Organs
Petroleum distillates	Irritant
Copper	Skin, Sensory, Mutagen, Liver, Kidney, Irritant, Immune system, Gastrointestinal, Central nervous system, Blood, Allergen, Developmental
Graphite	Lung
Silica, quartz	Some evidence of carcinogenicity, Lung, Immune system

## 12. ECOLOGICAL INFORMATION

**Ecological information:** Not available

## 13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

**Recommended method of disposal:** Dispose of according to Federal, State and local governmental regulations.

**EPA hazardous waste number:** Not a RCRA hazardous waste.

## 14. TRANSPORT INFORMATION

The shipping classifications in this section are for non-bulk packaging only (unless otherwise specified). Shipping classification may be different for bulk packaging.

### U.S. Department of Transportation Ground (49 CFR):

<b>Proper shipping name:</b>	Not regulated
<b>Hazard class or division:</b>	None
<b>Identification number:</b>	None
<b>Packing group:</b>	None
<b>DOT reportable quantity (lbs):</b>	Copper (CAS# 7440-50-8) is reportable at 5000 pounds (2700kg)
<b>Marine pollutant:</b>	Copper

### International Air Transportation (ICAO/IATA):

<b>Proper shipping name:</b>	Not regulated
<b>Hazard class or division:</b>	None
<b>Identification number:</b>	None
<b>Packing group:</b>	None

### Water Transportation (IMO/IMDG):

<b>Proper shipping name:</b>	Environmentally hazardous substances, liquid, n.o.s. (Copper)
<b>Hazard class or division:</b>	9
<b>Identification number:</b>	UN 3082
<b>Packing group:</b>	III
<b>Marine pollutant:</b>	Copper

## 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.

**CERCLA/SARA Section 302 EHS:** None.  
**CERCLA/SARA Section 311/312:** Immediate Health Hazard  
**CERCLA/SARA 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). Copper (CAS# 7440-50-8).

**California Proposition 65:** No California Proposition 65 listed chemicals are known to be present.

### Canada Regulatory Information

**CEPA DSL/NDSL Status:** All components are listed on or are exempt from listing on the Domestic Substances List.  
**WHMIS hazard class:** D.2.A, D.2.B

## 16. OTHER INFORMATION

**This material safety data sheet contains changes from the previous version in sections:**  
New Material Safety Data Sheet format.

**Prepared by:** C.J. Michaels, Senior Health & Regulatory Affairs Specialist

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