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## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product name:** C5-A® Copper Based Anti-Seize Lubricant  
**Product type:** Lubricant  
**Company address:**  
Henkel Corporation  
One Henkel Way  
Rocky Hill, Connecticut 06067

**Item No. :** 51002 / IDH No. 234194  
**Region:** United States  
**Contact Information:**  
Telephone: (860) 571-5100  
Emergency telephone: (860) 571-5100  
Internet: www.henkelna.com

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous components</u>	<u>%</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>	<u>OTHER</u>
Distillates (petroleum), hydrotreated heavy naphthenic 64742-52-5	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
Calcium hydroxide 1305-62-0	10-30	5 mg/m <sup>3</sup> TWA	15 mg/m <sup>3</sup> TWA total dust 5 mg/m <sup>3</sup> TWA respirable fraction	None
Distillates (petroleum), hydrotreated light naphthenic 64742-53-6	10-30	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 1 mg/m <sup>3</sup> TWA	0.1 mg/m <sup>3</sup> TWA fume 1 mg/m <sup>3</sup> TWA dusts and mists	None
Graphite 7782-42-5	5-10	2 mg/m <sup>3</sup> TWA 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	0.1-1	0.025 mg/m <sup>3</sup> TWA respirable fraction	0.1mg/m <sup>3</sup> TWA (respirable)	None

## 3. HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW

		<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

**CAUTION:** MAY CAUSE EYE AND SKIN IRRITATION.

**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. 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.

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**Existing conditions aggravated by exposure:**

Eye, skin, and respiratory disorders.

**See Section 11 for additional toxicological information.**

#### 4. FIRST AID MEASURES

**Inhalation:** Remove to fresh air. If discomfort persists seek medical attention.

**Skin contact:** Wash with soap and water. Get medical attention if symptoms develop and persist.

**Eye contact:** Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

**Ingestion:** Do not induce vomiting. Aspiration may cause pulmonary edema and pneumonitis. Obtain medical attention.

#### 5. FIRE-FIGHTING MEASURES

**Flash point:** Greater than 93°C (200°F) (estimated)

**Autoignition temperature:** Not determined

**Flammable/Explosive limits-lower %:** Not determined

**Flammable/Explosive limits-upper %:** Not determined

**Extinguishing media:** Carbon dioxide (CO2). Dry chemical. Foam. Water spray.

**Special fire fighting procedures:** None

**Unusual fire or explosion hazards:** None

**Hazardous combustion products:** Oxides of carbon.

#### 6. ACCIDENTAL RELEASE MEASURES

**Environmental precautions:** Do not allow material to contaminate ground water system.

**Clean-up methods:** 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

**Handling:** Keep container closed. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.

**Storage:** Keep in a cool, well ventilated area.

**Incompatible products:** Oxidizing agents.

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

#### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Engineering controls:** Ensure adequate ventilation. Local exhaust ventilation is recommended when general ventilation is not sufficient to control airborne contamination below occupational exposure limits.

**Respiratory protection:** Use NIOSH approved respirator if there is potential to exceed exposure limit(s). Observe OSHA regulations for respiratory use (29 CFR 1910.134).

**Skin protection:** Cover as much of the exposed skin area as possible with appropriate clothing.

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

**See Section 2 for exposure limits.**

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state:</b>	Paste
<b>Color:</b>	Copper
<b>Odor:</b>	Mild petroleum
<b>Vapor pressure:</b>	Less than 5 mm Hg
<b>pH:</b>	Not applicable
<b>Boiling point/range:</b>	Greater than 260°C (500°F)
<b>Melting point/range:</b>	Not available
<b>Specific gravity:</b>	1.30
<b>Vapor density:</b>	Heavier than air
<b>Evaporation rate:</b>	Slower than ether.
<b>Solubility in water:</b>	Insoluble.
<b>Partition coefficient (n-octanol/water):</b>	Not determined
<b>VOC content:</b>	Essentially Zero

## 10. STABILITY AND REACTIVITY

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

## 11. TOXICOLOGICAL INFORMATION

### Carcinogen Status

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen
Distillates (petroleum), hydrotreated heavy naphthenic 64742-52-5	No	No	No
Calcium hydroxide 1305-62-0	No	No	No
Distillates (petroleum), hydrotreated light naphthenic 64742-53-6	No	No	No
Copper 7440-50-8	No	No	No
Graphite 7782-42-5	No	No	No
Silica, quartz 14808-60-7	Known Carcinogen	Group 1	Yes

### Literature Referenced Target Organ & Other Health Effects

Hazardous components	Health Effects/Target Organs
Distillates (petroleum), hydrotreated heavy naphthenic 64742-52-5	Irritant
Calcium hydroxide 1305-62-0	Irritant, Corrosive
Distillates (petroleum), hydrotreated light naphthenic 64742-53-6	Irritant
Copper 7440-50-8	Skin, Sensory, Mutagen, Liver, Kidney, Irritant, Immune system, Gastrointestinal, Central nervous system, Blood, Allergen, Developmental
Graphite 7782-42-5	Lung
Silica, quartz 14808-60-7	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

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

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

### 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: Environmentally hazardous substances, liquid, n.o.s. (Copper)  
Hazard class or division: 9  
Identification number: UN3082  
Packing group: III  
Marine pollutant: 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/NDL 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: 2,11

Prepared by: Regulatory Affairs

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