



Revision Number: 005.0

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1. PRODUCT AND COMPANY IDENTIFICATION

| | | | |
|-------------------------------|--|---------------------|---------------|
| Product name: | C5-A® Copper Based Anti-Seize Lubricant | IDH number: | 234263 |
| Product type: | Lubricant | Item number: | 51147 |
| Restriction of Use: | None identified | Region: | United States |
| Company address: | Contact information: | | |
| Henkel Corporation | Telephone: (860) 571-5100 | | |
| One Henkel Way | MEDICAL EMERGENCY Phone: Poison Control Center | | |
| Rocky Hill, Connecticut 06067 | 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: CAUSES SKIN IRRITATION.
MAY CAUSE AN ALLERGIC SKIN REACTION.
CAUSES SERIOUS EYE DAMAGE.

| HAZARD CLASS | HAZARD CATEGORY |
|--------------------|-----------------|
| SKIN IRRITATION | 2 |
| SERIOUS EYE DAMAGE | 1 |
| SKIN SENSITIZATION | 1 |

PICTOGRAM(S)



Precautionary Statements

Prevention: Avoid breathing vapors, mist, or spray. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wear eye and face protection. Wear protective gloves.

Response: IF ON SKIN: Wash with plenty of soap and water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to remove. Continue rinsing. Immediately call a poison control center or physician. If skin irritation or rash occurs: Get medical attention. 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* |
|--|------------|-------------|
| Distillates (petroleum), hydrotreated heavy naphthenic | 64742-52-5 | 30 - 60 |
| Calcium dihydroxide | 1305-62-0 | 10 - 30 |
| Mineral oil light naphthenic hydrotreat. <3% DMSO | 64742-53-6 | 10 - 30 |
| Copper | 7440-50-8 | 10 - 30 |
| Graphite | 7782-42-5 | 5 - 10 |
| Quartz (SiO ₂) | 14808-60-7 | 0.1 - 1 |

* Exact percentage is a 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: | Wash with soap and water. If symptoms develop and persist, get medical attention. |
| Eye contact: | Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention. |
| Ingestion: | Do not induce vomiting. Get medical attention. |
| Symptoms: | See Section 11. |

5. FIRE FIGHTING MEASURES

| | |
|---|--|
| Extinguishing media: | Carbon dioxide. Dry chemical. foam Water spray or fog. |
| Special firefighting procedures: | None |
| Unusual fire or explosion hazards: | None |
| Hazardous combustion products: | Oxides of carbon. |

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 material to contaminate ground water system. |
| Clean-up methods: | Scrape up as much material as possible. Clean residue with soap and water. |

7. HANDLING AND STORAGE

| | |
|------------------|--|
| Handling: | Use only with adequate ventilation. Avoid contact with eyes, skin and clothing. Keep container closed. Wash thoroughly after handling. |
| Storage: | Keep in a cool, well ventilated area. |

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

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 |
|--|---|---|-----------|-------|
| Distillates (petroleum), hydrotreated heavy naphthenic | 5 mg/m ³ TWA mist 10 mg/m ³ STEL mist | 5 mg/m ³ TWA mist 500 ppm (2,000 mg/m ³) PEL 5 mg/m ³ PEL Mist. | None | None |
| Calcium dihydroxide | 5 mg/m ³ TWA | 5 mg/m ³ PEL Respirable fraction. 15 mg/m ³ PEL Total dust. | None | None |
| Mineral oil light naphthenic hydrotreat. <3% DMSO | None | 500 ppm (2,000 mg/m ³) PEL 5 mg/m ³ PEL Mist. | None | None |
| Copper | 1 mg/m ³ TWA (as Cu) Dust and mist. 0.2 mg/m ³ TWA (as Cu) Fume. | 1 mg/m ³ PEL (as Cu) Dust and mist. 0.1 mg/m ³ PEL (as Cu) Fume. | None | None |
| Graphite | 2 mg/m ³ TWA Respirable fraction. | 5 mg/m ³ PEL Respirable fraction. 15 mg/m ³ PEL Total dust. 15 MPPCF TWA | None | None |
| Quartz (SiO ₂) | 0.025 mg/m ³ TWA Respirable fraction. | 2.4 MPPCF TWA Respirable. 0.1 mg/m ³ TWA Respirable. 0.3 mg/m ³ TWA Total dust. | None | None |

Engineering controls:

Use local ventilation if general ventilation is insufficient to maintain vapor concentration below established exposure limits.

Respiratory protection:

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

Eye/face protection:

Safety goggles or safety glasses with side shields. Full face protection should be used if the potential for splashing or spraying of product exists.

Skin protection:

Use impermeable gloves and protective clothing as necessary to prevent skin contact. Use of Butyl or Nitrile Rubber gloves is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|------------------------|
| Physical state: | Paste |
| Color: | Copper |
| Odor: | Mild |
| Odor threshold: | Not available. |
| pH: | Not applicable |
| Vapor pressure: | < 5.0 mm hg |
| Boiling point/range: | > 260 °C (> 500°F) |
| Melting point/ range: | Not available. |
| Specific gravity: | 1.30 |
| Vapor density: | Heavier than air. |
| Flash point: | > 93 °C (> 199.4 °F) |
| Flammable/Explosive limits - lower: | Not determined |
| Flammable/Explosive limits - upper: | Not determined |
| Autoignition temperature: | Not determined |
| Evaporation rate: | Slower than ether. |
| Solubility in water: | Insoluble |
| Partition coefficient (n-octanol/water): | Not determined |
| VOC content: | < 3 % Essentially Zero |

Viscosity: Not available.
Decomposition temperature: Not available.

10. STABILITY AND REACTIVITY

Stability: Stable at normal conditions.
Hazardous reactions: Will not occur.
Hazardous decomposition products: Hydrocarbons. Oxides of carbon.
Incompatible materials: Strong acids and strong bases. Oxidizing agents.
Reactivity: Not available.
Conditions to avoid: Prolonged exposure to heat.

11. TOXICOLOGICAL INFORMATION

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects/Symptoms

Inhalation: Inhalation of copper fumes may result in metal fume fever. Symptoms include metallic taste, discoloration of skin or hair.
Skin contact: Causes skin irritation. May cause allergic skin reaction.
Eye contact: Causes serious eye damage.
Ingestion: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

| Hazardous Component(s) | LD50s and LC50s | Immediate and Delayed Health Effects |
|--|-------------------------------|--|
| Distillates (petroleum), hydrotreated heavy naphthenic | None | Irritant |
| Calcium dihydroxide | Oral LD50 (RAT) = 7,340 mg/kg | Irritant, Corrosive |
| Mineral oil light naphthenic hydrotreat. <3% DMSO | None | Irritant |
| Copper | None | Allergen, Blood, Central nervous system, Developmental, Gastrointestinal, Immune system, Irritant, Kidney, Liver, Mutagen, Sensory, Skin |
| Graphite | None | Lung |
| Quartz (SiO2) | None | Immune system, Lung, Some evidence of carcinogenicity |

| Hazardous Component(s) | NTP Carcinogen | IARC Carcinogen | OSHA Carcinogen (Specifically Regulated) |
|--|-------------------------------|-----------------|--|
| Distillates (petroleum), hydrotreated heavy naphthenic | No | No | No |
| Calcium dihydroxide | No | No | No |
| Mineral oil light naphthenic hydrotreat. <3% DMSO | No | No | No |
| Copper | No | No | No |
| Graphite | No | No | No |
| Quartz (SiO2) | Known To Be Human Carcinogen. | Group 1 | 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: Not a RCRA hazardous waste.

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, liquid, n.o.s. (Copper)
Hazard class or division: 9
Identification number: UN 3082
Packing group: III
Marine pollutant: Copper
DOT Hazardous Substance(s): Copper

International Air Transportation (ICAO/IATA)

Proper shipping name: Environmentally hazardous substance, liquid, n.o.s.
Hazard class or division: 9
Identification number: UN 3082
Packing group: III

Water Transportation (IMO/IMDG)

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Copper)
Hazard class or division: 9
Identification number: UN 3082
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 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). Copper (CAS# 7440-50-8).
CERCLA Reportable quantity: Copper (CAS# 7440-50-8) 5,000 lbs. (2,270 kg)
California Proposition 65: This product contains a chemical known in the State of California to cause cancer.

Canada Regulatory Information

CEPA DSL/NDSL Status: All components are listed on or are exempt from listing on the Canadian 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: Catherine Bimler, Regulatory Affairs Specialist
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