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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
1001 Trout Brook Crossing
Rocky Hill, Connecticut 06067

Item No. : 51003
Region: United States
Contact Information:
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>
n-Heptane 142-82-5	30-60	400 ppm TWA 500 ppm STEL	2000 mg/m ³ TWA 500 ppm TWA	None
Copper 7440-50-8	5-10	0.2 mg/m ³ TWA fume 1 mg/m ³ TWA dusts and mists, as Cu	0.1 mg/m ³ TWA fume 1 mg/m ³ TWA dusts and mists	None
Butane 106-97-8	5-10	1000 ppm TWA listed under aliphatic hydrocarbon gases alkane C1-C4	800 ppm TWA	None
Propane 74-98-6	5-10	1000 ppm TWA listed under aliphatic hydrocarbon gases alkane C1-C4	1000 ppm TWA 1800 mg/m ³ TWA	None
Graphite 7782-42-5	5-10	2 mg/m ³ TWA respirable fraction, all forms except graphite fibers	15 mg/m ³ (total), 5 mg/m ³ (respirable)	None
Calcium sulfonate grease UNKNOWN	5-10	None	None	None
Distillates (petroleum), hydrotreated heavy naphthenic 64742-52-5	1-5	5 mg/m ³ TWA (mist) 10mg/m ³ STEL (mist)	5 mg/m ³ TWA (mist)	None
Distillates (petroleum), hydrotreated light naphthenic 64742-53-6	1-5	5 mg/m ³ TWA (mist) 10mg/m ³ STEL (mist)	5 mg/m ³ TWA (mist)	None
Distillates (petroleum), hydrotreated heavy paraffinic 64742-54-7	1-5	5 mg/m ³ TWA (mist) 10mg/m ³ STEL (mist)	5 mg/m ³ TWA (mist)	None
Residual oils (petroleum), hydrotreated 64742-57-0	1-5	5 mg/m ³ TWA (mist) 10mg/m ³ STEL (mist)	5 mg/m ³ TWA (mist)	None
Residual oils (petroleum), solvent- dewaxed 64742-62-7	1-5	5 mg/m ³ TWA (mist) 10mg/m ³ STEL (mist)	5 mg/m ³ TWA (mist)	None
Distillates (petroleum), solvent dewaxed heavy paraffinic 64742-65-0	1-5	5 mg/m ³ TWA (mist) 10mg/m ³ STEL (mist)	5 mg/m ³ TWA (mist)	None
Calcium hydroxide 1305-62-0	1-5	5 mg/m ³ TWA	15 mg/m ³ TWA total dust 5 mg/m ³ TWA respirable fraction	None

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Silica, quartz
14808-60-7

0.1-1

0.05 mg/m³ TWA
respirable fraction

0.1mg/m³ TWA
(respirable)

None

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

HMIS:

Physical state: Aerosol
Color: Grey
Odor: Solvent

HEALTH: 2
FLAMMABILITY: 4
PHYSICAL HAZARD: 1
Personal Protection: See Section 8

DANGER: EXTREMELY FLAMMABLE.
CONTENTS UNDER PRESSURE.
HARMFUL IF INHALED.
MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION.

Relevant routes of exposure: Skin, inhalation, eyes

Potential Health Effects

Inhalation:

May cause irritation to nose and throat. Central nervous system depression, including dizziness, drowsiness, fatigue, nausea, headache, unconsciousness. Extreme overexposure may result in unconsciousness and possibly death. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage. Inhalation of copper fumes may result in metal fume fever. Symptoms include metallic taste, discoloration of skin or hair. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

Skin contact:

May cause irritation due to defatting of the skin.

Eye contact:

Direct spray or vapors will irritate and may harm eyes.

Ingestion:

Not expected under normal conditions of use.

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:

Remove contaminated clothing and shoes. Wash with soap and water. Get medical attention if symptoms occur. Wash clothing before reuse.

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 immediately.

5. FIRE-FIGHTING MEASURES

Flash point:

Less than -17.7°C (0°F) (Propellant)

Flashback:

Not evaluated

Autoignition temperature:

Not available

Flammable/Explosive limits-lower %:

Not available

Flammable/Explosive limits-upper %:

Not available

Extinguishing media:

Foam. Dry chemical. Carbon dioxide (CO₂).

Special fire fighting procedures:	Water spray may be ineffective. Water should be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat. If water is used, fog nozzles are preferable.
Unusual fire or explosion hazards:	Contents under pressure. Do not store or use near heat, spark, open flame or other sources of ignition. Do not puncture or incinerate pressurized containers. Exposure to temperatures above 49°C (120°F) may cause container to burst.
Hazardous combustion products:	Oxides of carbon.

6. ACCIDENTAL RELEASE MEASURES

Environmental precautions:	Remove sources of ignition. Ventilate area.
Clean-up methods:	Soak up with inert absorbent. Store in a closed container until ready for disposal.

7. HANDLING AND STORAGE

Handling:	Avoid contact with eyes, skin and clothing. Avoid breathing vapor and mist. Wash thoroughly after handling. Keep away from heat, spark and flame. Vapors will accumulate readily and may ignite explosively.
Storage:	Keep in a cool, well ventilated area. Store away from ignition sources. Do not puncture, incinerate, or expose to temperatures above 48.9 °C (120 °F). Heat from sunlight, radiators, stoves, hot water, and other heat sources could cause container to burst.
Incompatible products:	None.

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

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls:	Use local ventilation if general ventilation is insufficient to maintain vapor concentration below established exposure limits.
Respiratory protection:	If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH for protection against materials in Section 2. Observe OSHA regulations for respiratory use (29 CFR 1910.134).
Skin protection:	Chemical resistant, impermeable gloves.
Eye/face protection:	Safety goggles or safety glasses with side shields.

See Section 2 for exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Aerosol
Color:	Grey
Odor:	Solvent
Vapor pressure:	Not available
pH:	Not applicable
Boiling point/range:	Not available
Melting point/range:	Not available
Specific gravity:	Not available
Vapor density:	Not available
Evaporation rate:	Not available
Solubility in water:	Not determined
Partition coefficient (n-octanol/water):	Not available
VOC content:	Not available

10. STABILITY AND REACTIVITY

Stability:	Stable
Item No. :	51003

Product name: C5-A® Copper Based Anti-Seize Lubricant

Hazardous polymerization: Will not occur.

Hazardous decomposition products: Oxides of carbon.

Incompatibility: Strong oxidizers.

Conditions to avoid: Do not puncture, incinerate, or expose to temperatures above 48.9 °C (120 °F).

11. TOXICOLOGICAL INFORMATION

Carcinogen Status

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen
n-Heptane 142-82-5	No	No	No
Copper 7440-50-8	No	No	No
Butane 106-97-8	No	No	No
Propane 74-98-6	No	No	No
Graphite 7782-42-5	No	No	No
Calcium sulfonate grease UNKNOWN	No	No	No
Distillates (petroleum), hydrotreated heavy naphthenic 64742-52-5	No	No	No
Distillates (petroleum), hydrotreated light naphthenic 64742-53-6	No	No	No
Distillates (petroleum), hydrotreated heavy paraffinic 64742-54-7	No	No	No
Residual oils (petroleum), hydrotreated 64742-57-0	No	No	No
Residual oils (petroleum), solvent- dewaxed 64742-62-7	No	No	No
Distillates (petroleum), solvent dewaxed heavy paraffinic 64742-65-0	No	No	No
Calcium hydroxide 1305-62-0	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
n-Heptane 142-82-5	Central nervous system, Irritant
Copper 7440-50-8	Skin, Sensory, Mutagen, Liver, Kidney, Irritant, Immune system, Gastrointestinal, Central nervous system, Blood, Allergen, Developmental
Butane 106-97-8	Cardiac, Central nervous system, Irritant
Propane 74-98-6	Cardiac, Central nervous system, Irritant
Graphite 7782-42-5	Lung
Calcium sulfonate grease UNKNOWN	No data
Distillates (petroleum), hydrotreated heavy naphthenic 64742-52-5	Irritant
Distillates (petroleum), hydrotreated light naphthenic 64742-53-6	Irritant
Distillates (petroleum), hydrotreated heavy paraffinic 64742-54-7	Irritant
Residual oils (petroleum), hydrotreated 64742-57-0	Irritant
Residual oils (petroleum), solvent-dewaxed 64742-62-7	Irritant
Distillates (petroleum), solvent dewaxed heavy paraffinic 64742-65-0	Irritant
Calcium hydroxide 1305-62-0	Irritant, Corrosive
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: Do not incinerate. Depressurize cans. Dispose of in accordance with Federal, State and local regulations.

EPA hazardous waste number: Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.

14. TRANSPORT INFORMATION

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

Proper shipping name: Aerosols, flammable
Hazard class or division: 2.1
Identification number: UN 1950
Packing group: None
Exceptions: (Not more than 1 Liter) Consumer Commodity ORM-D
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: Aerosols, flammable
Hazard class or division: 2.1
Identification number: UN1950
Packing group: None
Exceptions: (Not more than 500mL) ID8000

WaterTransportation (IMO/IMDG):

Item No. : 51003

Product name: C5-A® Copper Based Anti-Seize Lubricant

Proper shipping name:	Aerosols, flammable
Hazard class or division:	2.1
Identification number:	UN1950
Packing group:	None
Exceptions:	Limited quantity (Not more than 1 L)
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: n-Heptane (142-82-5).

CERCLA/SARA Section 302 EHS: None.
CERCLA/SARA Section 311/312: Immediate Health Hazard, Delayed Health Hazard, Fire
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). None.

California Proposition 65: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

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: A, B.5, D.2.B

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: Revised to new format.

Prepared by: C.J. Michaels, Senior Product Safety & Regulatory Affairs Specialist

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