MATERIAL SAFETY DATA SHEET
LPS® Copper Anti-Seize (Bulk)

Revision Date: February 10, 2012 **Supersedes:** May 26, 2010

Section 1 • Product and Company Identification

Product Name: LPS® Copper Anti-Seize (Bulk)

Part Number(s): 02908, 02910, C02908, C02910

Chemical Name: Petroleum Hydrocarbon and Copper Mixture

Product Use: A low-friction anti-seize lubricant designed to prevent seizure and galling and resist settling and hardening of welding.

Manufacturer Information: LPS Laboratories, 4647 Hugh Howell Road, Tucker, GA, USA 30084
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Emergency Telephone Number: Chemtrec: USA & Canada: 1 800 424-9300
Outside USA and Canada: +1 703 527-3887

Website: http://www.lpslabs.com

Section 2 • Hazards Identification

This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Emergency Overview:

Aerosol: Not applicable

Bulk: WARNING: Prolonged or repeated skin contact may cause irritation.

Primary route(s) of entry: Skin and eye contact.

Potential Acute Health Effects:

Eyes: Irritating to eyes.

Skin: Repeated exposure may cause skin dryness or cracking.

Inhalation: Excessive inhalation of vapors can cause irritation of the respiratory tract, nausea, dizziness or headache.

Ingestion: Product has a low order of acute oral toxicity, but ingestion of large quantities may cause nausea, vomiting, and gastrointestinal irritation.

Potential Chronic Health Effects:

Carcinogenic Effects: **NTP:** No **IARC:** No **OSHA:** No **ACGIH:** No

Mutagenic Effects: None

Teratogenic Effects: None

Target Organs: None

Medical conditions aggravated by exposure:
Persons with pre-existing central nervous system (CNS) disease, neurological conditions, skin disorders, chronic respiratory diseases, or impaired liver or kidney function should avoid exposure.

Signs and Symptoms
Stinging in eyes. Repeated or prolonged skin contact can cause redness, irritation, and scaling of the skin (dermatitis). Breathing of high vapor concentrations may cause headaches, stupor, irritation of throat and eyes, and kidney effects.

Section 3 • Composition / Information on Ingredients

Component	CASRN	Weight Percent
Distillates (Petroleum), Hydrotreated Heavy Naphthenic	64742-52-5	50 - 70%
Residual Oils (Petroleum), Hydrotreated	64742-57-0	10 - 20%
Copper	7440-50-8	1 - 10%

Section 4 • First Aid Measures

Eyes: Check for and remove contact lenses. Immediately, flush eyes with cool, clean, low-pressure water for at least 15 minutes. Hold eyelids apart to ensure complete irrigation of the eye and eyelid tissue. DO NOT use eye ointment. Seek medical attention if irritation persists.

Skin: Remove contaminated shoes and clothing. Clean affected area thoroughly with mild soap and water. DO NOT use ointments. Seek medical attention if irritation persists.

Inhalation: Immediately move victim to fresh air. If victim is not breathing, immediately begin rescue breathing. If heart has stopped, immediately begin cardiopulmonary resuscitation (CPR). If breathing is difficult, seek medical attention immediately.

Ingestion: DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If spontaneous vomiting is about to occur, place victim's head below knees. If victim is drowsy or unconscious, place on the left side with head down. DO NOT leave victim unattended. Seek medical attention immediately.

Section 5 • Fire Fighting Measures

Products of Combustion: Carbon monoxide, carbon dioxide, sulphur oxides, some metallic oxides.

General Fire Hazards: High heat will cause product to boil, evolving vapor that could cause explosive rupture of closed containers.

Firefighting media: SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use CO2, water spray, fog or foam. Cool containing vessels with water jet in order to prevent pressure build-up, auto-ignition or explosions.

Sensitivity to Impact: None **Sensitivity to Static Discharge:** None

Protection Clothing (Fire): Firefighters must use full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies. Evacuate area and fight the fire from a maximum distance or use unmanned hose holders or monitor nozzles.

Special Remarks on Explosion Hazards:
None

Section 6 • Accidental Release Measures

Containment Procedures:

Small Spill and Leak: Absorb with an inert material and dispose of properly.

Large Spill and Leak: Secure the area and control access. Dike far ahead of a liquid spill to ensure complete collection. Pick up free liquid for disposal using absorbent pads, sand, or other inert non-combustible absorbent materials. Place into appropriate waste containers for later disposal.

Clean-Up Procedures: Contain and recover spilled material when possible.

Evacuation Procedures: Ventilate area of leak or spill. Keep unnecessary and unprotected people away.

Special Procedures: Ventilate area. Wear personal protective equipment during cleanup.

Section 7 • Handling and Storage

Handling: Avoid contact with skin and eyes. Wash thoroughly after handling.

Storage: Keep in original container. Keep container tightly closed. Store in a well ventilated area away from sources of ignition.

Precautions to be taken in handling and storage:
Store all materials in a dry, well-ventilated area. Avoid breathing vapors.

Section 8 • Exposure Controls / Personal Protection

Exposure Guidelines:

Component	CASRN	OSHA	ACGIH	NIOSH	Supplier
Distillates (Petroleum), Hydrotreated Heavy Naphthenic	64742-52-5	5 mg/m3 (oil mist) PEL	5 mg/m3 (oil mist) TLV 10 mg/m3 (oil mist) STEL	5 mg/m3 (oil mist) TWA 10 mg/m3 (oil mist) STEL	5 mg/m3 TWA
Residual Oils (Petroleum), Hydrotreated	64742-57-0	5 mg/m3 (oil mist) PEL	5 mg/m3 (oil mist) TLV 10 mg/m3 (oil mist) STEL	5 mg/m3 (oil mist) TWA 10 mg/m3 (oil mist) STEL	None reported
Copper	7440-50-8	1 mg/m3 (mist) PEL	1 mg/m3 (mist) TLV 2 mg/m3 (mist) Canada	1 mg/m3 (mist) TWA	None reported

Engineering Controls: Provide general and/or local exhaust ventilation to keep exposures below the exposure guidelines listed above.

Personal protective equipment

Eye protection: Safety glasses with side shields conforming to appropriate regulations. Eye wash fountain and emergency shower facilities are recommended.

Hand protection: Normally no hand protection is required; however, using chemical resistant gloves is recommended.

Respiratory protection: Typical use of this product under normal conditions does not require the use of respiratory protection. In the case of extreme temperatures, a dry residue will result when the grease and oils burn off. Where workers are exposed to the dust during removal of the film, use of air-purifying respirators or dust masks is suggested.

General Hygiene Considerations: Wash thoroughly after handling. Have eye-wash facilities immediately available.

Section 9 • Physical and Chemical Properties

Appearance:	Paste	**Color:**	Brown / Bright Copper
Odor:	Petroleum	**Evaporation Rate:**	< 0.01 (BuAc = 1)
Solubility Description:	Not soluble in water	**Flash Point:**	221ºC (430ºF)
Boiling Point:	> 260°C (500°F)	**Flash Point Method:**	Open Cup
Specific Gravity (H2O=1):	1.00 - 1.20 @ 20°C	**Decomposition Temperature:**	Not established
Vapor Density (air = 1):	> 5	**Auto ignition temperature:**	> 260°C (500ºF)
Vapor Pressure:	< 0.08 mm Hg @ 20ºC	**Flammable limits (estimated):**	LOWER: 0.9% UPPER: 7.0%
Rule 1171 PPc:	Not established	**Partition Coefficient (octanol/water):**	Not established
V.O.C. Content:	Aerosol: Not applicable Bulk: None	**Odor Threshold:**	Not established
Melting Point:	260ºC (500ºF)	**Viscosity:**	Not established
pH:	Not applicable	**Volatiles:**	Nil
Heat of combustion:	Aerosol: Not applicable Bulk: Not established		

Section 10 • Stability and Reactivity

Chemical Stability:	Product is stable under recommended storage conditions.
Conditions to Avoid:	Keep away from ignition sources and extreme temperatures.
Incompatibility:	Reactive or incompatible with oxidizing agents.
Hazardous Decomposition:	These products are carbon oxides (CO, CO2), sulphur oxides, some metallic oxides.
Hazardous Polymerization:	Will not occur.

Section 11 • Toxicological Information

Acute and Chronic Toxicity

A: General Product Information
An acute toxicity study of this product has not been conducted. Information given in this section relates only to individual constituents contained in this preparation.

B: Component Analysis

Component	CASRN	LC-50	LD-50
Distillates (Petroleum), Hydrotreated Heavy Naphthenic	64742-52-5	2.18 mg/L / rat / 4 hr	> 5000 mg/kg / oral / rat > 2000 mg/kg / dermal / rabbit
Residual Oils (Petroleum), Hydrotreated	64742-57-0	2.18 mg/L / rat / 4 hr	> 2000 mg/kg / oral / rat* > 2000 mg/kg / dermal / rabbit*
Copper	7440-50-8	238 mg/m3 / non-mammalian / 24 hr	413 mg/kg / oral / mouse

* Supplier Data

Section 12 • Ecological Information

Mobility: Non-volatile. Partially absorbed by soil. **Persistence / Degradability:** Only slightly biodegradable

Bioaccumulative potential: Minimal bioaccumulation potential **Other adverse effects:** See Note 1 below

Ecological studies have not been conducted for this product. The following information is available for component(s) of this product.

Ecotoxicity

Effects on Organisms	Component	CASRN	Test	Species	Results
Acute Toxicity on Fishes	Distillates (Petroleum), Hydrotreated Heavy Naphthenic	64742-52-5	96-hr LC50	Oncorhynchus Mykiss	> 5000 mg/L
	Residual Oils (Petroleum), Hydrotreated	64742-57-0	96-hr LC50	Oncorhynchus Mykiss	> 5000 mg/L
	Copper	7440-50-8	48-hr LC50	Gambusia Affinis	0.18 mg/L
Acute Toxicity on Daphnia	Distillates (Petroleum), Hydrotreated Heavy Naphthenic	64742-52-5	48-hr LC50	Daphnia Magna	> 1000 mg/L
	Residual Oils (Petroleum), Hydrotreated	64742-57-0	48-hr LC50	Daphnia Magna	> 1000 mg/L
Bacterial Inhibition	Distillates (Petroleum), Hydrotreated Heavy Naphthenic	64742-52-5	Bacterial Growth Inhibition	Pseudomonas Fluorecens (Bacteria)	> 1000 mg/L
	Residual Oils (Petroleum), Hydrotreated	64742-57-0	Bacterial Growth Inhibition	Pseudomonas Fluorecens (Bacteria)	> 1000 mg/L
Growth inhibition of algae	Distillates (Petroleum), Hydrotreated Heavy Naphthenic	64742-52-5	Growth Inhibition Concentration	Algae	0.15 mg/L
	Residual Oils (Petroleum), Hydrotreated	64742-57-0	96-hr EC50	Algae	> 1000 mg/L
	Copper	7440-50-8	96-hr EC50	Algae	450 mg/L
Bioaccumulation in fish	No data available				

* Supplier Data

Note 1 - Copper has been shown to be moderately toxic to fish.

Section 13 • Disposal Considerations

Waste Status: In its purchased form, this material does not meet the definition of a RCRA hazardous waste (40 CFR 261).

Disposal: Waste must be disposed of in accordance with any and all applicable environmental control rules and/or regulations.

Note: Chemical additions to, processing of, or otherwise altering this material may make this waste management information inaccurate, incomplete, or otherwise inappropriate. Furthermore, state and local waste disposal requirements may be more restrictive than federal laws and regulations.

Section 14 • Transport Information

D.O.T. Ground	**Shipping Name:**	Not regulated	**UN No.:**	NA
	Hazard Class:	NA	**Technical Name:**	NA
	Subclass:	NA	**Hazard Label:**	NA
	Packing Group:	NA		
Road/Rail - ADR/RID	**UN No.:**	3077	**ADR Class:**	9
	Packing Group:	III	**Classification Code:**	M7
	Name and description:	Environmentally hazardous substance, solid, n.o.s. (copper)	**Hazard ID No.:**	90
	Labeling:	9	**Technical Name:**	Copper
IMDG-IMO	**UN No.:**	3077	**Class:**	9
	Shipping Name:	Environmentally hazardous substance, solid, n.o.s. (copper)	**Subsidiary Risk:**	NA
	Labeling:	9	**Packing Group:**	III
	Packing Instructions:	P002, LP02	**EmS:**	F-A, S-F
	Marine pollutant:	Yes	**Technical Name:**	Copper
IATA - ICAO:	**UN No.:**	3077	**Class:**	9
	Shipping Name:	Environmentally hazardous substance, solid, n.o.s. (copper)	**Subclass:**	NA
	Packing Instructions:	Y956, 956	**Packing Group:**	III
	Labeling:	Miscellaneous	**Technical Name:**	Copper

The preceding information is subject to change and must be verified prior to shipment. It is the responsibility of anyone offering hazardous materials for shipment to ensure compliance with all applicable regulations.

Section 15 • Regulatory Information

U.S. Federal Regulations

RCRA Hazardous Waste No.: None

Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA):
Copper 7440-50-8 RQ 5000 lbs.

Toxic Substances Control Act (TSCA):
All components of this product are TSCA inventory listed and/or are exempt.

Superfund Amendments and Reauthorization Act (SARA) Title III SARA Section 311/312 (40 CFR 370) Hazard Categories:
None

This product contains the following toxic chemical(s) subject to reporting requirements of SARA Section 313 (40 CFR 372):
Copper 7440-50-8 max 8%

Section 112 Hazardous Air Pollutants (HAPs): None

State Regulations

California: This product does not contain chemical(s) known to the State of California to cause cancer, birth defects or other reproductive harm.

California and OTC States: This product is not regulated by consumer product regulations.

New Jersey Right to Know:
Aerosol: Not applicable
Bulk: Distillates (Petroleum), Hydrotreated Heavy Naphthenic 64742-52-5 ● Residual Oils (Petroleum), Hydrotreated 64742-57-0 ● Magnesium Silicate Hydrate 14807-96-6 ● Copper 7440-50-8 ● Calcium Carbonate 471-34-1

International Regulations

Canadian Environmental Protection Act (CEPA):
All of the components of this product are included on the Canadian Domestic Substances list (DSL).

Canadian Workplace Hazardous Materials Information System WHMIS:
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

WHMIS Classification:
NOT WHMIS controlled

Other Regulations:

Montreal Protocol listed ingredients:	None
Stockholm Convention listed ingredients:	None
Rotterdam Convention listed engredients:	None
RoHS Compliant:	Yes

Section 16 • Other Information

MSDS#: 12908 MSDS Preparation Responsible Name: Elena Badiuzzi Compliance Manager Telephone: +1 770 243-8800	**HMIS 1996**		**HMIS III**		**NFPA** Flammability Health  Reactivity Special
	Health:	1	Health:	[/] 1	
	Flammability:	1	Flammability Aerosol: Flammability Bulk:	NA 1	
	Reactivity:	1	Physical Hazard Aerosol: Physical Hazard Bulk:	NA 1	

Notice to Reader:
To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Elena Badiuzzi, Compliance Manager
LPS Laboratories, a division of Illinois Tool Works