



# MATERIAL SAFETY DATA SHEET

## 1. Product and Company Identification

<b>Material name</b>	LPS® All Purpose Anti-Seize
<b>Version #</b>	04
<b>Issue date</b>	08-22-2012
<b>Revision date</b>	09-18-2012
<b>Supersedes date</b>	08-22-2012
<b>CAS #</b>	Mixture
<b>Part Number</b>	04108, 04110, 04105
<b>Product use</b>	An all-purpose, anti-seize lubricant designed to prevent seizure and galling, and resist settling and hardening of welding.
<b>Manufacturer information</b>	LPS Laboratories, a division of Illinois Tool Works 4647 Hugh Howell Rd Tucker, GA 30084 United States www.lpslabs.com 1-800-241-8334 / 770-243-8800 Chemtrec 1-800-424-9300

## 2. Hazards Identification

<b>Emergency overview</b>	Harmful in contact with eyes. Prolonged exposure may cause chronic effects.
<b>OSHA regulatory status</b>	This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).
<b>Potential health effects</b>	
<b>Routes of exposure</b>	Inhalation. Ingestion. Skin contact. Eye contact.
<b>Eyes</b>	Contact may irritate or burn eyes. Do not get this material in contact with eyes.
<b>Skin</b>	Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. Avoid contact with the skin.
<b>Inhalation</b>	Prolonged inhalation may be harmful.
<b>Ingestion</b>	Components of the product may be absorbed into the body by ingestion. Do not ingest.
<b>Target organs</b>	Cardiac. Eyes. Skin.
<b>Chronic effects</b>	Conjunctiva. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.
<b>Signs and symptoms</b>	Conjunctivitis. Defatting of the skin. Skin irritation. Rash.
<b>Potential environmental effects</b>	Components of this product are hazardous to aquatic life. May cause long-term adverse effects in the environment.

## 3. Composition / Information on Ingredients

Components	CAS #	Percent
Heavy Hydrotreated Naphthenic Distillates (petroleum)	64742-52-5	40 - 60
Graphite	7782-42-5	10 - 20
Zinc Oxide	1314-13-2	10 - 20
Aluminum Complex Soap	54326-11-3	2.5 - 10
Calcium Carbonate	1317-65-3	2.5 - 10
Molybdenum Disulfide	1317-33-5	2.5 - 10
Residual Oil	64742-57-0	2.5 - 10
Other components below reportable levels		0.1 - 1

## 4. First Aid Measures

### First aid procedures

<b>Eye contact</b>	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Get medical attention immediately.
<b>Skin contact</b>	Remove and isolate contaminated clothing and shoes. Wash off with warm water and soap. For minor skin contact, avoid spreading material on unaffected skin. Get medical attention if irritation develops and persists.
<b>Inhalation</b>	Move to fresh air. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Get medical attention if symptoms occur.
<b>Ingestion</b>	Rinse mouth thoroughly. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. If ingestion of a large amount does occur, call a poison control center immediately.

**Notes to physician** In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

**General advice** Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. IF exposed or concerned: Get medical advice/attention. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation.

## 5. Fire Fighting Measures

**Flammable properties** Not flammable by OSHA criteria. Not combustible by OSHA criteria.

### Extinguishing media

**Suitable extinguishing media** Water.

### Protection of firefighters

**Protective equipment and precautions for firefighters** Wear suitable protective equipment.

**Fire fighting equipment/instructions** Move containers from fire area if you can do so without risk. In the event of fire, cool tanks with water spray.

**Specific methods** Cool containers exposed to flames with water until well after the fire is out.

## 6. Accidental Release Measures

**Personal precautions** Keep unnecessary personnel away. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak. Keep upwind. Keep out of low areas.

**Environmental precautions** Prevent further leakage or spillage if safe to do so. Do not contaminate water.

**Methods for containment** ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways.

**Methods for cleaning up** Should not be released into the environment. Following product recovery, flush area with water. For waste disposal, see section 13 of the MSDS.

## 7. Handling and Storage

**Handling** DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Do not get this material in contact with eyes. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with skin. Wear personal protective equipment. Avoid prolonged exposure. Avoid release to the environment.

**Storage** Keep away from heat, sparks and open flame. Store in a well-ventilated place. Keep container tightly closed. Keep away from food, drink and animal feedingstuffs. Keep out of the reach of children. Use care in handling/storage.

## 8. Exposure Controls / Personal Protection

### Occupational exposure limits

#### US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Aluminum Complex Soap (54326-11-3)	TWA	1 mg/m3	Respirable fraction.
Graphite (7782-42-5)	TWA	2 mg/m3	Respirable fraction.

**US. ACGIH Threshold Limit Values**

Components	Type	Value	Form
Heavy Hydrotreated Naphthenic Distillates (petroleum) (64742-52-5)	TWA	5 mg/m3	Inhalable fraction.
Molybdenum Disulfide (1317-33-5)	TWA	3 mg/m3	Respirable fraction.
Residual Oil (64742-57-0) Zinc Oxide (1314-13-2)	TWA	10 mg/m3	Inhalable fraction.
	STEL	5 mg/m3	Inhalable fraction.
	TWA	10 mg/m3	Respirable fraction.
		2 mg/m3	Respirable fraction.

**US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

Components	Type	Value	Form
Calcium Carbonate (1317-65-3)	PEL	5 mg/m3	Respirable fraction.
Graphite (7782-42-5)	PEL	15 mg/m3	Total dust.
		5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
Heavy Hydrotreated Naphthenic Distillates (petroleum) (64742-52-5)	PEL	5 mg/m3	Mist.
Molybdenum Disulfide (1317-33-5)	PEL	2000 mg/m3	Total dust.
		500 ppm	
		15 mg/m3	
Residual Oil (64742-57-0)	PEL	5 mg/m3	Mist.
Zinc Oxide (1314-13-2)	PEL	5 mg/m3	Respirable fraction.
		5 mg/m3	Fume.
		15 mg/m3	Total dust.

**US. OSHA Table Z-3 (29 CFR 1910.1000)**

Components	Type	Value
Graphite (7782-42-5)	TWA	15 mppcf

**Engineering controls**

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

**Personal protective equipment****Eye / face protection**

Do not get in eyes. Chemical goggles are recommended. Eye wash fountain is recommended. Do not get in eyes. Chemical goggles are recommended.

**Skin protection**

Wear appropriate chemical resistant clothing. Chemical resistant gloves.

**Respiratory protection**

No personal respiratory protective equipment normally required. If permissible levels are exceeded use NIOSH mechanical filter / organic vapor cartridge or an air-supplied respirator.

**General hygiene considerations**

Do not get in eyes. Avoid contact with skin. Keep away from food and drink. Handle in accordance with good industrial hygiene and safety practice.

**9. Physical & Chemical Properties**

<b>Appearance</b>	Paste.
<b>Physical state</b>	Solid.
<b>Form</b>	Solid.
<b>Color</b>	Blue
<b>Odor</b>	Hydrocarbon-like.
<b>Odor threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Vapor pressure</b>	< 0.01 kPa estimated
<b>Vapor density</b>	> 5
<b>Boiling point</b>	Not available. estimated
<b>Melting point/Freezing point</b>	> 449.6 °F (> 232 °C) estimated

<b>Solubility (water)</b>	Insoluble
<b>Relative density</b>	Not available.
<b>Flash point</b>	429.80 °F (221.00 °C) estimated
<b>Flammability limits in air, upper, % by volume</b>	Not available.
<b>Flammability limits in air, lower, % by volume</b>	Not available.
<b>Auto-ignition temperature</b>	> 500 °F (> 260 °C) estimated
<b>Evaporation rate</b>	0.01 BuAc
<b>Percent volatile</b>	0.96 % estimated
<b>Other data</b>	
<b>Density</b>	1.19 g/cm <sup>3</sup>
<b>Explosive limit - lower (%)</b>	0.9
<b>Explosive limit - upper (%)</b>	7 %

## 10. Chemical Stability & Reactivity Information

<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Conditions to avoid</b>	Heat, flames and sparks. Avoid temperatures exceeding the flash point.
<b>Incompatible materials</b>	Acids. Fluorine. Chlorine.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.

## 11. Toxicological Information

<b>Local effects</b>	Components of the product may be absorbed into the body through the skin. Contact may irritate or burn eyes.	
<b>Chronic effects</b>	Prolonged inhalation may be harmful.	
<b>Carcinogenicity</b>	Not applicable.	
<b>ACGIH Carcinogens</b>		
Aluminum Complex Soap (CAS 54326-11-3)		A4 Not classifiable as a human carcinogen.

## 12. Ecological Information

<b>Ecotoxicity</b>	Contains a substance which causes risk of hazardous effects to the environment.
<b>Environmental effects</b>	Harmful to aquatic organisms. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
<b>Persistence and degradability</b>	Not available.

## 13. Disposal Considerations

<b>Disposal instructions</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste. Dispose in accordance with all applicable regulations.
<b>Contaminated packaging</b>	Empty containers should be taken to an approved waste handling site for recycling or disposal.

## 14. Transport Information

<b>General</b>	DOT Regulated Marine Pollutant. IMDG Regulated Marine Pollutant.
<b>DOT</b>	
<b>Basic shipping requirements:</b>	
<b>UN number</b>	UN3077
<b>Proper shipping name</b>	Environmentally hazardous substances, solid, n.o.s. (Zinc Oxide), MARINE POLLUTANT
<b>Hazard class</b>	9
<b>Packing group</b>	III

**Environmental hazards****Marine pollutant**

Yes

**Special precautions**

Read safety instructions, MSDS and emergency procedures before handling.

**Additional information:****Special provisions**

8, 146, 335, A112, B54, IB8, IP3, N20, T1, TP33

**Packaging exceptions**

155

**Packaging non bulk**

213

**Packaging bulk**

240

**IATA****UN number**

UN3077

**UN proper shipping name**

Environmentally hazardous substances, solid, n.o.s. (Zinc Oxide)

**Transport hazard class(es)**

9

**Packing group**

III

**Environmental hazards**

Yes

**Labels required**

9

**IMDG****UN number**

UN3077

**UN proper shipping name**

Environmentally hazardous substances, solid, n.o.s. (Zinc Oxide), MARINE POLLUTANT

**Transport hazard class(es)**

9

**Subsidiary class(es)**

M7

**Packing group**

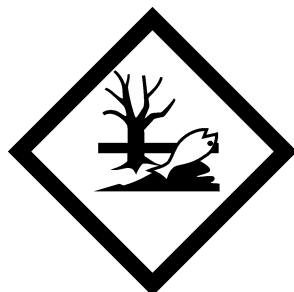
III

**Environmental hazards****Marine pollutant**

Yes

**Labels required**

9

**DOT; IATA****Marine pollutant**

## 15. Regulatory Information

**US federal regulations**

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.  
CERCLA/SARA Hazardous Substances - Not applicable.

**Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2))**

Not regulated.

**DEA Essential Chemical Code Number**

Not regulated.

**Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))**

Not regulated.

**DEA Exempt Chemical Mixtures Code Number**

Not regulated.

**US EPCRA (SARA Title III) Section 313 - Toxic Chemical: De minimis concentration**

Zinc Oxide (CAS 1314-13-2) 1.0 % N982

**US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance**

Zinc Oxide (CAS 1314-13-2) Listed. N982

**CERCLA (Superfund) reportable quantity**

None

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories** Immediate Hazard - Yes  
 Delayed Hazard - Yes  
 Fire Hazard - No  
 Pressure Hazard - No  
 Reactivity Hazard - No

**Section 302 extremely hazardous substance** No

**Section 311 hazardous chemical** No

**Inventory status**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	Yes
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

**State regulations** California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

**US - New Jersey RTK - Substances: Listed substance**

Calcium Carbonate (CAS 1317-65-3) Listed.  
 Graphite (CAS 7782-42-5) Listed.  
 Zinc Oxide (CAS 1314-13-2) Listed.

**US - Pennsylvania RTK - Hazardous Substances: Listed substance**

Calcium Carbonate (CAS 1317-65-3) Listed.  
 Graphite (CAS 7782-42-5) Listed.  
 Residual Oil (CAS 64742-57-0) Listed.  
 Zinc Oxide (CAS 1314-13-2) Listed.

**16. Other Information**

**Further information** HMIS® is a registered trade and service mark of the NPCA.

**HMIS® ratings** Health: 1  
 Flammability: 1  
 Physical hazard: 0

**NFPA ratings** Health: 1  
 Flammability: 1  
 Instability: 0

**Disclaimer** The information in the sheet was written based on the best knowledge and experience currently available.

**This data sheet contains changes from the previous version in section(s):**

Product and Company Identification: Alternate Trade Names  
Transport Information: Proper Shipping Name/Packing Group