LPS LABORATORIES
MATERIAL SAFETY DATA SHEET

Section 1 • Chemical Product and Company Identification

Manufacturer's Name:
LPS Laboratories

Address:
4647 Hugh Howell Road
Tucker, GA 30085-5052

Telephone Number: 770-243-8800

Emergency Telephone Number: 1-800-424-9300 Chemtrec;
Outside U.S.: (703) 527-3887

Trade Name:
LPS 3 Heavy-Duty Rust Inhibitor

Chemical Family:
Hydrocarbons / Calcium Carbonate

Part Numbers:
00316, 00322, 03128, 00305, 00355

PLAIN LANGUAGE HAZARD SUMMARY

Material Safety Data Sheets can be confusing. Federal and State laws require us to include a great deal of technical information that probably won't help the non-professional. LPS includes this "PLAIN LANGUAGE HAZARD SUMMARY" to address the questions and concerns of the average worker. If you have additional health, safety or product questions, don't hesitate to call us at 800/241-8334.

Worker Toxicity

LPS 3 HEAVY DUTY RUST INHIBITOR is an industrial chemical. It is a specialized soft-film coating designed to prevent rust and corrosion on steel, aluminum and other metals. It contains "rule 66/3 mineral spirits" and mineral oil which can be irritating to skin at a minimum and if handled improperly can be dangerous. We suggest you wear gloves and avoid extended exposure to unprotected skin. Don't get it in your eyes (it stings), or breath large amounts of the vapor, (it will dry out your nasal passages and if you breathe large amounts in poorly ventilated areas it can make you dizzy and even sick). Don't spray LPS 3 HEAVY DUTY RUST INHIBITOR for extended periods without adequate ventilation. If you're going to perform work involving a lot of product in a poorly ventilated area, use of a respirator or self-contained breathing equipment may be required. For more exposure and first aid information, refer to MSDS Sections 2, 3, 8 and 11.

Flammability

LPS 3 HEAVY DUTY RUST INHIBITOR is combustible having a flash point above 100^{o}F and an autoignition temperature over 400° F. Under normal use conditions flammability isn't a concern, but don't spray the product onto red-hot metal surfaces.

Disposal

If you spill LPS 3 HEAVY DUTY RUST INHIBITOR, notify the proper environmental or safety department at your company right away. If LPS 3 HEAVY DUTY RUST INHIBITOR becomes contaminated with another substance and is rendered unusable for protecting metal items from rust, the resulting mixture may fall under a hazardous classification. See section 13 for more details.

Section 2 • Composition, Information on Ingredients

Ingredients	CAS Numbers	%w/w	OSHA PEL-TWA	ACGIH - TLV	LC-50	LD-50	Other Limits
Mineral Spirits	64742-47-8	60 – 70	500 ppm	100 ppm	21,400 mg/m^3 for 4 hours (rat)	34,600 mg/kg (rat)	LD-50: 15,400 mg/kg (rabbit – dermal)
Petroleum oil	64742-54-7	5 – 10	Not available.	Not available.	Not available.	>5,000 mg/kg (rat)	LD-50: > 5,000 mg/kg in 24 hours (rabbit – dermal)
Microcrystalline Wax	63231-60-7	5 – 10	Not available	Not available	Not available	Not available	Not available
Calcium Carbonate*	471-34-1	1-5	5.0 mg/m^3	10 mg/m^3 TWA	Not available	Not available	NIOSH REL: 5 mg/m^3 TWA
Aromatic Hydrocarbon Resin	68410-16-2	1-3	Not available	Not available	Not available	Not available	Not available
Carbon dioxide (aerosol only)	124-38-9	2-3	10000 ppm	5000 ppm	Not available	Not available	Not available

The above components are hazardous as defined in 29 CFR 1910.1200. * Nuisance Dust (pure form)

Section 3 • Hazards Identification

Physical State and Appearance: Dark brown liquid with a sweet odor.
Emergency Overview: DANGER
Flammable. Contents Under Pressure. Harmful or Fatal if Swallowed.
Primary route(s) of entry: Skin Eye contact. Inhalation.
Potential Acute Health Effects:

Eyes: Irritating to eyes.

Skin: Repeated exposure may cause skin dryness or cracking. The solvent portion of this product can also be absorbed through the skin and produce CNS depression effects.

Inhalation: Breathing high concentrations of vapor may cause respiratory irritation, euphoria, excitation or giddiness, headache, nausea, vomiting, abdominal pain, loss of appetite, fatigue, muscular weakness, staggering gait, and central nervous system (CNS) depression. CNS effects include dizziness, drowsiness, disorientation, vertigo, memory loss, visual disturbances, difficulty with breathing, convulsions, unconsciousness, paralysis, coma and even death, depending upon the level of overexposure concentration and duration. Vapors can reduce the oxygen content in air. Approximately 20,000 ppm (or 2% by volume) of this product's solvent portion in air can be fatal to humans in 5 to 10 minutes. Sudden death from cardiac arrest (heart attack) may result from exposure to 5,000 ppm for only 5 minutes. Oxygen deprivation is possible if working in confined spaces.

Ingestion: If swallowed, this material may irritate the mucous membranes of the mouth, throat, and esophagus. It can be readily absorbed by the stomach and intestinal tract. Symptoms include a burning sensation fo the mouth and esophagus, nausea, vomiting, dizziness, staggering gait, drowsiness, loss of consciousness, and delirium, as well as additional central nervous system effects. Aspiration hazard if swallowed – can enter lungs and cause damage.

Potential Chronic Health Effects: **Carcinogenic Effects:** **NTP:** No **IARC:** No **OSHA:** No
Mutagenic Effects: None
Teratogenic Effects: None

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

Section 4 • First Aid Measures

Eyes: Check for and remove contact lenses. If irritation or redness develops, 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 immediately.

Skin: Remove contaminated shoes and clothing. Flush affected area with large amounts of water. If skin surface is damaged, apply a clean dressing and seek medical attention. Do not use ointments. If skin surface is not damaged, clean affected area thoroughly with mild soap and water. Seek medical attention if tissue appears damaged or if pain or 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, 100 percent humidified oxygen should be administered by a qualified individual. 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

Flash point: CLOSED CUP: 42° to 45°C (107° to 113°F). (Tagliabue.)
Flammable limits: LOWER: 0.6% UPPER: 6% Autoignition Temperature: >230°C (446°F)
Products of Combustion: Carbon monoxide and carbon dioxide.
Firefighting media: SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use water spray, fog or foam. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.

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. Cover pooling liquid with foam. Containers can build pressure if exposed to radiant heat, cool adjacent containers with flooding quantities of water until well after the fire is out.

Special Remarks on Explosion Hazards: None.

Section 6 • Accidental Release Measures

Small Spill and Leak: Absorb with an inert material and dispose of properly.
Large Spill and Leak: For large spills, secure the area and control access. Dike far ahead of a liquid spill to ensure complete collection. Water mist or spray may be used to reduce or disperse vapors; but, it may not prevent ignition in closed spaces. This material will float on water and its run-off may create an explosion or fire hazard. Verify that responders are properly HAZWOPER-trained and wearing appropriate respiratory equipment and fire-resistant protective clothing during cleanup operations. Pick up free liquid for disposal if this can be accomplished safely with explosion-proof equipment. Collect any excess material with absorbent pads, sand, or other inert non-combustible absorbent materials. Place into appropriate waste containers for later disposal.

Section 7 • Handling and Storage

Handling: Eliminate ignition sources. All equipment used when handling this material must be grounded when fluid temperature exceeds 100°F. Avoid contact with eyes, skin and clothing. After handling, always wash hands thoroughly with soap and water. Use only with adequate ventilation. Avoid breathing vapors or spray mists.
Storage: Keep container in a cool, well-ventilated area. Avoid all sources of ignition (spark or flame). Store below 120°F.

Section 8 • Exposure Controls, Personal Protection

Engineering Controls:	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits.
Personal Protection:	
Eyes:	Safety glasses.
Respiratory :	Use appropriate respirator if ventilation is inadequate.
Hands:	Impervious gloves.
Personal Protection in Case of a Large Spill:	Splash goggles. Full suit. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Section 9 • Physical and Chemical Properties

Physical State and Appearance:	Viscous liquid	**Vapor pressure:**	2.6 mmHg(at 20°C)
Color:	Brown (dark)	**Vapor density:**	4.8 (Air=1)
Odor:	Sweet Cherry	**Volatility:**	75% (v/v)
Boiling/Condensation point:	160°C (320°F)	**Evaporation rate:**	0.2 (N-butylacetate = 1)
Specific gravity:	0.83 (Water=1)		
		VOC:	577 (g/l)
Odor Threshold:	Not available.	**Solubility in water:**	Insoluble in cold water.

Section 10 • Stability and Reactivity

Stability and Reactivity:	The product is stable.
Incompatibility with Various Substances:	Extremely reactive or incompatible with oxidizing agents.
Hazardous decomposition products:	These products are carbon oxides (CO, CO2)
Hazardous polymerization:	Will not occur.

Section 11 • Toxicological Information

For Rule 66/3 Mineral Spirits Fraction:

Mineral Spirits is a mild to moderate eye irritant and a skin and respiratory tract irritant. Human volunteers exposed to an airborne concentration of 400 ppm experienced no ill effects. Saturated vapors in air (or AP 8,200 mg/m3) are below the LC50 level in rats.

Based upon laboratory animal studies, repeated direct application of Mineral Spirits to the skin can product defatting dermatitis, kidney damage, and changes in blood-forming capacity. Rats developed kidney damage and elevated blood urea nitrogen levels when exposed to a concentration of 1.9 mg/L for 65 days. The kidney damage in rats appeared to involve both the tubules and glomeruli, but only occurred in males; so these effects may not be pertinent to humans. Male rats exposed to airborne concentrations of 100, 150, and 1,500 ppm for 6 hours per day, 5 days per week for 9- days did not develop any functional or histological signs of neurotoxicity. Mineral Spirits has not been shown to be mutagenic in a variety of standard tests.

For additional ecological information concerning components of this product, users should refer to the Hazardous Substances Databank ® and the Oil and Hazardous Materials / Technical Assistance Data System (OHM/TADS) maintained by the U.S. National Library of Medicine. (Source: CITGO Petroleum Company).

Petroleum Base Oil Fraction:

The petroleum base oil used in this product contains fractions that may be refined by various processes including severe solvent extraction, severe hydrocracking, or severe hydrotreating. None of the oils requires a cancer warning under the OSHA Hazard Communication Standard (29 CFR 1910.1200). These oils have not been listed in the National Toxicology Program (NTP) Annual Report nor have they been classified by the International Agency for Research on Cancer (IARC) as: carcinogenic to humans, probably carcinogenic to humans or possibly carcinogenic to humans.

Section 12 • Ecological Information

For Rule 66/3 Mineral Spirits Fraction:

Mineral spirits is potentially toxic to freshwater and saltwater ecosystems. It will normally float on water with its lighter components evaporating rapidly. In stagnant or slow-flowing waterways, a naphtha hydrocarbon layer can cover a large surface area. As a result, this covering layer might limit or eliminate natural atmospheric oxygen transport into the water. With time, if not removed, oxygen depletion in the waterway might be enough to cause a fish kill or create an anaerobic environment. This coating action can also be harmful or fatal to plankton, algae, aquatic life, and water birds. Additionally, potable water and boiler feed water systems should never be allowed more than 5 ppm contamination from this material.

Using Rainbow Trout (Oncorhynchus mykiss), similar materials showed a 96 hour TLm (Median Toxic Limit) from 10 ppm to 20 ppm in ambient saltwater. 24 hour TLms resulted in 2,990 ppm and 200 ppm when using Bluegill Sunfish (Lipomis macrochirus) and juvenile American Shad (Squalius cephalus), respectively. Based upon actual spill incident investigations, similar materials have been shown to bioaccumulate in tissues of various fish from 1 ppm to 10 ppm levels.

Petroleum Base Oil Fraction:

The 96 hour LC50 for rainbow trout (Oncorhynchus mykiss) is > 1000 mg/l. This material is not expected to readily biodegrade.

Section 13 • Disposal Considerations

Waste Status: This product, as sold in bulk, has the RCRA characteristic of ignitability and if discarded would have the hazardous waste code D001.

Disposal: Maximize material recovery for reuse or recycling. If spilled material is introduced into a wastewater treatment system, chemical and biological oxygen demand (COD and BOD) will likely increase. This material is slowly biodegradable if gradually exposed to microorganisms, preferably in an aerobic environment. In sewage-seeded wastewater, at or below concentrations of 0.2% by volume, there is little or no effect on bio-oxidation and /or digestion. However, at 1% by volume, the base solvent of this product doubles the required digestion period. Higher concentrations interfere with floc formation and sludge settling and also plug filters or exchange beds. Vapor emissions from a bio-oxidation process contaminated by this material might prove to be a potential health hazard.

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 • Transportation Information

Aerosol Only

Mode	Shipping Name	Hazard Class	Number	Technical Name	Label	Packing Group	Emergency Response Guide
D.O.T. Ground	Consumer Commodity	ORM-D	UN 1950	NA	ORM-D	NA	NA
IATA (US)	Consumer Commodity	9	UN 8000	NA	Miscellaneous	NA	NA
IATA (non-US)	AEROSOLS, flammable	2.1	UN 1950	NA	Flammable Gas	NA	NA
IMDG (Regular)	AEROSOL	2.1	UN 1950	NA	Flammable Gas	NA	EMS: 2-13
IMDG (Special)	Dangerous Goods in Limited Quantities of Class 2	NA	UN 1950	NA	NA	NA	EMS: 2-13

Section 14 • Transportation Information - Continued

All Non-Aerosol Packaging

Mode	Shipping Name	Hazard Class	Number	Technical Name	Label	Packing Group	Emergency Response Guide
D.O.T. Ground	Not Regulated	NA	NA	NA	NA	NA	NA
IATA (US)	Flammable liquid, n.o.s.	3	UN 1993	Naphtha Petroleum	Flammable Liquid	III	NA
IATA (non-US)	Flammable liquid, n.o.s.	3	UN 1993	NA	Flammable Liquid	III	NA
IMDG (Regular)	Flammable liquid, n.o.s.	3	UN 1993	Naphtha Petroleum	Flammable Liquid	III	EMS: 3-07
IMDG (Special)	NA	NA	NA	NA	NA	NA	EMS: 3-07

If shipped by air (IATA), part # 00322 and #03128 will need to be repacked. Contact LPS Technical for additional information.

Section 15 • Regulatory Information

HCS Classification: Class: Flammable aerosol.

U.S. Federal Regulations:
TSCA 8(b) inventory: All of the ingredients are listed on the TSCA inventory.
CERCLA Sections 102a/103 Hazardous Substances (40 CFR Part 370): This product contains no Reportable Quantity (RQ) Substances.
SARA Title III Sections 311/312 Hazardous Categorization (40 CFR Part 370.2): Fire Hazard, Acute (Immediate) Health Hazard, and Chronic (Delayed) Health Hazard.
SARA Title III Sections 313 Chemicals: None.

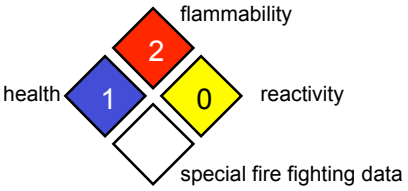
Section 16 • Other Information

DOC# 10316

HMIS

Health - 1
Flammability - 2
Reactivity - 0
Personal Protection - B

NFPA



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.

June 2, 2004
Ed Williams, Technical Manager
LPS Laboratories
A division of Illinois Tool Works

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