



MATERIAL SAFETY DATA SHEET

LPS[®] Red & Redi

Multi-Purpose Red Grease

Revision Date: 3/9/2010

Supersedes: 3/18/2007

Section 1 – Product and Company Identification

Product Name: LPS[®] Red & Redi *Multi-Purpose Red Grease*

Part Number: 05816, C05816

Chemical Name: Petroleum Hydrocarbons

Product Use: Red colored, multi-purpose grease designed with high temperature resistance while providing excellent lubrication.

Manufacturer Information: LPS Laboratories, 4647 Hugh Howell Rd., Tucker, GA, USA 30084

TEL: 1 770-243-8800

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

FAX: 1 770-243-8899

Website: <http://www.lpslabs.com>

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 will not 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, do not hesitate to call us at 1-770-243-8800.

Worker Toxicity

LPS[®] Red & Redi is an industrial lubricant. It contains petroleum derived oils and solvents, so it can irritate your skin. We suggest you wear gloves and avoid extended exposure to unprotected skin. Do not get it in your eyes (it stings), or breathe 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). When sprayed onto chains and gears with short bursts, the product will not produce fumes in any great quantity, (do not spray LPS[®] Red & Redi for extended periods without adequate ventilation). If you are going to perform work involving a lot of spray lubricant 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[®] Red & Redi Grease uses mostly propane ("gas grill fuel") as its propellant. It is extremely flammable! Don't spray the product onto red-hot metal surfaces, don't smoke while using it, and avoid spraying near welding or grinding operations. Do not spray onto live electrical equipment or in or around ignition sources. Store product away from heat sources.

Disposal

LPS[®] Red & Redi Grease normally cannot be spilled, but if the aerosol can is dropped from several feet or crushed it may discharge its contents. A single aerosol can of LPS[®] Red & Redi Grease contains less than one pint of material and much of this will evaporate quickly. If a spill occurs, the two greatest concerns are flammability of the fast drying vapors and slipperiness of walking surfaces in the affected area. Notify the proper environmental and safety personnel at your company right away. Absorb spilled material with a suitable solid like sand or "kitty litter" and place into an appropriate waste container. If an aerosol can of LPS[®] Red & Redi Grease does not spray and has more than an inch of material inside, it will be considered a flammable hazardous waste under U.S. EPA guidelines. See section 13 for more details. If you spill LPS[®] Red & Redi Grease, notify the proper environmental or safety department at your company right away. See section 13 for more details.



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Section 2 – Hazards identification

This material is 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: DANGER: Extremely Flammable. Eye irritant. Vapor Harmful. Contents under pressure. Harmful or Fatal if Swallowed. Do not use on energized equipment.

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

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: Ingestion of large quantities may cause nausea, vomiting, and gastrointestinal irritation. May cause injury if aspirated into lungs.

Potential Chronic Health Effects:

Carcinogenic Effects: NTP: No OSHA: No ACGIH: No

Mutagenic Effects: None

Teratogenic Effects: A minor component of this product, n-hexane, has been shown to cause harm to the fetus in laboratory animal studies. Harm to the fetus occurs only at exposure levels that harm the pregnant animal. The relevance of these findings to humans is uncertain.

Target Organs:

Prolonged and repeated exposure to n-hexane may cause peripheral neuropathy by damaging peripheral nerve tissue (that of the arms and legs) and result in muscular weakness and loss of sensation. Prolonged and repeated inhalation of high levels of mixed isomers of hexane resulted in kidney damage in male rats. The effects observed are the same as those seen in male rats exposed to other hydrocarbons. The mechanism by which these chemicals cause the characteristic kidney toxicity is unique to the male rat and the kidney effects are not expected to occur in man.

Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals: liver abnormalities, kidney damage.

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.



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LPS[®] Red & Redi

Multi-Purpose Red Grease

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Section 3 – Composition / Information on Ingredients

Component	CASRN	Percent by Weight
Petroleum Oil	64742-52-5	30 – 40%
Propane/Isobutane Blend	68476-85-7	20 - 30%
2-methylpentane	107-83-5	25 - 35%
3-methylpentane	96-14-0	10 - 15%
2,3-dimethylbutane	79-29-8	10 - 15%
2,2-dimethylbutane	75-83-2	5 - 10%
Aliphatic Hydrocarbon	64742-47-8	1 - 5%
n-hexane	110-54-3	1 - 3%

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. 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.
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Section 5 – Fire Fighting Measures

Products of Combustion: Carbon monoxide and carbon dioxide.

General Fire Hazards: This item is a highly flammable aerosol. High heat will cause explosive rupture of containers and the rapid spread of fire.

Firefighting media: Use CO₂, DRY chemical powder, 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: Yes

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.



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Multi-Purpose Red Grease

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Section 6 – Accidental Release Measures

Containment Procedures	Small Spill and Leak: Large Spill and Leak:	Eliminate ignition sources. Absorb with an inert material and dispose of properly. Eliminate ignition sources, 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		Wear appropriate personal protective equipment (respiratory protection, solvent resistant gloves). Absorb spill with an inert material such as clay, vermiculite or diatomaceous earth. Place slurry in an approved chemical waste container for disposal. Wash spill area with detergent and water. Before discharging rinse water to sanitary sewer system, consult local regulations.
Evacuation Procedures		Ventilate area of leak or spill. Keep unnecessary and unprotected people away.
Special Procedures		Remove all sources of ignition. Ventilate area. Wear appropriate protective equipment during cleanup.

Section 7 – Handling and Storage

Handling: DO NOT spray into or around ignition sources. After handling, always wash hands thoroughly with soap and water. Use only with adequate ventilation. Avoid breathing vapors or spray mists.

Storage: Keep container closed and in a cool, well-ventilated area. Avoid all sources of ignition (spark or flame). Store below 120°F. Store aerosols as Level 3 Aerosol (NFPA 30B).

Precautions to be taken in handling and storage: Store all materials in dry, well-ventilated area. Avoid breathing vapors. Ground and bond containers before transferring materials.

Section 8 – Exposure Controls / Personal Protection

Exposure Guidelines:

Component	CASRN	OSHA TWA-PEL	OSHA STEL	ACGIH-TLV	ACGIH-STEEL	NIOSH REL
Petroleum Oil	64742-52-5	5 mg/m ³ Oil mist	Not Established	5 mg/m ³ Oil mist	10 mg/m ³ Oil mist	10 mg/m ³ * Oil mist
Propane/Isobutane Blend	68476-85-7	1000 ppm	Not Established	1000 ppm	Not Established	350 mg/m ³
2-methylpentane	107-83-5	500 ppm	1000 ppm	500 ppm	1000 ppm	100 ppm
3-methylpentane	96-14-0	500 ppm	1000 ppm	500 ppm	1000 ppm	100 ppm
2,3-dimethylbutane	79-29-8	500 ppm	1000 ppm	500 ppm	1000 ppm	100 ppm
2,2-dimethylbutane	75-83-2	500 ppm	1000 ppm	500 ppm	1000 ppm	100 ppm
Aliphatic Hydrocarbon	64742-47-8	500 ppm Related Chemical	Not Established	100 ppm Related Chemical	Not Established	TWA-350 mg/m ³ Ceil-1800 mg/m ³ Related Chemical
n-hexane	110-54-3	500 ppm	Not Established	50 ppm	Not Established	50 ppm

* Supplier Data



MATERIAL SAFETY DATA SHEET

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Multi-Purpose Red Grease

Revision Date: 3/9/2010

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Engineering measures Provide local and/or general exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits.

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, if product will be sprayed for an extended period, "overspray" onto skin may occur. If so, use protective gloves (i.e., nitrile) conforming to appropriate regulations. Please observe the instructions regarding permeability and breakthrough time that are provided by the supplier of the gloves

Respiratory protection If airborne concentrations are above the applicable exposure limits (listed above), use NIOSH approved respiratory protection (i.e., organic cartridge).

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

Section 9 – Physical and Chemical Properties

Appearance:	Viscous liquid that forms greasy film	Color:	Red
Odor:	Mild, mineral oil	Evaporation Rate:	<1(Ethyl Ether =1)
Solubility:	Not soluble in water	Flash Point:	>(-29°C) (-20°F) bulk liquid
Boiling Point:	~70.2° (158°F)	Decomposition Temperature:	Not Established.
Specific Gravity (Water=1):	0.77 - 0.80 at 20 °C	Flash Point Method:	Estimated
Vapor Density (air=1):	~2.0-3.0 calculated	Auto Ignition Temperature:	Not Established
Vapor Pressure at 20°C:	~2500-3500 mmHg calculated aerosol	Partition Coefficient (octanol/water):	Not Established
pH:	Not Applicable	Odor Threshold:	Not Established
Flammable limits (estimated):	LEL: 1.8% UEL: 9.5%	Viscosity:	3100-4000 cPs bulk liquid
V.O.C. content	65%, 4.21 #/gal, 504 g/L per CARB, OTC, & EPA Definition	Volatiles:	65%
		Melting Point (°C):	Not Applicable

Section 10 – Chemical Stability and Reactivity

Chemical Stability:	Product is stable under recommended storage conditions.
Conditions to Avoid:	Keep away from heat and ignition sources. Exposure to direct sunlight for extended periods. Temperatures in excess of 50°C.
Incompatibility:	Extremely reactive or incompatible with oxidizing agents.
Hazardous Decomposition:	Combustion will generate smoke, possibly thick and choking, resulting in zero visibility and combustion products include carbon monoxide and carbon dioxide.
Hazardous Polymerization:	Will not occur.



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Multi-Purpose Red Grease

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Section 11 – Toxicological Information

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.

Component	CASRN	LC-50	LD-50
Petroleum Oil	64742-52-5	Not Available	Not Available
Propane/Isobutane Blend	68476-85-7	See Note-1	Not Available
2-methylpentane	107-83-5	>3125 ppm/rat/4hr	Not Available
3-methylpentane	96-14-0	Not available	Not Available
2,3-dimethylbutane	79-29-8	Not Available	Not Available
2,2-dimethylbutane	75-83-2	Not Available	Not Available
Aliphatic Hydrocarbon	64742-47-8	21400 mg/m ³ /rat/4hr*	34600 mg/kg/oral/rat* 15400 mg/kg/dermal/rabbit*
n-hexane	110-54-3	48000 ppm/ rat/4H**	25 g/kg oral/rat** >1.3 g/kg dermal/rabbit**

*Related chemical data, ** Supplier Data

Note 1- Propane-Isobutane is untested for eye and skin irritancy, as well as sensitization. Toxic effects described in animals from exposure by inhalation include anaesthetic effects, and cardiac sensitization.

Acute Toxicity Data:

ISOBUTANE

Inhalation 15-minute LC50: 570,000 ppm in rats

n-BUTANE

Inhalation 4-hour LC50: 658 mg/L in rats

For Petroleum Derived Components (minimum 95% of total composition):

The petroleum derived materials in this product are mild to moderate eye, skin, and respiratory tract irritants. Based upon laboratory animal studies of some of the components, repeated direct application to the skin can produce defatting, dermatitis, kidney damage, and changes in blood-forming capacity. None of the components of this blended product have been shown to be mutagenic. 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.



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Section 12 – Ecological Information

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

Ecotoxicity:

Effect on Organisms	Component	CASRN	Test	Species	Results
Acute Toxicity on Fishes	n-hexane	110-54-3	48-hr LC ₁₀₀	Leuciscus idus melanotus	260,000 µg/L
	2-Methylpentane	107-83-5	48-hour EC ₅₀	Daphnia magna	2.1 mg/L
Acute Toxicity on Daphnia	n-hexane	110-54-3	24-hr LC ₅₀	Daphnia magna	50,000 µg/L
Bacterial inhibition	No Data Available				
Growth inhibition of algae	n-hexane	110-54-3	EC ₅₀	Anabaena inaequalis	1.70%
Bioaccumulation in fish	No Data Available				

Mobility: Semi-volatile. Readily absorbed into soil. **Persistence and degradability:** Only slightly biodegradable.

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

For Petroleum Derived Components (minimum 95% of total composition):

Petroleum derived components of this product are potentially toxic to freshwater and saltwater ecosystems. These will normally float on water with their lighter components evaporating rapidly. In stagnant or slow-flowing waterways, petroleum distillate layers 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 a small 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.

Section 13 – Disposal Considerations

Waste Status: Aerosol products, if depressurized and emptied to less than 2.5 cm of fluid contents are classified as non-hazardous waste under 40 CFR 261.7 (U.S.). If disposed of in its received form, this aerosol carries waste codes D001 and D003. (U.S.) Dispensed product, as received, carries waste code D001.

Disposal: Waste must be disposed of in accordance with national, regional, provincial, and local environmental control 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.



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Section 14 • Transport Information

D.O.T. Ground	Shipping Name:	Consumer Commodity	UN Number:	NA
	Hazard Class:	ORM-D	Technical Name:	NA
	Subclass:	NA	Hazard Label:	ORM-D Already on box
Road/Rail - ADR/RID	UN no:	1950	ADR Class:	2
	Packing group:	NA	Classification code:	5F
	Name and Description:	AEROSOLS, Flammable	Hazard ID no:	NA
	Labeling:	2.1		
IMDG-IMO	UN no:	1950	Class:	2.1
	Shipping Name:	AEROSOLS	Subsidiary Risk:	2.1
	Packing Instructions:	P003, LP02	Packing group:	NA
	Marine pollutant:	NO	EmS:	F-D, S-U
IATA-ICAO	UN no:	1950	Class:	2.1
	Shipping Name:	AEROSOLS, Flammable	Subclass	NA
	Packing instructions:	203, Y203 (Ltd. Qty.)	Packing group:	NA
	Labeling:	Flammable Gas		

Section 15 – Regulatory Information

U.S. Federal Regulations

RCRA Hazardous Waste No.: D001, D003 (aerosol only)

Comprehensive Environmental Response and Liability Act of 1980 (CERCLA): n-hexane- 5000 pounds

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:

Sudden Release of Pressure, Fire Hazard, Immediate (Acute) Health Hazard, Delayed (Chronic) Health Hazard.

This product contains the following toxic chemical(s) subject to reporting requirements of SARA Section 313 (40 CFR 372):

Component	CAS Number	Maximum %
n-hexane	110-54-3	3%

Section 112 Hazardous Air Pollutants (HAPs): n-hexane



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LPS[®] Red & Redi

Multi-Purpose Red Grease

Revision Date: 3/9/2010

Supercedes: 3/18/2007

State Regulations

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

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

New Jersey Right to Know:

Petroleum Oil 64742-52-5 • Propane/Isobutane Blend 68476-85-7 • 2-Methylpentane 107-83-5 • 3-Methylpentane 96-14-0 • 2, 3-Dimethylbutane 79-29-8 • 2, 2-Dimethylbutane 75-83-2 • Aliphatic Hydrocarbon 64742-47-8 • n-hexane 110-54-3

International Regulations

Canadian Environmental Protection Act: 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: Class A, Class B5, Class D2A, Class D2B



Other Regulations

Montreal Protocol listed ingredients: None.

Stockholm Convention listed ingredients: None.

Rotterdam Convention listed ingredients: None.

RoHS Compliant: Yes.

Section 16 • Other Information

MSDS#15816 Responsible Name: Clea George Regulatory Affairs Coordinator	HMIS 1996		HMIS III	NFPA Flammability  Health Reactivity	
	Health:	1	Health:		[/]1
	Flammability:	3	Flammability:		4
	Reactivity:	0	Physical Hazard:		2

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.

Clea L George, Regulatory Affairs Coordinator
LPS Laboratories
A division of Illinois Tool Works