



MATERIAL SAFETY DATA SHEET

Premium Di-Electric Grease

Revision 2

Revision Date: 1/6/2010

Supercedes: 1/5/2007

Section 1 – Product and Company Identification

Product Name: Premium Di-Electric Grease

Part Number: 03216, C03216

Chemical Name: Petroleum Hydrocarbons

Product Use: A silicone-based grease designed to preserve electrical and electronic connections.

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 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 1-770-243-8800.

Worker Toxicity

LPS Premium Di-Electric Grease is a non-curing silicone compound used for sealing, lubricating, insulating, and waterproofing of electrical connections and components. It contains isohexane and propane/isobutene propellant which 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 Premium Di-Electric Grease 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 even a self-contained breathing apparatus may be necessary. For more exposure and first aid information, refer to MSDS Sections 2, 4, 8 and 11.

Flammability

LPS Premium Di-Electric Grease is extremely flammable, having a flash point below 32° F (0° C). Do not spray onto live electrical equipment or in or around ignition sources. Store product away from heat sources.

Disposal

If you spill LPS Premium Di-Electric 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: Product has a low order of acute oral toxicity, but 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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Section 3 – Composition / Information on Ingredients

Component	CASRN	Percent by Weight
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%
n-hexane	110-54-3	1 - 3%

The remaining ingredients of this preparation are not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

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.

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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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
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
n-Hexane	110-54-3	500 ppm	Not Established	50 ppm	Not Established	50 ppm



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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:	Liquid.	Color:	Clear/ Colorless
Odor:	Ether-like	Evaporation Rate:	<1(Ethyl Ether =1)
Solubility:	Not soluble in water	Flash Point:	<-17°C (0°F) bulk liquid
Boiling Point:	61° (142°F)	Decomposition Temperature:	Not Determined.
Specific Gravity (Water=1):	0.6-0.7 @ 20 °C	Flash Point Method:	TCC
Vapor Density (air=1):	~3.0	Auto Ignition Temperature:	306°C (583°F)
Vapor Pressure:	352mmHg @ 38 °C	Partition Coefficient (octanol/water):	3.2 (estimated)
pH:	Not applicable	Odor Threshold:	Not Determined.
Flammable limits (estimated):	LOWER: 1.2% UPPER: 7%	Viscosity:	Not Determined
V.O.C. content	90%, 4.88 #/gal, 583 g/L per CARB, OTC, & EPA Definition	Volatiles:	90%
		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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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
Propane/Isobutane Blend	68476-85-7	> 3125 ppm / 4 hours/rat	Not Established
2-methylpentane*	107-83-5	3125 ppm/ rat/4H	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
n-Hexane*	110-54-3	48000 ppm/ rat/4H	25 g/kg oral/rat 1.3 g/kg dermal/rabbit

*Supplier data

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: None known.



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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.

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		



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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

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:

2-Methylpentane 107-83-5 • Propane/Isobutane Blend 68476-85-7 • 3-Methylpentane 96-14-0 • 2, 3-Dimethylbutane 79-29-8 • 2, 2-Dimethylbutane 75-83-2 • 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.



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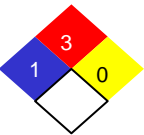
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Section 16 • Other Information

MSDS#13216 Responsible Name: Clea Johnson Regulatory Affairs Coordinator	HMIS 1996		HMIS III		<p>NFPA Flammability</p>  <p>Health Reactivity</p>
	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 Johnson, Regulatory Affairs Coordinator
LPS Laboratories
A division of Illinois Tool Works