Section 1 • Product and Company Identification

Product Name: LPS® PF® Solvent

Part Number(s): 61400, 61410, 61432, 61401, 61420 (aerosol), 61456, C61400, C61410, C61432, C61401, C61405, C61420 (aerosol), C61456

Chemical Name: Petroleum Hydrocarbon

Product Use: A solvent agent designed for removing grease, oil and other residues from metal, power cable and fiber optic cable surfaces.

Manufacturer Information: LPS Laboratories, 4647 Hugh Howell Road, Tucker, GA, USA 30084
TEL: USA & Canada: 1 800 241-8334
Outside USA and Canada: +1 770 243-8800
FAX: USA & Canada: 1 800 543-1563
Outside USA and Canada: +1 770 243-8899

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 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: Flammable. Contents under pressure. Harmful or fatal if swallowed.

Bulk: DANGER: Combustible. Harmful or fatal if swallowed.

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

Potential Acute Health Effects:

- **Eyes:** Irritating to eyes.

- **Skin:** Prolonged or repeated skin contact with liquid may cause defatting resulting in drying, redness and possible blistering. This product contains citrus d-Limonene – a skin sensitizing agent.

- **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  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

<table>
<thead>
<tr>
<th>Component</th>
<th>CASRN</th>
<th>Weight Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naphtha (Petroleum), Hydrotreated Heavy</td>
<td>64742-48-9</td>
<td>80 - 100%</td>
</tr>
<tr>
<td>d-limonene</td>
<td>5989-27-5</td>
<td>5 - 10%</td>
</tr>
<tr>
<td>Carbon Dioxide (aerosol only)</td>
<td>124-38-9</td>
<td>1 - 5%</td>
</tr>
</tbody>
</table>

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: 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: 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.

Special Remarks on Explosion Hazards: Aerosols may explode upon heating, spread fire and overcome sprinkler systems.

Section 6 • Accidental Release Measures

Containment Procedures: Small Spill and Leak: Eliminate ignition sources. Absorb with an inert material and dispose of properly.
Large Spill and Leak: 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: Contain and recover spilled material when possible.
Evacuation Procedures: Ventilate area of leak or spill. Keep unnecessary and unprotected people away.
Special Procedures: Remove all sources of ignition. Ventilate area. Wear personal protective equipment during cleanup.

Section 7 • Handling and Storage

Handling: DO NOT spray into or around ignition sources. DO NOT allow material to come in contact with eyes or skin. Wear appropriate protective equipment during handling. Keep container closed. Avoid breathing vapors or mists. Use only with adequate ventilation. Wash thoroughly after handling.

Storage: Keep container in a cool, well-ventilated area. Avoid all sources of ignition (spark or flame). Store between 40°F and 120°F (4.4°C and 49°C).

Precautions to be taken in handling and storage: Store aerosols as Level 3 Aerosol (NFPA 30B). Store all materials in a dry, well-ventilated area. Avoid breathing vapors.
Section 8 • Exposure Controls / Personal Protection

Exposure Guidelines:

<table>
<thead>
<tr>
<th>Component</th>
<th>CASRN</th>
<th>OSHA</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>Supplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naphtha (Petroleum), Hydrotreated Heavy</td>
<td>64742-48-9</td>
<td>5 mg/m³ (oil mist) PEL</td>
<td>5 mg/m³ (oil mist) TLV 10 mg/m³ (oil mist) STEL</td>
<td>5 mg/m³ (oil mist) TWA 10 mg/m³ (oil mist) STEL</td>
<td>171 ppm TWA</td>
</tr>
<tr>
<td>d-limonene</td>
<td>5989-27-5</td>
<td>Not established</td>
<td>Not established</td>
<td>Not established</td>
<td>None reported</td>
</tr>
<tr>
<td>Carbon Dioxide (aerosol only)</td>
<td>124-38-9</td>
<td>5000 ppm PEL</td>
<td>5000 ppm TLV 30000 ppm STEL</td>
<td>5000 ppm TWA 30000 ppm STEL</td>
<td>None reported</td>
</tr>
</tbody>
</table>

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, if product will be sprayed for an extended period, "overspray" onto skin may occur. If so, wear chemical resistant gloves conforming to appropriate regulations. Please observe the instructions regarding permeability and breakthrough time that are provided by the supplier of the gloves.

Respiratory protection: Typical use of this product under normal conditions does not require the use of respiratory protection. If airborne concentrations are above the applicable exposure limits (listed above), use NIOSH approved respiratory protection (i.e. organic vapor cartridge).

General Hygiene Considerations: Wash thoroughly after handling. Have eye-wash facilities immediately available.
Section 9 • Physical and Chemical Properties

Appearance: Liquid

Color: Colorless / water-white

Odor: Orange

Evaporation Rate: < 0.1 (BuAc = 1)

Solubility Description: Negligible

Flash Point: > 61°C (142°F)

Boiling Point: 185°C (365°F)

Flash Point Method: Tag-Closed Cup

Specific Gravity (H2O=1): 0.74 - 0.78 @ 20°C

Decomposition Temperature: Not established

Vapor Density (air = 1): > 1

Auto ignition temperature: 335°C (635°F)

Vapor Pressure: 0.48 mm Hg @ 20°C

Flammable limits (estimated): LOWER: 0.7% UPPER: 5.3%

Rule 1171 PPc: Not established

Partition Coefficient (octanol/water): Not established

V.O.C. Content: Aerosol: 97.8% per State & Federal Consumer Product Regulations; 760 g/L per SCAQMD Rule 102

Bulk: 100% per State & Federal Consumer Product Regulations; 777 g/L per SCAQMD Rule 102

Odor Threshold: Not established

Melting Point: Not established

Viscosity: 1.5 cSt @ 25°C

pH: Not applicable

Volatile: 100%

Heat of combustion: Aerosol: > 30 kJ/g Bulk: > 30 kJ/g

Section 10 • Stability and Reactivity

Chemical Stability: Product is stable under recommended storage conditions.

Conditions to Avoid: Keep away from heat and ignition sources.

Incompatibility: Reactive or incompatible with oxidizing agents.

Hazardous Decomposition: These products are carbon oxides (CO, CO2).

Hazardous Polymerization: Will not occur.
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.

B: Component Analysis

<table>
<thead>
<tr>
<th>Component</th>
<th>CASRN</th>
<th>LC-50</th>
<th>LD-50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naphtha (Petroleum), Hydrotreated Heavy</td>
<td>64742-48-9</td>
<td>Not established</td>
<td>&gt; 10000 mg/kg / oral*</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>&gt; 3160 mg/kg / dermal*</td>
</tr>
<tr>
<td>d-limonene</td>
<td>5989-27-5</td>
<td>Not established</td>
<td>&gt; 5000 mg/kg / oral / rabbit</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>&gt; 5000 mg/kg / dermal / rabbit</td>
</tr>
<tr>
<td>Carbon Dioxide (aerosol only)</td>
<td>124-38-9</td>
<td>470000 ppm / rat / 30 minutes</td>
<td>Not appropriate</td>
</tr>
</tbody>
</table>

* Supplier Data

Section 12 • Ecological Information

Mobility: Highly volatile. Not expected to partition to sediment.
Persistence / Degradability: Readily biodegradable
Bioaccumulative potential: No bioaccumulation potential
Other adverse effects: None known

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

Ecotoxicity

<table>
<thead>
<tr>
<th>Effects on Organisms</th>
<th>Component</th>
<th>CASRN</th>
<th>Test</th>
<th>Species</th>
<th>Results</th>
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<tbody>
<tr>
<td>Acute Toxicity on Fishes</td>
<td>d-limonene</td>
<td>5989-27-5</td>
<td>4-day LC50</td>
<td>Oncorhynchus Mykiss</td>
<td>35,000 µg/L</td>
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<tr>
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<td>96-hr EC50</td>
<td>Pimephales Promelas</td>
<td>1,490,000 µg/L</td>
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<tr>
<td>Acute Toxicity on Daphnia</td>
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<tr>
<td>Bacterial Inhibition</td>
<td></td>
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<tr>
<td>Growth inhibition of algae</td>
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<tr>
<td>Bioaccumulation in fish</td>
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</tr>
</tbody>
</table>

* Supplier Data
Section 13 • Disposal Considerations

Waste Status: Aerosol cans, if depressurized and emptied to less than 1 inch (2.54 cm) of fluid contents, are classified as non-hazardous waste under 40 CFR 261.7 (U.S.). If disposed of in its received form, the aerosol product carries the waste code D003 (U.S.). If disposed of in its received form, the bulk product does not meet the classification of a RCRA hazardous waste.

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

Aerosol

<table>
<thead>
<tr>
<th>D.O.T. Ground</th>
<th>Shipping Name:</th>
<th>Consumer Commodity</th>
<th>UN No.:</th>
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<tr>
<td>Hazard Class:</td>
<td>ORM-D</td>
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<td>NA</td>
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<tr>
<td>Subclass:</td>
<td>NA</td>
<td>Hazard Label:</td>
<td>ORM-D Already on box</td>
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<td>Packing Group:</td>
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<table>
<thead>
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<th>ADR Class:</th>
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<tbody>
<tr>
<td>Packing Group:</td>
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<td>Classification Code:</td>
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<td>Name and description:</td>
<td>AEROSOLS, flammable</td>
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<table>
<thead>
<tr>
<th>IMDG-IMO</th>
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<tbody>
<tr>
<td>Shipping Name:</td>
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<td>Subsidiary Risk:</td>
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<tr>
<td>Labeling:</td>
<td>NA</td>
<td>Packing Group:</td>
<td>NA</td>
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<tr>
<td>Packing Instructions:</td>
<td>P003, LP02</td>
<td>EmS:</td>
<td>F-D, S-U</td>
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<tr>
<td>Marine pollutant:</td>
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<td>Technical Name:</td>
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</table>

<table>
<thead>
<tr>
<th>IATA - ICAO</th>
<th>UN No.:</th>
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<th>Class:</th>
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<tbody>
<tr>
<td>Shipping Name:</td>
<td>Aerosols, flammable</td>
<td>Subclass:</td>
<td>NA</td>
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<tr>
<td>Packing Instructions:</td>
<td>203, Y203 (Ltd. Qty.)</td>
<td>Packing Group:</td>
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</tr>
<tr>
<td>Labeling:</td>
<td>Flammable Gas</td>
<td>Technical Name:</td>
<td>NA</td>
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</tr>
</tbody>
</table>

Bulk versions of this product are not regulated by any mode of transportation.

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.: D003 (aerosol only)

Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA):
None

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 (aerosols only), 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):
No individual section 313 component is present at or above 1%.

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 for manufacturing use only - not for retail sale.

New Jersey Right to Know:
Aerosol: Naphtha (Petroleum), Hydrotreated Heavy 64742-48-9 ● d-limonene 5989-27-5 ● Carbon Dioxide 124-38-9
Bulk: Naphtha (Petroleum), Hydrotreated Heavy 64742-48-9 ● d-limonene 5989-27-5

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:**
Aerosol: Class A, Class B5, Class D2B

**WHMIS Classification:**
Bulk: Class B3, 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

<table>
<thead>
<tr>
<th>MSDS#: 161420</th>
<th>HMIS 1996</th>
<th>HMIS III</th>
<th>NFPA</th>
</tr>
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<tbody>
<tr>
<td>Health: 1</td>
<td>Health: [1] 1</td>
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</tr>
<tr>
<td>Flammability: 2</td>
<td>Flammability Aerosol: 4</td>
<td>Flammability Bulk: 2</td>
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</tr>
<tr>
<td>Reactivity: 0</td>
<td>Physical Hazard Aerosol: 2</td>
<td>Physical Hazard Bulk: 0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Special Safety</td>
<td>Special Safety</td>
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</tr>
</tbody>
</table>

**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