MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product identifier **LPS® PF® Solvent**

Version # 01

Issue date 01-06-2014

CAS # Mixture

Part Number 61420, C61420

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, a division of Illinois Tool Works
4647 Hugh Howell Rd
Tucker, Georgia 30084 United States
www.lpslabs.com

1-800-241-8334/	770-243-8800
Chemtrec	1-800-424-9300

2. Hazards Identification

Emergency overview DANGER

Flammable aerosol. Contents under pressure. May be ignited by heat, sparks or flames.

HARMFUL OR FATAL IF SWALLOWED.
May cause an allergic skin reaction. May be irritating to eyes.

Potential health effects

Routes of exposure Eye contact. Skin contact. Inhalation. Ingestion.

Eyes Avoid contact with eyes. May cause eye irritation.

Skin Avoid contact with the skin. May cause sensitization by skin contact.

Inhalation Do not breathe fumes. Prolonged inhalation may be harmful.

Ingestion Do not ingest. Harmful: may cause lung damage if swallowed.

Signs and symptoms Direct contact with eyes may cause temporary irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause an allergic skin reaction. Symptoms may include redness, edema, drying, defatting and cracking of the skin.

Potential environmental effects Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

3. Composition / Information on Ingredients

Components	CAS #	Percent
Naphtha Petroleum, Hydrotreated Heavy	64742-48-9	60 - 100
D-LIMONENE	5989-27-5	7 - 13
CARBON DIOXIDE	124-38-9	1 - 5

4. First Aid Measures

First aid procedures

Eye contact Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses. Continue rinsing. Get medical attention if irritation develops and persists.

Skin contact Wash off with soap and water. Get medical attention if irritation develops and persists.

Inhalation If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.

Ingestion Call a physician or poison control center immediately. Only induce vomiting at the instruction of medical personnel. Never give anything by mouth to an unconscious person. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

Notes to physician Provide general supportive measures and treat symptomatically.

General advice Call a POISON CENTER or doctor/physician if you feel unwell.

5. Fire Fighting Measures

Flammable properties Flammable by WHMIS criteria. Pressurized container may explode when exposed to heat or flame.

Extinguishing media

Suitable extinguishing media Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Protection of firefighters

Specific hazards arising from the chemical Pressurized container may explode when exposed to heat or flame.

Protective equipment for firefighters Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

Fire fighting equipment/instructions In case of fire and/or explosion do not breathe fumes. Cool containers exposed to heat with water spray and remove container, if no risk is involved.

Explosion data

Sensitivity to static discharge None known.

Sensitivity to mechanical impact None known.

Hazardous combustion products May include oxides of carbon.

General fire hazards Flammable aerosol.

6. Accidental Release Measures

Personal precautions Keep unnecessary personnel away. For personal protection, see section 8 of the MSDS.

Environmental precautions Do not contaminate water.

Methods for cleaning up Should not be released into the environment. For waste disposal, see section 13 of the MSDS.

7. Handling and Storage

Handling Pressurized container: Do not pierce or burn, even after use. Avoid contact with eyes. Do not get this material in contact with skin. Avoid prolonged exposure. Avoid release to the environment.

Storage Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Store locked up. Store away from incompatible materials (see Section 10 of the MSDS).

8. Exposure Controls / Personal Protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value
Carbon Dioxide (CAS 124-38-9)	STEL	30000 ppm
	TWA	5000 ppm

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value
Carbon Dioxide (CAS 124-38-9)	STEL	54000 mg/m3
		30000 ppm
	TWA	9000 mg/m3
		5000 ppm

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value
Carbon Dioxide (CAS 124-38-9)	STEL	15000 ppm
	TWA	5000 ppm

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

Components	Type	Value
Carbon Dioxide (CAS 124-38-9)	STEL	30000 ppm
	TWA	5000 ppm

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value
Carbon Dioxide (CAS 124-38-9)	STEL	30000 ppm
	TWA	5000 ppm

Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

Components	Type	Value
Carbon Dioxide (CAS 124-38-9)	STEL	54000 mg/m3
		30000 ppm
	TWA	9000 mg/m3
		5000 ppm

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

Components	Type	Value
Carbon Dioxide (CAS 124-38-9)	PEL	9000 mg/m3
		5000 ppm

Biological limit values No biological exposure limits noted for the ingredient(s).

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 Avoid contact with eyes. Wear safety glasses with side shields (or goggles). Eye wash fountain is recommended.

Skin protection Avoid contact with the skin. Wear suitable protective clothing and gloves. Chemical resistant gloves.

Respiratory protection No personal respiratory protective equipment normally required. Do not breathe dust/fume/gas/mist/vapors/spray.

9. Physical & Chemical Properties

Appearance

Physical state Gas.

Form Aerosol.

Color Clear water-white

Odor Orange

Odor threshold Not available.

pH Not applicable

Vapor pressure 0.48 mm Hg @ 20°C

Vapor density > 1 (air = 1)

Boiling point 365 °F (185 °C) @760 mm Hg

Melting point/Freezing point Not available.

Solubility (water) Negligible

Specific gravity 0.74 - 0.78 @20°C

Relative density Not available.

Flash point > 141.8 °F (> 61.0 °C) Tag Closed Cup

Flammability limits in air, upper, % by volume 5.3 %

Flammability limits in air, lower, % by volume 0.7 %

Auto-ignition temperature	635 °F (335 °C)
VOC	100 % per US State and Federal Consumer Product Regulations
Evaporation rate	< 0.1 BuAc = 1
Viscosity	1.5 cSt @ 25°C
Percent volatile	100 %
Partition coefficient (n-octanol/water)	Not Determined
Other data	
Heat of combustion	> 30 kJ/g

10. Chemical Stability & Reactivity Information

Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Heat, flames and sparks. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Carbon oxides.
Possibility of hazardous reactions	Hazardous polymerization does not occur.

11. Toxicological Information

Toxicological data

Components	Species	Test Results
D-LIMONENE (CAS 5989-27-5)		
Acute		
Dermal		
LD50	Rabbit	> 5000 mg/kg
Oral		
LD50	Mouse	5600 - 6600 mg/kg
	Rat	> 2000 mg/kg
Other		
LD50	Mouse	1.3 g/kg
	Rat	0.11 g/kg

Acute effects	May cause an allergic skin reaction. Harmful if swallowed. May be fatal if swallowed and enters airways.
Local effects	May cause sensitization by skin contact.
Chronic effects	Prolonged or repeated contact may cause drying, cracking, or irritation. Prolonged inhalation may be harmful.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

D-LIMONENE (CAS 5989-27-5)	3 Not classifiable as to carcinogenicity to humans.

Mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Reproductive effects	This product is not expected to cause reproductive or developmental effects.
Symptoms and target organs	Direct contact with eyes may cause temporary irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause an allergic skin reaction.

12. Ecological Information

Ecotoxicological data

Components		Species	Test Results
D-LIMONENE (CAS 5989-27-5)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia pulex)	69.6 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	0.619 - 0.796 mg/l, 96 hours

Ecotoxicity	Toxic to aquatic life with long lasting effects.
Environmental effects	Toxic to aquatic organisms.
Aquatic toxicity	Toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.
Persistence and degradability	Expected to biodegrade.
Partition coefficient	
D-LIMONENE	4.232
Mobility in environmental media	The product is immiscible with water and will spread on the water surface.

13. Disposal Considerations

Disposal instructions	Dispose of contents/container in accordance with local/regional/national/international regulations.
Waste from residues / unused products	Dispose of in accordance with local regulations.
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport Information

TDG

UN number	UN1950
UN proper shipping name	Aerosols, flammable
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Packing group	Not applicable.
Environmental hazards	No
Special precautions for user	Not available.

IATA

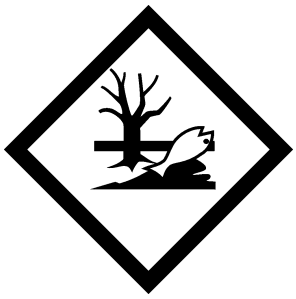
UN number	UN1950
UN proper shipping name	Aerosols, flammable
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Packing group	Not applicable.
Environmental hazards	No.
Special precautions for user	Not available.
Other information	
Passenger and cargo aircraft	Allowed.
Cargo aircraft only	Allowed.

IMDG

UN number	UN1950
UN proper shipping name	Aerosols, flammable, MARINE POLLUTANT
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Packing group	Not applicable.
Environmental hazards	
Marine pollutant	Yes
EmS	F-D, S-U
Special precautions for user	Not available.

IATA; IMDG; TDG

Marine pollutant



15. Regulatory Information

WHMIS status Controlled

WHMIS classification
A - Compressed Gas
B5 - Flammable Aerosols
D2B - Other Toxic Effects-TOXIC

WHMIS labeling

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)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
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)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other Information