



# MATERIAL SAFETY DATA SHEET

## 1. Product and Company Identification

<b>Product identifier</b>	<b>LPS® LST (Aerosol)</b>	
<b>Version #</b>	01	
<b>Issue date</b>	07-18-2014	
<b>CAS #</b>	Mixture	
<b>Part Number</b>	01916, C01916	
<b>Product use</b>	An industrial penetrant designed to penetrate rust and loosen seized bolts and other equipment damaged by corrosion.	
<b>Manufacturer information</b>	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	
<b>Supplier</b>	Not available.	

## 2. Hazards Identification

<b>Emergency overview</b>	<b>DANGER</b>  Flammable aerosol.  CONTENTS UNDER PRESSURE. Pressurized container may explode when exposed to heat or flame.  HARMFUL OR FATAL IF SWALLOWED. Irritating to eyes and skin.
<b>Potential health effects</b>	
<b>Routes of exposure</b>	Eye contact. Skin contact. Inhalation. Ingestion.
<b>Eyes</b>	Avoid contact with eyes. May cause eye irritation.
<b>Skin</b>	Do not get this material in contact with skin.
<b>Inhalation</b>	Avoid breathing dust/fume/gas/mist/vapors/spray. Prolonged inhalation may be harmful.
<b>Ingestion</b>	Exposure by ingestion of an aerosol is unlikely. Harmful if swallowed. Harmful: may cause lung damage if swallowed. May be fatal if swallowed. Do not ingest.
<b>Target organs</b>	Cardiac. Respiratory system.
<b>Signs and symptoms</b>	Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Skin irritation. May cause redness and pain.
<b>Potential environmental effects</b>	Ecological injuries are not known or expected under normal use.

## 3. Composition / Information on Ingredients

<b>Hazardous components</b>	<b>CAS #</b>	<b>Percent</b>
CARBON DIOXIDE	124-38-9	1 - 5
<b>Non-hazardous components</b>	<b>CAS #</b>	<b>Percent</b>
Distillates Petroleum, Hydrotreated Light	64742-47-8	90 - 100
Distillates Petroleum Hydrotreated Heavy	64742-54-7	< 1

## 4. First Aid Measures

<b>First aid procedures</b>	
<b>Eye contact</b>	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
<b>Skin contact</b>	Wash off with soap and water. Get medical attention if irritation develops and persists.

<b>Inhalation</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. For breathing difficulties, oxygen may be necessary. Call a physician if symptoms develop or persist.
<b>Ingestion</b>	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.
<b>Notes to physician</b>	Provide general supportive measures and treat symptomatically.
<b>General advice</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Call a POISON CENTER or doctor/physician if you feel unwell.
<b>5. Fire Fighting Measures</b>	
<b>Flammable properties</b>	Flammable by WHMIS criteria. Heat may cause the containers to explode. Ruptured cylinders may rocket.
<b>Extinguishing media</b>	
<b>Suitable extinguishing media</b>	Powder. Alcohol resistant foam. Water. Water spray. Dry chemicals. Carbon dioxide (CO <sub>2</sub> ).
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Protection of firefighters</b>	
<b>Specific hazards arising from the chemical</b>	Contents under pressure. Pressurized container may explode when exposed to heat or flame. Fire may produce irritating, corrosive and/or toxic gases.
<b>Protective equipment for firefighters</b>	Firefighters should wear full protective clothing including self contained breathing apparatus.
<b>Fire fighting equipment/instructions</b>	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Cool containers exposed to heat with water spray and remove container, if no risk is involved. Containers should be cooled with water to prevent vapor pressure build up.
<b>Specific methods</b>	Cool containers exposed to flames with water until well after the fire is out.
<b>Explosion data</b>	
<b>Sensitivity to static discharge</b>	Yes
<b>Sensitivity to mechanical impact</b>	None known.
<b>Hazardous combustion products</b>	May include oxides of carbon.
<b>6. Accidental Release Measures</b>	
<b>Personal precautions</b>	Consider initial downwind evacuation for at least 500 meters (1/3 mile). Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Fully encapsulating, vapor protective clothing should be worn for spills and leaks with no fire. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. For personal protection, see section 8 of the MSDS.
<b>Environmental precautions</b>	Prevent further leakage or spillage if safe to do so. Do not contaminate water.
<b>Methods for containment</b>	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Use water spray to reduce vapors or divert vapor cloud drift. Keep out of low areas. Prevent entry into waterways, sewer, basements or confined areas.
<b>Methods for cleaning up</b>	Should not be released into the environment. Stop the flow of material, if this is without risk. Isolate area until gas has dispersed. Following product recovery, flush area with water. Scrub the area with detergent and water. Clean up in accordance with all applicable regulations. For waste disposal, see section 13 of the MSDS.
<b>Other information</b>	Clean up in accordance with all applicable regulations.

## 7. Handling and Storage

### Handling

Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. All equipment used when handling the product must be grounded. Do not re-use empty containers. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get this material in contact with eyes. Do not get this material in contact with skin. Avoid prolonged or repeated contact with skin. Avoid prolonged exposure. Do not get this material on clothing. Do not use in areas without adequate ventilation. Wear positive pressure self-contained breathing apparatus (SCBA). Wear personal protective equipment. Wash thoroughly after handling. Avoid release to the environment.

### Storage

Contents under pressure. The pressure in sealed containers can increase under the influence of heat. Do not expose to heat or store at temperatures above 120°F/49°C as can may burst. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a closed container away from incompatible materials. Store in a well-ventilated place. Keep container dry. Store away from incompatible materials (see Section 10 of the MSDS). Keep out of the reach of children. Keep in an area equipped with sprinklers.

## 8. Exposure Controls / Personal Protection

### Occupational exposure limits

#### ACGIH

Components	Type	Value	Form
Distillates Petroleum, Hydroteated Light (CAS 64742-47-8)	TWA	5 mg/m3	Oil mist

#### 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
	TWA	30000 ppm 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	Form
CARBON DIOXIDE (CAS 124-38-9)	STEL	15000 ppm	
Distillates Petroleum, Hydroteated Light (CAS 64742-47-8)	TWA	5000 ppm	Non-aerosol.
	TWA	200 mg/m3	

#### 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
	TWA	30000 ppm 9000 mg/m3 5000 ppm

U.S. - OSHA Components	Type	Value	Form
Distillates Petroleum, Hydrotreated Light (CAS 64742-47-8)	PEL	5 mg/m3	Oil mist

**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).

**Exposure guidelines****Canada - British Columbia OELs: Skin designation**

Distillates Petroleum, Hydrotreated Light (CAS 64742-47-8) Can be absorbed through the skin.

**Engineering controls** Ensure adequate ventilation, especially in confined areas.

**Personal protective equipment**

**Eye/face protection** Wear safety glasses with side shields (or goggles).

**Skin protection** Wear suitable protective clothing.

**Respiratory protection** In case of insufficient ventilation, wear suitable respiratory equipment.

**9. Physical & Chemical Properties**

<b>Appearance</b>	Liquid.
<b>Physical state</b>	Gas.
<b>Form</b>	Aerosol.
<b>Color</b>	Clear
<b>Odor</b>	Vanilla
<b>Odor threshold</b>	Not available.
<b>pH</b>	Not applicable
<b>Vapor pressure</b>	< 0.1 mm Hg @ 20°C
<b>Vapor density</b>	4.7
<b>Boiling point</b>	383 °F (195 °C)
<b>Melting point/Freezing point</b>	Not established
<b>Solubility (water)</b>	< 0.1 %
<b>Specific gravity</b>	0.79 - 0.81 @ 20°C
<b>Relative density</b>	Not available.
<b>Flash point</b>	174.2 °F (79.0 °C) Tag Closed Cup
<b>Flammability limits in air, upper, % by volume</b>	Not available.
<b>Flammability limits in air, lower, % by volume</b>	Not available.
<b>Auto-ignition temperature</b>	Not established
<b>VOC</b>	0 % per US State and Federal Consumer Product Regulations
<b>Evaporation rate</b>	< 0.7 BuAc
<b>Viscosity</b>	Not established
<b>Percent volatile</b>	96 - 99 %

<b>Partition coefficient (n-octanol/water)</b>	> 1
<b>Other data</b>	
<b>Decomposition temperature</b>	Not established
<b>Flammability (solid, gas)</b>	Flammable gas.
<b>Heat of combustion</b>	> 30 kJ/g

## 10. Chemical Stability & Reactivity Information

<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Conditions to avoid</b>	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
<b>Incompatible materials</b>	Strong oxidizing agents.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.

## 11. Toxicological Information

### Toxicological data

Components	Species	Test Results
Distillates Petroleum Hydrotreated Heavy (CAS 64742-54-7)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg
<i>Inhalation</i>		
LC50	Rat	> 2.5 mg/l
<i>Oral</i>		
LD50	Rat	> 2000 mg/kg
Distillates Petroleum, Hydrotreated Light (CAS 64742-47-8)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg
<i>Inhalation</i>		
LC50	Cat	> 6.4 mg/l
	Rat	> 0.1 mg/l
<i>Oral</i>		
LD50	Rat	> 5000 mg/kg
<b>Acute effects</b>	Based on available data, the classification criteria are not met.	
<b>Sensitization</b>	Based on available data, the classification criteria are not met.	
<b>Local effects</b>	Irritating to eyes and skin. Irritating to respiratory system. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.	
<b>Chronic effects</b>	Prolonged inhalation may be harmful.	
<b>Carcinogenicity</b>	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.	
<b>Skin corrosion/irritation</b>	Prolonged skin contact may cause temporary irritation.	
<b>Serious eye damage/irritation</b>	Direct contact with eyes may cause temporary irritation.	
<b>Mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
<b>Reproductive effects</b>	Based on available data, the classification criteria are not met.	
<b>Teratogenicity</b>	Not available.	
<b>Symptoms and target organs</b>	Irritating to eyes, respiratory system and skin. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Exposure may cause temporary irritation, redness, or discomfort.	
<b>Synergistic materials</b>	Not available.	

## 12. Ecological Information

### Ecotoxicological data

Components	Species	Test Results
Distillates Petroleum, Hydrotreated Light (CAS 64742-47-8)		
<b>Aquatic</b>		
Fish	LC50 Rainbow trout,donaldson trout (Oncorhynchus mykiss)	2.9 mg/l, 96 hours
<b>Ecotoxicity</b>	Ecological injuries are not known or expected under normal use.	
<b>Environmental effects</b>	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.	
<b>Aquatic toxicity</b>	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.	
<b>Persistence and degradability</b>	Not inherently biodegradable.	
<b>Partition coefficient</b>		
LPS® LST (Aerosol)	> 1	
<b>Mobility in environmental media</b>	Readily absorbed into soil. The product is immiscible with water and will spread on the water surface.	
<b>Other adverse effects</b>	None known.	

## 13. Disposal Considerations

<b>Disposal instructions</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. Do not allow this material to drain into sewers/water supplies. Dispose in accordance with all applicable regulations.
<b>Waste from residues / unused products</b>	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
<b>Contaminated packaging</b>	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied. Do not re-use empty containers.

## 14. Transport Information

### TDG

<b>UN number</b>	UN1950
<b>UN proper shipping name</b>	AEROSOLS, flammable
<b>Transport hazard class(es)</b>	
<b>Class</b>	2.1
<b>Subsidiary risk</b>	-
<b>Packing group</b>	Not applicable.
<b>Environmental hazards</b>	No
<b>Special precautions for user</b>	Read safety instructions, MSDS and emergency procedures before handling.

### IATA

<b>UN number</b>	UN1950
<b>UN proper shipping name</b>	Aerosols, flammable
<b>Transport hazard class(es)</b>	
<b>Class</b>	2.1
<b>Subsidiary risk</b>	-
<b>Packing group</b>	Not applicable.
<b>Environmental hazards</b>	No
<b>ERG Code</b>	10L
<b>Special precautions for user</b>	Read safety instructions, MSDS and emergency procedures before handling.

### Other information

<b>Passenger and cargo aircraft</b>	Allowed.
<b>Cargo aircraft only</b>	Allowed.

### IMDG

<b>UN number</b>	UN1950
<b>UN proper shipping name</b>	AEROSOLS

**Transport hazard class(es)****Class** 2**Subsidiary risk** -**Packing group** Not applicable.**Environmental hazards****Marine pollutant** No**EmS** F-D, S-U**Special precautions for user** Read safety instructions, MSDS and emergency procedures before handling.

IATA; IMDG; TDG

**15. Regulatory Information****Canadian regulations**

This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

**WHMIS status**

Controlled

**WHMIS classification**A - Compressed Gas  
B5 - Flammable Aerosols  
D2B - Other Toxic Effects-TOXIC**WHMIS labeling****International Inventories**

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)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
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**

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**Prepared by**

Not available.