



**MATERIAL SAFETY DATA SHEET**  
**LPS® F-104 (Aerosol)**

Revision Date: 31st March 2014

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**Section 1 • Product and Company Identification**

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**Product Name :** LPS® F-104 (Aerosol)

**Part Number(s) :** 04920

**CAS # :** Mixture

**Product Use :** A solvent degreasing agent designed for removing tar, adhesives, grease, oil and other residues from metal and other hard surfaces.

**Australia Supplier Information :**

**MRO Chem Pty Ltd**

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South Yarra, Vic 3141, Australia.

**TEL :** +61 (3) 9823 6273

**WEBSITE :** <http://www.mrochem.com.au>

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(AUSTRALIA) : +61 (4) 3448 1129

**Manufacturer Information :**

**LPS Laboratories, a division of Illinois Tool Works**

**ADDRESS :** 4647 Hugh Howell Rd  
Tucker, GA 30084 United States

**TEL:** +1 770 243-8800

**FAX:** +1 770 243-8899

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Subsequent pages 1/7 - 7/7 are the original MSDS prepared by Manufacturer LPS Laboratories.



# MATERIAL SAFETY DATA SHEET

## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

**Material name** LPS® F-104 (Aerosol)  
**Recommended use** A solvent degreasing agent designed for removing tar, adhesives, grease, oil and other residues from metal and other hard surfaces.  
**Version #** 01  
**CAS #** Mixture  
**Part Number** 04920  
**Manufacturer information** LPS Laboratories, a division of Illinois Tool Works  
4647 Hugh Howell Rd  
Tucker, GA 30084 United States  
sds@lpslabs.com  
www.lpslabs.com  
1-800-241-8334 / 770-243-8800  
Chemtrec 1-800-424-9300

## 2. HAZARDS IDENTIFICATION

**Classification** F+;R12, R43, N;R51/53  
**Risk phrase(s)** R12 Extremely flammable.  
R43 May cause sensitization by skin contact.  
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
**Safety phrase(s)** S7/9 Keep container tightly closed and in a well-ventilated place.  
S16 Keep away from sources of ignition - No smoking.  
S23 Do not breathe gas/fumes/vapor/spray.  
S24/25 Avoid contact with skin and eyes.  
S36/37 Wear suitable protective clothing and gloves.  
S57 Use appropriate container to avoid environmental contamination.  
S60 This material and its container must be disposed of as hazardous waste.  
S61 Avoid release to the environment. Refer to special instructions/ Safety data sheets.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS #	Percent
Distillates Petroleum Hydrotreated Light	64742-47-8	> 60
1-Propoxy-2-Propanol	1569-01-3	< 10
Carbon Dioxide	124-38-9	< 10
d-limonene	5989-27-5	< 10
Propylene glycol monomethyl ether acetate	108-65-6	< 10
Other components below reportable levels		< 10

## 4. FIRST AID MEASURES

**Inhalation** Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a POISON CENTER or doctor/physician if you feel unwell.

**Skin contact** In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if irritation develops and persists.

**Eye contact** Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention if irritation develops and persists.

**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.

**General advice** In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**Notes to physician** Provide general supportive measures and treat symptomatically. In case of shortness of breath, give oxygen. Keep victim under observation. Symptoms may be delayed.

## 5. FIRE-FIGHTING MEASURES

<b>Suitable extinguishing media</b>	Dry chemical powder. Carbon dioxide (CO <sub>2</sub> ). Water spray, fog or regular foam.
<b>Extinguishing media which must not be used for safety reasons</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Unusual fire &amp; explosion hazards</b>	Heat may cause the containers to explode.
<b>Specific hazards</b>	Contents under pressure. Pressurized container may explode when exposed to heat or flame. Fire may produce irritating, corrosive and/or toxic gases.
<b>Special protective equipment for fire-fighters</b>	Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. Use water spray to cool unopened containers. Self-contained breathing apparatus and full protective clothing must be worn in case of fire. In the event of fire and/or explosion do not breathe fumes.
<b>HAZCHEM code</b>	None.
<b>Hazardous combustion products</b>	May include oxides of carbon.
<b>General fire hazards</b>	Extremely flammable aerosol.

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal precautions</b>	Keep unnecessary personnel away.
<b>Environmental precautions</b>	Contact local authorities in case of spillage to drain/aquatic environment.
<b>Containment procedures</b>	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Dike the spilled material, where this is possible. Prevent entry into waterways, sewer, basements or confined areas.
<b>Methods for cleaning up</b>	Extinguish all flames in the vicinity. Prevent product from entering drains.  Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.  Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.  Never return spills in original containers for re-use. This material and its container must be disposed of as hazardous waste.

## 7. HANDLING AND STORAGE

<b>Handling</b>	May be ignited by open flame. 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 breathe dust/fume/gas/mist/vapors/spray. Use only in well-ventilated areas. Do not get in eyes, on skin, on clothing. Avoid prolonged exposure. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment.
<b>Storage</b>	Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Do not puncture, incinerate or crush. Keep out of the reach of children.

## 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

#### Australia. National Workplace OELs (Workplace Exposure Standards for Airborne Contaminants, Appendix A)

Components	Type	Value
Carbon Dioxide (CAS 124-38-9)	STEL	54000 mg/m <sup>3</sup>
		30000 ppm
	TWA	22500 mg/m <sup>3</sup>
Propylene glycol monomethyl ether acetate (CAS 108-65-6)		12500 ppm
	STEL	548 mg/m <sup>3</sup>

**Australia. National Workplace OELs (Workplace Exposure Standards for Airborne Contaminants, Appendix A)**

Components	Type	Value
	TWA	100 ppm 274 mg/m <sup>3</sup> 50 ppm

**Australia. OELs. (Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment)**

Components	Type	Value
Carbon Dioxide (CAS 124-38-9)	STEL	54000 mg/m <sup>3</sup>
	TWA	30000 ppm 22500 mg/m <sup>3</sup> 12500 ppm
Propylene glycol monomethyl ether acetate (CAS 108-65-6)	STEL	548 mg/m <sup>3</sup>
	TWA	100 ppm 274 mg/m <sup>3</sup> 50 ppm

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

**Recommended monitoring procedures**

**Additional exposure data** Not available.

**Australia OELs: Skin designation**

Propylene glycol monomethyl ether acetate (CAS 108-65-6) Can be absorbed through the skin.

**Engineering measures to reduce exposure** 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**

**Respiratory protection** No personal respiratory protective equipment normally required. Use a positive-pressure air-supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate protection.

**Hand protection** Chemical resistant gloves are recommended.

**Eye protection** Wear safety glasses with side shields (or goggles). Eye wash fountain is recommended.

**Skin and body protection** Avoid contact with clothing. Wear suitable protective clothing. Chemical resistant gloves.

**General** Use personal protective equipment as required.

**Environmental exposure controls** Environmental manager must be informed of all major releases.

**Hygiene measures** When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance</b>	Liquid.
<b>Physical state</b>	Gas.
<b>Form</b>	Aerosol.
<b>Color</b>	Clear water-white
<b>Odor</b>	Mild. Orange.
<b>Odor threshold</b>	Not established
<b>pH</b>	Not applicable
<b>Vapor pressure</b>	2 mm Hg @20°C
<b>Vapor density</b>	4.8 - 5.3
<b>Boiling point</b>	314.6 °F (157 °C)
<b>Melting point/Freezing point</b>	Not established
<b>Solubility (water)</b>	Slightly soluble in water.
<b>Specific gravity</b>	0.77 - 0.79 @20°C
<b>Flash point</b>	104.0 °F (40.0 °C) Tag Closed Cup (dispensed liquid)

<b>Flammability limits in air, upper, % by volume</b>	6 %
<b>Flammability limits in air, lower, % by volume</b>	0.7 %
<b>Auto-ignition temperature</b>	> 442.4 °F (> 228 °C)
<b>VOC</b>	97.2 % per US State and Federal Consumer Product Regulations
<b>Evaporation rate</b>	0.2 (BuAc = 1)
<b>Viscosity</b>	< 3 cSt @25°C
<b>Percent volatile</b>	100 %
<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. STABILITY AND REACTIVITY

<b>Chemical stability</b>	Risk of ignition.
<b>Conditions to avoid</b>	Heat, flames and sparks. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
<b>Hazardous decomposition products</b>	Carbon oxides.

## 11. TOXICOLOGICAL INFORMATION

### Toxicological data

Components	Species	Test Results
1-Propoxy-2-Propanol (CAS 1569-01-3)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	4.29 ml/kg 3.17 mg/kg
<i>Inhalation</i>		
LC50	Rat	> 1725 ppm
<i>Oral</i>		
LD50	Mouse	260 mg/kg
	Rat	> 2000 mg/kg 2.83 ml/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
d-limonene (CAS 5989-27-5)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 5000 mg/kg
<i>Oral</i>		
LD50	Mouse	5600 - 6600 mg/kg
	Rat	> 2000 mg/kg
<i>Other</i>		
LD50	Mouse	1.3 g/kg

Components	Species	Test Results
	Rat	0.11 g/kg
Propylene glycol monomethyl ether acetate (CAS 108-65-6)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rat	> 2000 mg/kg
<i>Oral</i>		
LD50	Rat	> 5000 mg/kg
* Estimates for product may be based on additional component data not shown.		
<b>Acute toxicity</b>	Based on available data, the classification criteria are not met.	
<b>Routes of exposure</b>	Skin contact. Eye contact. Inhalation. Ingestion.	
<b>Chronic toxicity</b>	Prolonged or repeated contact may cause drying, cracking, or irritation.	
<b>Sensitization</b>	May cause sensitization by skin contact.	
<b>Carcinogenicity</b>	Based on available data, the classification criteria are not met.	
<b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>		
d-limonene (CAS 5989-27-5)	3 Not classifiable as to carcinogenicity to humans.	
<b>Mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
<b>Reproductivity</b>	This product is not expected to cause reproductive or developmental effects.	
<b>Epidemiology</b>	No epidemiological data is available for this product.	
<b>Local effects</b>	May be irritating to eyes. May cause sensitization by skin contact. Harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.	
<b>Symptoms and target organs</b>	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
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
d-limonene (CAS 5989-27-5)		
<b>Aquatic</b>		
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

\* Estimates for product may be based on additional component data not shown.

<b>Ecotoxicity</b>	Expected to be toxic to aquatic organisms. May cause long-term adverse effects in the environment.
<b>Persistence and degradability</b>	Not inherently biodegradable.
<b>Mobility</b>	This product is miscible in water.
<b>Bioaccumulation</b>	
<b>Bioaccumulative potential</b>	
<b>Octanol/water partition coefficient log Kow</b>	
LPS® F-104 (Aerosol)	< 1
1-Propoxy-2-Propanol	0.621
d-limonene	4.232
<b>Environmental effects</b>	Toxic to aquatic organisms.
<b>Aquatic toxicity</b>	Toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.
<b>Other adverse effects</b>	Not available.

## 13. DISPOSAL CONSIDERATIONS

<b>Disposal instructions</b>	Contents under pressure. This material and its container must be disposed of as hazardous waste. Do not discharge into drains, water courses or onto the ground. Dispose of contents/container in accordance with local/regional/national/international regulations.
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<b>Waste from residues / unused products</b>	Dispose of in accordance with local regulations. Avoid discharge into water courses or onto the ground.
<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.

## 14. TRANSPORT INFORMATION

### ADG

<b>UN number</b>	UN1950
<b>UN proper shipping name</b>	Aerosols, flammable (d-limonene, Naphtha)
<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>	Yes
<b>Hazchem code</b>	2YE
<b>Special precautions for user</b>	Not available.

### IATA

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

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not available.

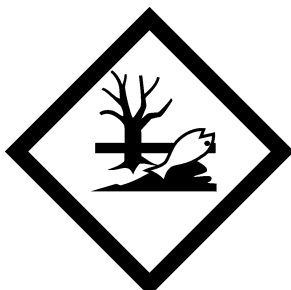
### ADG



IATA; IMDG



Marine pollutant



## 15. REGULATORY INFORMATION

### National regulations

This Material Safety Data Sheet was prepared in accordance with the Australia National Code of Practice for the Preparation of Material Safety Data Sheets (NOHSC: 2011.) No poison schedule number allocated.

#### Australia HVIC: Listed substance

Carbon Dioxide (CAS 124-38-9)	Listed.
Distillates Petroleum Hydrotreated Light (CAS 64742-47-8)	Listed.
Propylene glycol monomethyl ether acetate (CAS 108-65-6)	Listed.

### 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

### 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.

### Issue date

12-08-2013