



MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Material name	LPS 3® (Bulk)
Recommended use	A specialized soft-film coating designed to prevent rust and corrosion on steel, aluminum and other metals.
Version #	03
CAS #	Mixture
Part Number	00322, 03128, 00305, 00355
Supplier Name	MRO Chem Pty Ltd
Address	Level 19, 644 Chapel Street, South Yarra, Vic 3141, Australia. Tel: +61 (3)9823 6273 Website: http://www.mrochem.com.au
In Case of Emergency	(Australia) +61 (4)3448 1129 (US) +1 703-527-3887
Manufacturer	
Company name	LPS Laboratories, a division of Illinois Tool Works, Inc.
Address	4647 Hugh Howell Rd., Tucker, GA 30084 (U.S.A.)
Website	http://www.lpslabs.com
E-mail	sds@lpslabs.com

2. HAZARDS IDENTIFICATION

Classification	R10, Xn;R65, Xi;R36/38, R52/53
Risk phrase(s)	R10 Flammable. R36/38 Irritating to eyes and skin. R65 Harmful: may cause lung damage if swallowed. R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Safety phrase(s)	S2 Keep out of the reach of children. S9 Keep container 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. S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S60 This material and its container must be disposed of as hazardous waste. S62 If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS #	Percent
Light Mineral Spirits	64742-88-7	30 - 60
1,2,4-Trimethylbenzene	95-63-6	< 10
1-butoxy-2-propanol	5131-66-8	< 10
Acetophenone	98-86-2	< 10
Amyl Acetate	628-63-7	< 10
Benzaldehyde	100-52-7	< 10
Distillates Petroleum Hydrotreated Heavy	64742-54-7	< 10
Distillates Petroleum, Hydrotreated Light	64742-47-8	< 10
Ethylbenzene	100-41-4	< 10
Mineral Spirits Regular Stoddard Solvent	8052-41-3	< 10
Petrolatum	8009-03-8	< 10
Xylene	1330-20-7	< 10
Other components below reportable levels		10 - < 30

4. FIRST AID MEASURES

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If breathing stops, provide artificial respiration. Do not use mouth-to-mouth method if victim inhaled the substance. Call a physician if symptoms develop or persist.
Skin contact	Take off immediately all contaminated clothing. Wash off with warm water and soap. For minor skin contact, avoid spreading material on unaffected skin. Get medical attention if irritation develops and persists.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do.
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.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	Alcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO ₂).
Extinguishing media which must not be used for safety reasons	Do not use water jet as an extinguisher, as this will spread the fire.
Unusual fire & explosion hazards	Heat may cause the containers to explode.
Specific hazards	Fire may produce irritating, corrosive and/or toxic gases.
Special protective equipment for fire-fighters	Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask. Structural firefighters protective clothing will only provide limited protection.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials. Move container from fire area if it can be done without risk. In the event of fire and/or explosion do not breathe fumes. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
HAZCHEM code	None

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Keep unnecessary personnel away. Keep out of low areas. Keep upwind. 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.
Environmental precautions	Avoid release to the environment. Refer to special instructions/safety data sheets. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.
Containment procedures	Refer to attached safety data sheets and/or instructions for use. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Use water spray to reduce vapors or divert vapor cloud drift. Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Prevent entry into waterways, sewer, basements or confined areas.
Methods for cleaning up	<p>Extinguish all flames in the vicinity. Should not be released into the environment. Prevent product from entering drains.</p> <p>Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Do not allow material to contaminate ground water system. 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.</p> <p>Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.</p> <p>Never return spills in original containers for re-use. This material and its container must be disposed of as hazardous waste. For waste disposal, see section 13 of the MSDS.</p>

7. HANDLING AND STORAGE

Handling	Keep away from sources of ignition - No smoking. All equipment used when handling the product must be grounded. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, on clothing. Avoid prolonged exposure. Do not use in areas without adequate ventilation. Wear personal protective equipment. Wash thoroughly after handling. Observe good industrial hygiene practices. Avoid release to the environment.
Storage	<p>Level 1 Aerosol.</p> <p>Do not handle or store near an open flame, heat or other sources of ignition. Keep container tightly closed. Store in a well-ventilated place. Store locked up. Keep out of the reach of children. Use care in handling/storage.</p>

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value
1,2,4-Trimethylbenzene (CAS 95-63-6)	TWA	25 ppm
Acetophenone (CAS 98-86-2)	TWA	10 ppm
Amyl Acetate (CAS 628-63-7)	STEL	100 ppm
	TWA	50 ppm
Ethylbenzene (CAS 100-41-4)	TWA	20 ppm
Mineral Spirits Regular Stoddard Solvent (CAS 8052-41-3)	TWA	100 ppm
Xylene (CAS 1330-20-7)	STEL	150 ppm
	TWA	100 ppm

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

Components	Type	Value
1,2,4-Trimethylbenzene (CAS 95-63-6)	TWA	123 mg/m3
		25 ppm
Amyl Acetate (CAS 628-63-7)	STEL	541 mg/m3
	TWA	100 ppm 270 mg/m3 50 ppm
Ethylbenzene (CAS 100-41-4)	STEL	543 mg/m3
	TWA	125 ppm 434 mg/m3 100 ppm
Mineral Spirits Regular Stoddard Solvent (CAS 8052-41-3)	TWA	790 mg/m3
Xylene (CAS 1330-20-7)	STEL	655 mg/m3 150 ppm
	TWA	350 mg/m3 80 ppm

Recommended monitoring procedures

Additional exposure data Not available.

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

For prolonged or repeated skin contact use suitable protective gloves. 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

Appearance	Liquid.
Physical state	Liquid.
Form	Liquid.
Color	Brown.
Odor	Mild. Cherry.
Odor threshold	Not Established
pH	Not Applicable
Vapor pressure	> 1 mm Hg @ 20°C
Vapor density	5.48 (air = 1)
Boiling point	354.2 °F (179 °C)
Melting point/Freezing point	Not Established
Solubility (water)	Negligible
Specific gravity	0.81 - 0.83 @ 20°C
Flash point	104.00 - 113.00 °F (40.00 - 45.00 °C) Tag Closed Cup
Flammability limits in air, upper, % by volume	7 %
Flammability limits in air, lower, % by volume	1 %
Auto-ignition temperature	474.8 °F (246 °C)
VOC	73.5 % per U.S. State and Federal Consumer Product Regulations
Evaporation rate	151 (Ethyl Ether = 1)
Viscosity	200 - 400 cP @ 25°C
Percent volatile	70 - 80 %
Partition coefficient (n-octanol/water)	Not Established
Other data	
Decomposition temperature	Not Established
Flammability (solid, gas)	Flammable gas.

10. STABILITY AND REACTIVITY

Chemical stability	Material is stable under normal conditions. Instability caused by elevated temperatures. Risk of ignition.
Conditions to avoid	Avoid temperatures exceeding the flash point. This product may react with oxidizing agents.
Materials to avoid	Strong oxidizing agents.
Hazardous decomposition products	Carbon oxides.
Hazardous polymerization	Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Toxicological data		
Components	Species	Test Results
Acetophenone (CAS 98-86-2)		
Acute		
<i>Dermal</i>		
LD50	Guinea pig	> 20 ml/kg
<i>Oral</i>		
LD50	Rat	0.81 g/kg
<i>Other</i>		
LD50	Mouse	200 mg/kg
		1.07 g/kg
LDL0	Mouse	330 mg/kg

Components	Species	Test Results
Benzaldehyde (CAS 100-52-7)		
Acute		
<i>Dermal</i>		
LD50	Guinea pig	> 2000 mg/kg
	Rabbit	> 1250 mg/kg
<i>Oral</i>		
LD50	Guinea pig	1000 mg/kg
	Rat	1300 mg/kg
<i>Other</i>		
LD50	Mouse	1020 mg/kg
	Rabbit	5000 mg/kg
Ethylbenzene (CAS 100-41-4)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	17800 mg/kg
<i>Oral</i>		
LD50	Rat	3500 mg/kg
		5.46 g/kg
<i>Other</i>		
LD50	Mouse	2272 mg/kg
Xylene (CAS 1330-20-7)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 43 g/kg
<i>Inhalation</i>		
LC50	Mouse	3907 mg/l, 6 Hours
	Rat	6350 mg/l, 4 Hours
LCL0	Rat	8000 mg/l, 4 Hours
<i>Oral</i>		
LD50	Mouse	1590 mg/kg
	Rat	3523 - 8600 mg/kg

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

Acute toxicity	Based on available data, the classification criteria are not met.
Routes of exposure	Inhalation. Ingestion. Skin contact. Eye contact.
Chronic toxicity	Prolonged inhalation may be harmful.
Sensitization	Based on available data, the classification criteria are not met.
Carcinogenicity	Based on available data, the classification criteria are not met.
IARC Monographs. Overall Evaluation of Carcinogenicity	
Ethylbenzene (CAS 100-41-4)	2B Possibly carcinogenic to humans.
Xylene (CAS 1330-20-7)	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.
Reproductivity	Based on available data, the classification criteria are not met.
Epidemiology	No epidemiological data is available for this product.
Local effects	Irritating to eyes and skin. Irritating to respiratory system. Harmful by inhalation and if swallowed.
Symptoms and target organs	Irritating to eyes, respiratory system and skin. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

12. ECOLOGICAL INFORMATION

Ecotoxicological data

Components		Species	Test Results
Acetophenone (CAS 98-86-2)			
Aquatic			
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>)	155 mg/l, 96 hours
Amyl Acetate (CAS 628-63-7)			
Aquatic			
Fish	LC50	Western mosquitofish (<i>Gambusia affinis</i>)	65 mg/l, 96 hours
Benzaldehyde (CAS 100-52-7)			
Aquatic			
Fish	LC50	Bluegill (<i>Lepomis macrochirus</i>)	0.8 - 1.44 mg/l, 96 hours
Ethylbenzene (CAS 100-41-4)			
Aquatic			
Crustacea	EC50	Water flea (<i>Daphnia magna</i>)	1.37 - 4.4 mg/l, 48 hours
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>)	7.5 - 11 mg/l, 96 hours
Xylene (CAS 1330-20-7)			
Aquatic			
Fish	LC50	Bluegill (<i>Lepomis macrochirus</i>)	7.711 - 9.591 mg/l, 96 hours

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

Ecotoxicity	Harmful to aquatic life with long lasting effects.
Persistence and degradability	Not inherently biodegradable.
Mobility	The product is immiscible with water and will spread on the water surface. Readily absorbed into soil.

Bioaccumulation

Bioaccumulative potential

Octanol/water partition coefficient log Kow

Acetophenone	1.58
Amyl Acetate	2.3
Benzaldehyde	1.48
Ethylbenzene	3.15
Mineral Spirits Regular Stoddard Solvent	3.16 - 7.15
Xylene	3.12 - 3.2

Environmental effects	Harmful to aquatic organisms.
Aquatic toxicity	May cause long-term adverse effects in the aquatic environment.

13. DISPOSAL CONSIDERATIONS

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Must be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities. Do not discharge into drains, water courses or onto the ground. Do not allow this material to drain into sewers/water supplies. After recovery of solvent dispose of residue as hazardous waste. Dispose in accordance with all applicable regulations.
Waste from residues / unused products	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). Dispose of in accordance with local regulations. Avoid discharge into water courses or onto the ground.
Contaminated packaging	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

ADG

UN number	UN1268
Proper shipping name	Petroleum Distillates, n.o.s. mixture
Hazard class	3
Packing group	III
Labels required	3

IATA

UN number	UN1268
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Proper shipping name Petroleum distillates, n.o.s.
Hazard class 3
Packing group III
ERG code 3L

IMDG

UN number UN1268
Proper shipping name PETROLEUM DISTILLATES, N.O.S. or PETROLEUM PRODUCTS, N.O.S.
Hazard class 3
Packing group III
EmS F-E, S-E

ADG



IATA; IMDG



HAZCHEM code None

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.)

Australia HVIC: Listed substance

Distillates Petroleum Hydrotreated Heavy (CAS 64742-54-7)	Listed.
Distillates Petroleum, Hydrotreated Light (CAS 64742-47-8)	Listed.
Ethylbenzene (CAS 100-41-4)	Listed.
Light Mineral Spirits (CAS 64742-88-7)	Listed.
Xylene (CAS 1330-20-7)	Listed.

Australia Medicines & Poisons Schedule 5: Use/Concentration/Exceptions

Acetophenone (CAS 98-86-2)	Exception was applied to data.
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Australia Medicines & Poisons Schedule 6: Use/Concentration/Exceptions

Xylene (CAS 1330-20-7)	Exception may apply, see the regulation for relevance.
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Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies 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

06-03-2013

Revision date

06-17-2013

This data sheet contains changes from the previous version in section(s):

Composition / Information on Ingredients: Disclosure Overrides
Physical & Chemical Properties: Multiple Properties