MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Material name	**LPS® Food Grade Silicone**
Recommended use	A food grade industrial lubricant for rubber, plastic and metal parts.
Version #	01
CAS #	Mixture
Part Number	01716
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	F+;R12, Xi;R38, R67, N;R51/53
Risk phrase(s)	R12 Extremely flammable. R38 Irritating to skin. R67 Vapors may cause drowsiness and dizziness. R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Safety phrase(s)	S1/2 Keep locked up and out of the reach of children. 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 Avoid contact with skin. S29 Do not empty into drains. S33 Take precautionary measures against static discharges. 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
2-Methylpentane	107-83-5	30 - 60
2,3-Dimethylbutane	79-29-8	10 - < 30
3-Methylpentane	96-14-0	10 - < 30
Propane	74-98-6	10 - < 30
2,2-Dimethylbutane	75-83-2	< 10
Isobutane	75-28-5	< 10
N-Butane	106-97-8	< 10
N-hexane	110-54-3	< 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. If not breathing, give artificial respiration. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician or poison control center immediately.

Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes 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 immediately.
Ingestion	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Never give anything by mouth to a victim who is unconscious or is having convulsions. Rinse mouth thoroughly. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
General advice	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.
Notes to physician	Symptoms may be delayed. Keep victim under observation.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	Extinguishing media - small fires: Dry chemical powder. Extinguishing media - large fires: Carbon dioxide (CO_2). Dry chemical powder. Foam. Water fog.
Extinguishing media which must not be used for safety reasons	Do not use a solid water stream as it may scatter and spread fire.
Specific hazards	Contents under pressure. Pressurized container may explode when exposed to heat or flame. Fire may produce irritating, corrosive and/or toxic gases.
Specific methods	Cool containers exposed to flames with water until well after the fire is out.
HAZCHEM code	None

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Keep unnecessary personnel away. Local authorities should be advised if significant spillages cannot be contained. Wear appropriate protective equipment and clothing during clean-up.
Environmental precautions	Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so.
Containment procedures	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. Prevent entry into waterways, sewer, basements or confined areas.
Methods for cleaning up	Stop the flow of material, if this is without risk. Isolate area until gas has dispersed. Following product recovery, flush area with water.

7. HANDLING AND STORAGE

Handling	Pressurized container: Do not pierce or burn, even after use. 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. Ground and bond containers when transferring material. Do not use if spray button is missing or defective. Do not re-use empty containers. Use only in well-ventilated areas. Avoid prolonged exposure.
Storage	Level 3 Aerosol. Store locked up. Contents under pressure. Do not handle or store near an open flame, heat or other sources of ignition. 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
2,2-Dimethylbutane (CAS 75-83-2)	STEL	1000 ppm
	TWA	500 ppm
2,3-Dimethylbutane (CAS 79-29-8)	STEL	1000 ppm
	TWA	500 ppm
2-Methylpentane (CAS 107-83-5)	STEL	1000 ppm
	TWA	500 ppm
3-Methylpentane (CAS 96-14-0)	STEL	1000 ppm
	TWA	500 ppm
Isobutane (CAS 75-28-5)	TWA	1000 ppm
N-Butane (CAS 106-97-8)	TWA	1000 ppm
N-hexane (CAS 110-54-3)	TWA	50 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Propane (CAS 74-98-6)	TWA	1000 ppm

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

Components	Type	Value
2,2-Dimethylbutane (CAS 75-83-2)	STEL	3500 mg/m3
		1000 ppm
	TWA	1760 mg/m3
		500 ppm
2,3-Dimethylbutane (CAS 79-29-8)	STEL	3500 mg/m3
		1000 ppm
	TWA	1760 mg/m3
		500 ppm
2-Methylpentane (CAS 107-83-5)	STEL	3500 mg/m3
		1000 ppm
	TWA	1760 mg/m3
		500 ppm
3-Methylpentane (CAS 96-14-0)	STEL	3500 mg/m3
		1000 ppm
	TWA	1760 mg/m3
		500 ppm
N-Butane (CAS 106-97-8)	TWA	1900 mg/m3
		800 ppm
N-hexane (CAS 110-54-3)	TWA	72 mg/m3
		20 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 If permissible levels are exceeded use NIOSH mechanical filter / organic vapor cartridge or an air-supplied respirator.

Hand protection For prolonged or repeated skin contact use suitable protective gloves. Chemical resistant gloves are recommended.

Eye protection Do not get in eyes. Chemical goggles are recommended. Eye wash fountain is recommended.

Skin and body protection Wear suitable protective clothing. Chemical resistant gloves.

Hygiene measures Do not get in eyes, on skin, on clothing. When using, do not eat, drink or smoke. Wash hands after handling and before eating. Keep away from food and drink. Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance Liquid.

Physical state Gas.

Form Aerosol.

Color Clear.Colorless

Odor Mild. Ether-like.

Odor threshold Not established

pH Not Applicable

Vapor pressure 352 mm Hg @ 38 °C

Vapor density ~3

Boiling point 141.8 °F (61 °C)

Melting point/Freezing point Not Established / -241.2 °F (-151.798775166 °C)

Solubility (water)	Not soluble in water
Specific gravity	0.64 - 0.66 @ 20°C
Flash point	< 1.40 °F (< -17.00 °C) Tag Closed Cup
Flammability limits in air, upper, % by volume	6 % (estimated)
Flammability limits in air, lower, % by volume	1 % (estimated)
Auto-ignition temperature	582.8 °F (306 °C)
VOC	96.1 % per State and Federal Consumer Product Regulations
Evaporation rate	< 1 BuAc
Viscosity	< 14 cSt @ 25°C
Percent volatile	96 %
Partition coefficient (n-octanol/water)	> 1
Other data	
Heat of combustion	> 30 kJ/g

10. STABILITY AND REACTIVITY

Chemical stability	Risk of explosion.
Conditions to avoid	Heat, flames and sparks. Avoid temperatures exceeding the flash point.
Materials to avoid	Strong oxidizing agents. Fluorine. Chlorine. Nitrates.
Hazardous decomposition products	At thermal decomposition temperatures, carbon monoxide and carbon dioxide.
Hazardous polymerization	Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute toxicity	Based on available data, the classification criteria are not met.
Routes of exposure	Inhalation. Not applicable.
Toxicological information	Occupational exposure to the substance or mixture may cause adverse effects.
Chronic toxicity	Prolonged inhalation may be harmful. Repeated absorption may cause disorder of central nervous system, liver, kidneys and blood.
Sensitization	Based on available data, the classification criteria are not met.

US. ACGIH Threshold Limit Values

N-hexane (CAS 110-54-3)	Can be absorbed through the skin.

Carcinogenicity	Based on available data, the classification criteria are not met.
Mutagenicity	Based on available data, the classification criteria are not met.
Reproductivity	Suspected of damaging fertility or the unborn child.
Epidemiology	No epidemiological data is available for this product.
Symptoms and target organs	Irritant effects. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Behavioral changes. Decrease in motor functions. Narcosis.
Further information	Symptoms may be delayed.

12. ECOLOGICAL INFORMATION

Ecotoxicity	Expected to be toxic to aquatic organisms. May cause long-term adverse effects in the environment.
Persistence and degradability	Not inherently biodegradable.
Bioaccumulation	

Bioaccumulative potential

Octanol/water partition coefficient log Kow

LPS® Food Grade Silicone	> 1
2,2-Dimethylbutane	3.82
2,3-Dimethylbutane	3.42
2-Methylpentane	3.74
3-Methylpentane	3.6
Isobutane	2.76
N-Butane	2.89
N-hexane	3.9
Propane	2.36

13. DISPOSAL CONSIDERATIONS

Disposal instructions	Contents under pressure. Do not puncture, incinerate or crush. Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose in accordance with all applicable regulations.
Waste from residues / unused products	Dispose of in accordance with local regulations.
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

14. TRANSPORT INFORMATION

ADG

UN number	UN1950
Proper shipping name	Aerosols, flammable
Hazard class	2.1
Marine pollutant	no
Labels required	2.1
Packaging exceptions	306

IATA

UN number	UN1950
Proper shipping name	Aerosols, flammable
Hazard class	2.1
Labels required	2.1
Packaging exceptions	306
Packaging non-bulk	None
Packaging bulk	None

IMDG

UN number	UN1950
Proper shipping name	Aerosols, flammable
Hazard class	2.1
Labels required	2.1
Packaging exceptions	306

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

N-Butane (CAS 106-97-8)	Listed.
N-hexane (CAS 110-54-3)	Listed.

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

2,2-Dimethylbutane (CAS 75-83-2)	Exception may apply, see the regulation for relevance.
2,3-Dimethylbutane (CAS 79-29-8)	Exception may apply, see the regulation for relevance.
2-Methylpentane (CAS 107-83-5)	Exception may apply, see the regulation for relevance.

3-Methylpentane (CAS 96-14-0)	Exception may apply, see the regulation for relevance.
Isobutane (CAS 75-28-5)	Exception may apply, see the regulation for relevance.
N-Butane (CAS 106-97-8)	Exception may apply, see the regulation for relevance.
N-hexane (CAS 110-54-3)	Exception may apply, see the regulation for relevance.

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)	No
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)

16. OTHER INFORMATION

Disclaimer
The information in the sheet was written based on the best knowledge and experience currently available.

Issue date
02-07-2013

This data sheet contains changes from the previous version in section(s):
Product and Company Identification: Product Uses
Composition / Information on Ingredients: Ingredients
Physical & Chemical Properties: Multiple Properties
Transport Information: Product Shipping Name/Packing Group
Regulatory Information: United States
GHS: Listing