



SAFETY DATA SHEET

1. Identification

Product identifier LPS® Food Grade Silicone

Other means of identification

Part Number 01716

Recommended use A food grade industrial lubricant for rubber, plastic and metal parts.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name LPS Laboratories, a division of Illinois Tool Works, Inc.

Address 4647 Hugh Howell Rd.
Tucker, GA 30084

Country (U.S.A.)

In Case of Emergency Tel: +1 770-243-8800
1-800-424-9300 (inside U.S.)
+001 703-527-3887 (outside U.S.)

Website www.lpslabs.com

E-mail sds@lpslabs.com

2. Hazard(s) identification

Physical hazards	Flammable aerosols	Category 1
Health hazards	Skin corrosion/irritation	Category 2
	Reproductive toxicity (fertility)	Category 2
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Specific target organ toxicity, repeated exposure	Category 2
OSHA hazard(s)	Not classified.	

Label elements



Signal word Danger

Hazard statement

H222 - Extremely flammable aerosol.
H361 - Suspected of damaging fertility or the unborn child.
H373 - May cause damage to central nervous system, liver, kidneys, and blood through prolonged or repeated exposure.
H336 - May cause drowsiness or dizziness.
H315 - Causes skin irritation.

Precautionary statement

Prevention

P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P211 - Do not spray on an open flame or other ignition source.
P271 - Use only outdoors or in a well-ventilated area.
P251 - Pressurized container: Do not pierce or burn, even after use.
P260 - Do not breathe dust/fume/gas/mist/vapors/spray.
P280 - Wear protective gloves/eye protection/face protection.
P264 - Wash thoroughly after handling.
P281 - Use personal protective equipment as required.
P273 - Avoid release to the environment.

Response	P308 + P313 - IF exposed or concerned: Get medical advice/attention. P302 + P352 - IF ON SKIN: Wash with plenty of soap and water. P321 - Specific treatment (see this label). P332 + P313 - If skin irritation occurs: Get medical advice/attention. P362 - Take off contaminated clothing and wash before reuse. P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. P312 - Call a POISON CENTER or doctor/physician if you feel unwell. P391 - Collect spillage.	
Storage	P403 + P233 - Store in a well-ventilated place. Keep container tightly closed. P405 - Store locked up. P410 + P412 - Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.	
Disposal	P501 - Dispose of contents/container in accordance with local/regional/national/international regulations.	
Hazard(s) not otherwise classified (HNOC)	Not classified.	
Environmental hazards	Hazardous to the aquatic environment, long-term hazard	Category 2

Supplemental information

25% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment. 94.67% of the mixture consists of component(s) of unknown acute oral toxicity.

3. Composition/information on ingredients

Mixtures

Hazardous components Chemical name	CAS number	%
2-Methylpentane	107-83-5	30 - < 40
2,3-Dimethylbutane	79-29-8	10 - < 20
3-Methylpentane	96-14-0	10 - < 20
Propane	74-98-6	10 - < 20
2,2-Dimethylbutane	75-83-2	5 - < 10
N-Butane	106-97-8	5 - < 10
Isobutane	75-28-5	1 - < 3
N-hexane	110-54-3	1 - < 3
Other components below reportable levels		5 - < 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.
Most important symptoms/effects, acute and delayed	Narcosis. Irritation of eyes and mucous membranes. Skin irritation. Decrease in motor functions. Behavioral changes. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Prolonged exposure may cause chronic effects.
Indication of immediate medical attention and special treatment needed	In case of shortness of breath, give oxygen. Symptoms may be delayed. Keep victim under observation.
General information	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.

5. Fire-fighting measures

Suitable extinguishing media	Extinguishing media - small fires: Dry chemical powder. Extinguishing media - large fires: Carbon dioxide (CO2). Dry chemical powder. Foam. Water fog.
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Unsuitable extinguishing media	Do not use a solid water stream as it may scatter and spread fire.
Specific hazards arising from the chemical	Contents under pressure. Pressurized container may explode when exposed to heat or flame. Fire may produce irritating, corrosive and/or toxic gases.
Special protective equipment and precautions for firefighters	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Firefighters should wear full protective clothing including self contained breathing apparatus. Structural firefighters protective clothing will only provide limited protection.
Fire-fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out. Water runoff can cause environmental damage.
Specific methods	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. Use standard firefighting procedures and consider the hazards of other involved materials. Move container from fire area if it can be done without risk. Use water spray to cool unopened containers. Cool containers exposed to flames with water until well after the fire is out.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Immediately evacuate personnel to safe areas. Keep unnecessary personnel away. Local authorities should be advised if significant spillages cannot be contained. Consider initial downwind evacuation for at least 500 meters (1/3 mile). Wear appropriate protective equipment and clothing during clean-up. 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. Do not touch or walk through spilled material. Keep people away from and upwind of spill/leak. Keep upwind. Keep out of low areas. Pay attention to flashback. Ventilate closed spaces before entering them.
Methods and materials for containment and cleaning up	ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. The product is immiscible with water and will spread on the water surface. Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Dike far ahead of spill for later disposal. Absorb spillage with non-combustible, absorbent material. Scoop up used absorbent into drums or other appropriate container. Following product recovery, flush area with water. Prevent entry into waterways, sewer, basements or confined areas.
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.

7. Handling and storage

Precautions for safe handling	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Vapors may form explosive mixtures with air. 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. All equipment used when handling the product must be grounded. Ground and bond containers when transferring material. Do not use if spray button is missing or defective. Do not re-use empty containers. Do not breathe dust/fume/gas/mist/vapors/spray. Do not taste or swallow. Avoid contact with skin. Avoid contact with eyes. Avoid contact during pregnancy/while nursing. Do not get this material on clothing. Wear personal protective equipment. Use only in well-ventilated areas. Avoid prolonged exposure. When using, do not eat, drink or smoke. Wash hands thoroughly after handling. Avoid release to the environment.
Conditions for safe storage, including any incompatibilities	Level 3 Aerosol. Store locked up. Contents under pressure. Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Do not handle or store near an open flame, heat or other sources of ignition. Do not puncture, incinerate or crush. 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 well-ventilated place. Keep container tightly closed. Keep in an area equipped with sprinklers. Keep away from food, drink and animal feedingstuffs. Keep out of the reach of children.

8. Exposure controls/personal protection

Occupational exposure limits

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

Components	Type	Value
N-hexane (CAS 110-54-3)	PEL	1800 mg/m3 500 ppm
Propane (CAS 74-98-6)	PEL	1800 mg/m3

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

Components	Type	Value
		1000 ppm

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
Propane (CAS 74-98-6)	TWA	1000 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
2,2-Dimethylbutane (CAS 75-83-2)	Ceiling	1800 mg/m3
	REL	510 ppm 350 mg/m3 100 ppm
2,3-Dimethylbutane (CAS 79-29-8)	Ceiling	1800 mg/m3
	REL	510 ppm 350 mg/m3 100 ppm
2-Methylpentane (CAS 107-83-5)	Ceiling	1800 mg/m3
	REL	510 ppm 350 mg/m3 100 ppm
3-Methylpentane (CAS 96-14-0)	Ceiling	1800 mg/m3
	REL	510 ppm 350 mg/m3 100 ppm
Isobutane (CAS 75-28-5)	REL	1900 mg/m3 800 ppm
N-Butane (CAS 106-97-8)	REL	1900 mg/m3 800 ppm
N-hexane (CAS 110-54-3)	REL	180 mg/m3 50 ppm
Propane (CAS 74-98-6)	REL	1800 mg/m3 1000 ppm

Biological limit values

US. ACGIH. BEIs. Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
N-hexane (CAS 110-54-3)	0.4 mg/l	2,5-Hexanedion without hydrolysis	Urine	*

* - For sampling details, please see the source document.

Exposure guidelines

US. ACGIH Threshold Limit Values

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

US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants

N-HEXANE (CAS 110-54-3)

Can be absorbed through the skin.

Appropriate 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.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Do not get in eyes. Chemical goggles are recommended. Eye wash fountain is recommended.
Skin protection	
Hand protection	For prolonged or repeated skin contact use suitable protective gloves. Chemical resistant gloves are recommended.
Other	Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment. Wear suitable protective clothing. Chemical resistant gloves.
Respiratory protection	If permissible levels are exceeded use NIOSH mechanical filter / organic vapor cartridge or an air-supplied respirator.
Thermal hazards	Not available.
General hygiene considerations	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
Melting point/freezing point	Not Established / -241.2 °F (-151.798775166 °C)
Initial boiling point and boiling range	141.8 °F (61 °C)
Flash point	< 1.40 °F (< -17.00 °C) Tag Closed Cup
Evaporation rate	< 1 BuAc
Flammability (solid, gas)	Flammable gas.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	1 % (estimated)
Flammability limit - upper (%)	6 % (estimated)
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	352 mm Hg @ 38 °C
Vapor density	~3
Solubility(ies)	Not soluble in water
Partition coefficient (n-octanol/water)	> 1
Auto-ignition temperature	582.8 °F (306 °C)
Decomposition temperature	Not available.
Viscosity	< 14 cSt @ 25°C
Other information	
Heat of combustion	> 30 kJ/g
Percent volatile	96 %
Specific gravity	0.64 - 0.66 @ 20°C
VOC (Weight %)	96.1 % per State and Federal Consumer Product Regulations

10. Stability and reactivity

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

11. Toxicological information

Information on likely routes of exposure

Ingestion	May be harmful if swallowed. May be fatal if swallowed and enters airways.
Inhalation	May be harmful if inhaled. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea.
Skin contact	Causes skin irritation.
Eye contact	May be irritating to eyes.

Symptoms related to the physical, chemical and toxicological characteristics 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.

Information on toxicological effects

Acute toxicity	Based on available data, the classification criteria are not met.
Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/eye irritation	May be irritating to eyes.
Respiratory sensitization	Based on available data, the classification criteria are not met.
Skin sensitization	Based on available data, the classification criteria are not met.
Germ cell mutagenicity	Based on available data, the classification criteria are not met.
Carcinogenicity	Based on available data, the classification criteria are not met.
Reproductive toxicity	Suspected of damaging fertility or the unborn child.
Specific target organ toxicity - single exposure	Narcotic effects.
Specific target organ toxicity - repeated exposure	Causes damage to organs through prolonged or repeated exposure. Central nervous system. Liver. Kidneys. Blood. Skin.
Aspiration hazard	May be harmful if swallowed and enters airways.
Chronic effects	Prolonged inhalation may be harmful. Repeated absorption may cause disorder of central nervous system, liver, kidneys and blood.
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.
Bioaccumulative potential	Not available.

Partition coefficient n-octanol / water (log Kow)

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

Mobility in soil	Not available.
Other adverse effects	Not available.

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.
Local disposal regulations	Not available.

Hazardous waste code	D001: Waste Flammable material with a flash point <140 F D003: Waste Reactive material
Waste from residues / unused products	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).
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

DOT

UN number	UN1950
UN proper shipping name	Aerosols, flammable
Transport hazard class(es)	2.1
Subsidiary class(es)	Not available.
Packing group	Not available.
Special precautions for user	Read safety instructions, MSDS and emergency procedures before handling.
Labels required	2.1
Special provisions	N82
Packaging exceptions	306
Packaging non bulk	None
Packaging bulk	None

IATA

UN number	UN1950
UN proper shipping name	Aerosols, flammable
Transport hazard class(es)	2.1
Subsidiary class(es)	-
Packaging group	Not available.
Environmental hazards	No
Labels required	2.1
ERG Code	Not available.
Special precautions for user	Not available.

IMDG

UN number	UN1950
UN proper shipping name	Aerosols, flammable
Transport hazard class(es)	2.1
Subsidiary class(es)	-
Packaging group	Not available.
Environmental hazards	
Marine pollutant	No
Labels required	2.1
EmS	Not available.
Special precautions for user	Not available.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code No information available.

DOT





15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not on regulatory list.

CERCLA Hazardous Substance List (40 CFR 302.4)

2,2-Dimethylbutane (CAS 75-83-2)	LISTED
2,3-Dimethylbutane (CAS 79-29-8)	LISTED
2-Methylpentane (CAS 107-83-5)	LISTED
3-Methylpentane (CAS 96-14-0)	LISTED
Isobutane (CAS 75-28-5)	LISTED
N-Butane (CAS 106-97-8)	LISTED
N-hexane (CAS 110-54-3)	LISTED
Propane (CAS 74-98-6)	LISTED

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - Yes
 Delayed Hazard - Yes
 Fire Hazard - Yes
 Pressure Hazard - Yes
 Reactivity Hazard - No

SARA 302 Extremely hazardous substance

No

SARA 311/312 Hazardous chemical

No

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

N-hexane (CAS 110-54-3)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Isobutane (CAS 75-28-5)
 N-Butane (CAS 106-97-8)
 Propane (CAS 74-98-6)

Safe Drinking Water Act (SDWA)

Not regulated.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Not listed.

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Not regulated.

DEA Exempt Chemical Mixtures Code Number

Not regulated.

Food and Drug Administration (FDA)

Not regulated.

US state regulations

US. Massachusetts RTK - Substance List

2,2-Dimethylbutane (CAS 75-83-2)
 2,3-Dimethylbutane (CAS 79-29-8)
 2-Methylpentane (CAS 107-83-5)
 3-Methylpentane (CAS 96-14-0)
 Isobutane (CAS 75-28-5)
 N-Butane (CAS 106-97-8)

N-hexane (CAS 110-54-3)

Propane (CAS 74-98-6)

US. New Jersey Worker and Community Right-to-Know Act

Isobutane (CAS 75-28-5) 500 LBS

N-Butane (CAS 106-97-8) 500 LBS

N-hexane (CAS 110-54-3) 500 LBS

Propane (CAS 74-98-6) 500 LBS

US. Pennsylvania RTK - Hazardous Substances

2,2-Dimethylbutane (CAS 75-83-2)

2,3-Dimethylbutane (CAS 79-29-8)

2-Methylpentane (CAS 107-83-5)

3-Methylpentane (CAS 96-14-0)

Isobutane (CAS 75-28-5)

N-Butane (CAS 106-97-8)

N-hexane (CAS 110-54-3)

Propane (CAS 74-98-6)

US. Rhode Island RTK

N-Butane (CAS 106-97-8)

N-hexane (CAS 110-54-3)

Propane (CAS 74-98-6)

US. California Proposition 65

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Not listed.

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)	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 this product complies with the inventory requirements administered by the governing country(s)

16. Other information, including date of preparation or last revision

Issue date 02-07-2013

Version # 01

Further information HMIS® is a registered trade and service mark of the NPCA.

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

Revision Information Product and Company Identification: Product Uses
Composition / Information on Ingredients: Ingredients
Physical & Chemical Properties: Multiple Properties
Transport Information: Proper Shipping Name/Packing Group
Regulatory Information: United States
GHS: Listing