SAFETY DATA SHEET

1. Identification

Product identifier LPS® Dry Film Silicone Lubricant

Other means of identification

Part Number 01616

Recommended use A dry film industrial lubricant for rubber, plastic and metal parts.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer Manufacturer

> Company name **ITW Pro Brands**

Address 4647 Hugh Howell Rd.

Tucker, GA 30084

Country (U.S.A.)

Tel: +1 770-243-8800

In Case of Emergency 1-800-424-9300 (inside U.S.)

+001 703-527-3887 (outside U.S.)

Website www.lpslabs.com

E-mail lpssds@itwprobrands.com

2. Hazard(s) identification

Physical hazards Flammable aerosols Category 1

> Gases under pressure Liquefied gas Skin corrosion/irritation Category 2 Reproductive toxicity Category 2

Specific target organ toxicity, single exposure Category 3 narcotic effects Specific target organ toxicity, repeated Category 2 (nervous system)

exposure (inhalation)

Environmental hazards Not classified. **OSHA** defined hazards Not classified.

Label elements

Health hazards



Signal word Danger

Hazard statement Extremely flammable aerosol. Contains gas under pressure; may explode if heated. Causes skin

irritation. May cause drowsiness or dizziness. Suspected of damaging fertility or the unborn child. May cause damage to organs (nervous system) through prolonged or repeated exposure by

inhalation.

Precautionary statement

Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read

and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Do not breathe gas. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.

If exposed or concerned: Get medical advice/attention. If on skin: Wash with plenty of water. If Response skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash

before reuse. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a

poison center/doctor if you feel unwell.

Material name: LPS® Dry Film Silicone Lubricant 01616 Version #: 01 Issue date: 06-20-2016

Storage Store in a well-ventilated place. Keep container tightly closed. Store locked up. Protect from

sunlight. Do not expose to temperatures exceeding 50°C/122°F.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC)

None known.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
1,1-Difluoroethane (HFC-152a)		75-37-6	50 - 60
2-Methylpentane		107-83-5	10 - 20
2,3-Dimethylbutane		79-29-8	5 - 10
3-Methylpentane		96-14-0	5 - 10
2,2-Dimethylbutane		75-83-2	1 - 5
Isopropanol		67-63-0	1 - 5
Poly (Dimethylsiloxane)		63148-62-9	1 - 5
N-hexane		110-54-3	1 - 2

4. First-aid measures

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON

CENTER or doctor/physician if you feel unwell.

Skin contact Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get

medical advice/attention. Wash contaminated clothing before reuse.

Eye contact Rinse with water. Get medical attention if irritation develops and persists.

Ingestion Not likely, due to the form of the product. In the unlikely event of swallowing contact a physician or

poison control center. Rinse mouth.

Most important symptoms/effects, acute and

delayed

Indication of immediate medical attention and special treatment needed

General information

May cause drowsiness and dizziness. Narcosis. Headache. Nausea, vomiting. Behavioral changes. Decrease in motor functions. Skin irritation. May cause redness and pain. Prolonged exposure may cause chronic effects.

Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire-fighting measures

Suitable extinguishing media

Unsuitable extinguishing media

Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from

the chemical

Specific methods

Contents under pressure. Pressurized container may explode when exposed to heat or flame. During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters

ent Fireti Iters face

Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

Fire fighting equipment/instructions

In case of fire: Stop leak if safe to do so. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up.

Use standard firefighting procedures and consider the hazards of other involved materials. Move

containers from fire area if you can do so without risk. Cool containers exposed to flames with water until well after the fire is out. In the event of fire and/or explosion do not breathe fumes.

General fire hazardsExtremely flammable aerosol. Contents under pressure. Pressurized container may explode when exposed to heat or flame.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures 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). Wear appropriate protective equipment and clothing during clean-up. Do not breathe gas. Emergency personnel need self-contained breathing equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. Use personal protection recommended in Section 8 of the SDS.

Methods and materials for containment and cleaning up

Refer to attached safety data sheets and/or instructions for use. Stop leak if you can do so without risk. Isolate area until gas has dispersed. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material

Large Spills: Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Scoop up used absorbent into drums or other appropriate container. 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.

Environmental precautions

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid discharge into drains, water courses or onto the ground.

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. 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 breathe gas. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Level 3 Aerosol.

Store locked up. Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122°F. Keep away from heat, sparks and open flame. 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 original tightly closed container. Store in a well-ventilated place. Stored containers should be periodically checked for general condition and leakage. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

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

Components	Туре	Value	
Isopropanol (CAS 67-63-0)	PEL	980 mg/m3	
		400 ppm	
N-hexane (CAS 110-54-3)	PEL	1800 mg/m3	
		500 ppm	
US. ACGIH Threshold Limit Value	s		
Components	Туре	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	

US. ACGIH Threshold Limit Value		Value	
Components	Туре	value	
3-Methylpentane (CAS 96-14-0)	STEL	1000 ppm	
,	TWA	500 ppm	
Isopropanol (CAS 67-63-0)	STEL	400 ppm	
	TWA	200 ppm	
N-hexane (CAS 110-54-3)	TWA	50 ppm	
US. NIOSH: Pocket Guide to Cher	nical Hazards		
Components	Туре	Value	
Isopropanol (CAS 67-63-0)	STEL	1225 mg/m3	
		500 ppm	
	TWA	980 mg/m3	
		400 ppm	
N-hexane (CAS 110-54-3)	TWA	180 mg/m3	
		50 ppm	
US. Workplace Environmental Ex	oosure Level (WEEL) Guides		
Components	Type	Value	
1,1-Difluoroethane (HFC-152a) (CAS 75-37-6)	TWA	2700 mg/m3	
		1000 ppm	

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Isopropanol (CAS 67-63-0)	40 mg/l	Acetone	Urine	*
N-hexane (CAS 110-54-3)	0.4 mg/l	2,5-Hexanedio n, without hydrolysis	Urine	*

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

Exposure guidelines

US - California OELs: Skin designation

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

US ACGIH Threshold Limit Values: Skin designation

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. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

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

Skin protection

Hand protection Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove

supplier.

Other Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

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

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Observe any medical surveillance requirements. 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

Physical state Gas.
Form Aerosol.

Color Colorless. Odor Isohexane. Not available. **Odor threshold** Not available. pН Not available. Melting point/freezing point

Initial boiling point and boiling range

< 1.4 °F (< -17.0 °C) Tag Closed Cup Flash point

Evaporation rate < 1 (Ethyl Ether = 1) Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower

Not available.

(%)

Flammability limit - upper

Not available.

Not available.

(%)

Explosive limit - lower (%) Not available. Explosive limit - upper (%) Not available. Vapor pressure 55 psig @ 25°C $\sim 3 \text{ (air} = 1)$ Vapor density Relative density Not available.

Solubility(ies)

< 10 % w/w Solubility (water)

Partition coefficient > 1

(n-octanol/water)

Auto-ignition temperature Not available. Not available. **Decomposition temperature** Viscosity < 14 cSt @ 25°C

Other information

6.23 Density

Explosive properties Not explosive. **Oxidizing properties** Not oxidizing.

Specific gravity 0.75

VOC 41 % per US State & Federal Consumer Product Regulations

10. Stability and reactivity

Reactivity The product is stable and non-reactive under normal conditions of use, storage and transport.

Material is stable under normal conditions. **Chemical stability** Possibility of hazardous Hazardous polymerization does not occur.

reactions

Conditions to avoid Heat. Avoid temperatures exceeding the flash point. Contact with incompatible materials.

Incompatible materials Strong oxidizing agents.

Hazardous decomposition

products

Carbon oxides.

11. Toxicological information

Information on likely routes of exposure

May cause damage to organs through prolonged or repeated exposure by inhalation. May cause Inhalation

drowsiness and dizziness. Headache. Nausea, vomiting.

Skin contact Causes skin irritation.

Direct contact with eyes may cause temporary irritation. Eye contact

Ingestion Expected to be a low ingestion hazard. Symptoms related to the physical, chemical and toxicological characteristics

May cause drowsiness and dizziness. Narcosis. Headache. Nausea, vomiting. Behavioral changes. Decrease in motor functions. Skin irritation. May cause redness and pain.

Information on toxicological effects

Acute toxicity Narcotic effects.

Components	Species	Test Results
1,1-Difluoroethane (HFC-	152a) (CAS 75-37-6)	
Acuto		

Acute

Inhalation

Gas

LC50 Rat > 437500 ppm, 4 Hours

Isopropanol (CAS 67-63-0)

<u>Acute</u>

Dermal

LD50 Rabbit 12800 mg/kg

16.4 ml/kg, 24 Hours

Inhalation

Vapor

LC50 Rat > 10000 ppm, 6 Hours

Oral

LD50 Dog 4797 mg/kg

 Mouse
 3600 mg/kg

 Rabbit
 5.03 g/kg

 Rat
 5.84 g/kg

4.7 g/kg

N-hexane (CAS 110-54-3)

Acute

Dermal

LD50 Rabbit > 2000 mg/kg, 4 Hours

> 5 ml/kg, 4 Hours

Inhalation

LC50 Mouse 48000 ppm, 4 Hours

Vapor

LC50 Rat > 5000 ppm, 24 Hours

> 31.86 mg/l

73860 ppm, 4 Hours

Oral

LD50 Rat 28710 mg/kg

24 ml/kg

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicityNo data available to indicate product or any components present at greater than 0.1% are

mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

ACGIH Carcinogens

Isopropanol (CAS 67-63-0) A4 Not classifiable as a human carcinogen.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity Suspected of damaging fertility or the unborn child.

May cause drowsiness and dizziness.

Specific target organ

toxicity - single exposure

Specific target organ

toxicity - repeated exposure

May cause damage to organs (nervous system) through prolonged or repeated exposure by

inhalation.

Not likely, due to the form of the product. **Aspiration hazard**

Chronic effects May cause damage to organs through prolonged or repeated exposure. Prolonged inhalation may

be harmful.

None known. **Further information**

12. Ecological information

The product is not classified as environmentally hazardous. However, this does not exclude the **Ecotoxicity** possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Species Components **Test Results** Isopropanol (CAS 67-63-0)

Aquatic

Fish LC50 Bluegill (Lepomis macrochirus) > 1400 mg/l, 96 hours

N-hexane (CAS 110-54-3)

Aquatic

LC50 Fish Fathead minnow (Pimephales promelas) 2.101 - 2.981 mg/l, 96 hours

Poly (Dimethylsiloxane) (CAS 63148-62-9)

Aquatic

Fish LC50 Channel catfish (Ictalurus punctatus) 2.36 - 4.15 mg/l, 96 hours

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

LPS® Dry Film Silicone Lubricant > 1 1,1-Difluoroethane (HFC-152a) 0.75 2,2-Dimethylbutane 3.82 2,3-Dimethylbutane 3.42 2-Methylpentane 3.74 3-Methylpentane 3.6 Isopropanol 0.05 N-hexane 3.9

Mobility in soil No data available. Other adverse effects None known.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents

under pressure. Do not puncture, incinerate or crush. Dispose of contents/container in accordance

with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

The waste code should be assigned in discussion between the user, the producer and the waste Hazardous waste code

disposal company.

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

Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

14. Transport information

DOT

UN1950 **UN number**

UN proper shipping name

Aerosols, flammable

Transport hazard class(es)

Class 2.1 Subsidiary risk 2.1 Label(s)

Not applicable. Packing group

Environmental hazards

Marine pollutant No.

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Special provisions N82 306 Packaging exceptions Packaging non bulk 304 Packaging bulk None

IATA

UN number UN1950

UN proper shipping name Aerosols, flammable

Transport hazard class(es)

2.1 Class Subsidiary risk Label(s) 2.1

Packing group Not applicable.

Environmental hazards

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Other information

Passenger and cargo

Allowed with restrictions.

Not applicable.

aircraft

Allowed with restrictions. Cargo aircraft only

IMDG

UN number UN1950

UN proper shipping name AEROSOLS, flammable

Transport hazard class(es)

2.1 **Class** Subsidiary risk Label(s) 2.1

Packing group Not applicable.

Environmental hazards

Marine pollutant No. F-D, S-U **EmS**

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and

the IBC Code

DOT



IATA; IMDG



General information

Before transporting product containers: Ensure that containers are firmly secured. Ensure cylinder valve is closed and not leaking. Ensure valve outlet cap nut or plug (where provided) is correctly fitted. Ensure valve protection device (where provided) is correctly fitted. Ensure adequate ventilation. Ensure compliance with applicable regulations.

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.

CERCLA Hazardous Substance List (40 CFR 302.4)

N-hexane (CAS 110-54-3)

Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

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

Not listed.

SARA 311/312 Hazardous

Yes

chemical

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.	
N-HEXANE	110-54-3	1 - 2	

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)

1,1-Difluoroethane (HFC-152a) (CAS 75-37-6)

Safe Drinking Water Act

Not regulated.

(SDWA)

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Isopropanol (CAS 67-63-0) Low priority

US state regulations

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd.

(a))

Isopropanol (CAS 67-63-0)

N-hexane (CAS 110-54-3)

US. Massachusetts RTK - Substance List

1,1-Difluoroethane (HFC-152a) (CAS 75-37-6)

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) Isopropanol (CAS 67-63-0)

N-hexane (CAS 110-54-3)

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

1,1-Difluoroethane (HFC-152a) (CAS 75-37-6)

2,2-Dimethylbutane (CAS 75-83-2) 2,3-Dimethylbutane (CAS 79-29-8) 2-Methylpentane (CAS 107-83-5)

Isopropanol (CAS 67-63-0) N-hexane (CAS 110-54-3)

US. Pennsylvania Worker and Community Right-to-Know Law

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) Isopropanol (CAS 67-63-0) N-hexane (CAS 110-54-3)

US. Rhode Island RTK

1,1-Difluoroethane (HFC-152a) (CAS 75-37-6)

Isopropanol (CAS 67-63-0) N-hexane (CAS 110-54-3)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

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

^{*}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).

Toxic Substances Control Act (TSCA) Inventory

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

Issue date 06-20-2016

Version # 01

United States & Puerto Rico

Disclaimer ITW Pro Brands cannot anticipate all conditions under which this information and its product, or

the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. 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.

Yes