



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product identifier	White Lithium	
Version #	01	
Issue date	08-10-2015	
CAS #	Mixture	
Part Number	03816, C03816	
Product use	A white lithium based grease formulated with PTFE additives to provide superior lubrication.	
Manufacturer information	ITW Pro Brands 4647 Hugh Howell Rd Tucker, GA 30084 United States lpssds@itwprobrands.com www.lpslabs.com 1-800-241-8334 / 770-243-8800 Chemtrec 1-800-424-9300	
Supplier	Not available.	

2. Hazards Identification

Emergency overview	DANGER Flammable aerosol. CONTENTS UNDER PRESSURE. Pressurized container may explode when exposed to heat or flame. Will be easily ignited by heat, spark or flames. HARMFUL OR FATAL IF SWALLOWED. Causes skin irritation. Causes serious eye irritation. Vapors may cause drowsiness and dizziness. Possible reproductive hazard. Prolonged exposure may cause chronic effects. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Potential health effects	
Routes of exposure	Inhalation. Ingestion. Skin contact. Eye contact.
Eyes	Avoid contact with eyes. Causes eye irritation.
Skin	Avoid contact with the skin. May be harmful if absorbed through skin. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.
Inhalation	Do not breathe vapors, aerosols. Irritating to respiratory system. Intentional misuse by concentrating and inhaling the product can be harmful or fatal.
Ingestion	Exposure by ingestion of an aerosol is unlikely. Harmful: may cause lung damage if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Do not ingest.
Target organs	Eyes. Skin. Respiratory system. Central nervous system.
Chronic effects	Conjunctiva. May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion and blurred vision) and/or damage. Pregnant women or women of child-bearing age should not be exposed to this product. May cause harm to the unborn child. May be harmful if absorbed through skin. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.
Signs and symptoms	Irritation of eyes and mucous membranes. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin. Rash. Narcosis. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Behavioral changes. Decrease in motor functions. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.
Potential environmental effects	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

3. Composition / Information on Ingredients

Hazardous components	CAS #	Percent
2-METHYLPENTANE	107-83-5	10 - 20
ACETONE	67-64-1	10 - 20

Hazardous components	CAS #	Percent
2,3-DIMETHYLBUTANE	79-29-8	1 - 10
3-Methylpentane	96-14-0	1 - 10
NEOHEXANE	75-83-2	1 - 5
N-HEXANE	110-54-3	1 - 3
Titanium Dioxide	13463-67-7	< 1
Non-hazardous components	CAS #	Percent
Petroleum Gases, Liquefied, Sweetened	68476-86-8	20 - 30
Petroleum Oil	64742-52-5	20 - 30

4. First Aid Measures

First aid procedures

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. Get medical attention if symptoms persist.

Skin contact

Remove contaminated clothing immediately and wash skin with soap and water. 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. Do not use mouth-to-mouth method if victim ingested the substance.

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.

General advice

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

5. Fire Fighting Measures

Flammable properties

Flammable by WHMIS criteria. Heat may cause the containers to explode. Ruptured cylinders may rocket. Vapors may travel considerable distance to a source of ignition and flash back.

Extinguishing media

Suitable extinguishing media

Powder. Alcohol resistant foam. Carbon dioxide (CO₂).

Unsuitable extinguishing media

Do not use a solid water stream as it may scatter and spread fire.

Protection of firefighters

Specific hazards arising from the chemical

Contents under pressure. Pressurized container may explode when exposed to heat or flame.

Protective equipment for firefighters

Firefighters should wear full protective clothing including self contained breathing apparatus. Structural firefighters protective clothing will only provide limited protection. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions

Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Do not direct water at source of leak or safety devices as icing may occur. Containers should be cooled with water to prevent vapor pressure build up. Some of these materials, if spilled, may evaporate leaving a flammable residue.

Explosion data

Sensitivity to static discharge

Yes

Sensitivity to mechanical impact

None known.

Hazardous combustion products

May include oxides of carbon.

6. Accidental Release Measures

Personal precautions

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Pay attention to flashback. Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). 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

Prevent further leakage or spillage if safe to do so. Do not contaminate water.

Methods for containment

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stop leak if you can do so without risk. If possible, turn leaking containers so that gas escapes rather than liquid. Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Keep out of low areas. Prevent entry into waterways, sewer, basements or confined areas.

Methods for cleaning up

Ventilate the area. Stop the flow of material, if this is without risk. Isolate area until gas has dispersed. Following product recovery, flush area with water. Clean up in accordance with all applicable regulations. For waste disposal, see section 13 of the MSDS.

Other information

Clean up in accordance with all applicable regulations.

7. Handling and Storage

Handling

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 re-use empty containers.

Do not breathe dust/fume/gas/mist/vapors/spray. Avoid prolonged exposure. Do not use in areas without adequate ventilation. Wear personal protective equipment. Wash thoroughly after handling.

Storage

Contents under pressure. The pressure in sealed containers can increase under the influence of heat. Do not expose to heat or store at temperatures above 120°F/49°C as can may burst. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Store in a well-ventilated place. Keep in an area equipped with sprinklers.

8. Exposure Controls / Personal Protection

Occupational exposure limits

ACGIH

Components

Petroleum Oil (CAS
64742-52-5)

Type

TWA

Value

5 mg/m3

Form

Oil mist

US. ACGIH Threshold Limit Values

Components

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

Type

STEL

Value

1000 ppm

2-METHYLPENTANE (CAS
107-83-5)

TWA

STEL

500 ppm

1000 ppm

3-Methylpentane (CAS
96-14-0)

TWA

STEL

500 ppm

1000 ppm

ACETONE (CAS 67-64-1)

TWA

STEL

500 ppm

750 ppm

NEOHEXANE (CAS
75-83-2)

TWA

STEL

500 ppm

1000 ppm

N-HEXANE (CAS 110-54-3)

TWA

TWA

500 ppm

50 ppm

Titanium Dioxide (CAS
13463-67-7)

TWA

10 mg/m3

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value
2-METHYLPENTANE (CAS 107-83-5)	STEL	3500 mg/m3
		1000 ppm
	TWA	1760 mg/m3
3-Methylpentane (CAS 96-14-0)		500 ppm
	STEL	3500 mg/m3
		1000 ppm
ACETONE (CAS 67-64-1)	TWA	1760 mg/m3
		500 ppm
	STEL	1800 mg/m3
N-HEXANE (CAS 110-54-3)		750 ppm
	TWA	1200 mg/m3
		500 ppm
Titanium Dioxide (CAS 13463-67-7)		176 mg/m3
	TWA	50 ppm
		10 mg/m3

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value	Form
ACETONE (CAS 67-64-1)	STEL	500 ppm	
	TWA	250 ppm	
N-HEXANE (CAS 110-54-3)	TWA	20 ppm	
Titanium Dioxide (CAS 13463-67-7)	TWA	3 mg/m3	Respirable fraction.
		10 mg/m3	Total dust.

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

Components	Type	Value
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
ACETONE (CAS 67-64-1)	STEL	750 ppm
	TWA	500 ppm
NEOHEXANE (CAS 75-83-2)	STEL	1000 ppm
	TWA	500 ppm
N-HEXANE (CAS 110-54-3)	TWA	50 ppm
Titanium Dioxide (CAS 13463-67-7)	TWA	10 mg/m3

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value
ACETONE (CAS 67-64-1)	STEL	750 ppm
	TWA	500 ppm
N-HEXANE (CAS 110-54-3)	TWA	50 ppm
Titanium Dioxide (CAS 13463-67-7)	TWA	10 mg/m3

Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

Components	Type	Value	Form
ACETONE (CAS 67-64-1)	STEL	2380 mg/m3	
		1000 ppm	

Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

Components	Type	Value	Form
	TWA	1190 mg/m3	
N-HEXANE (CAS 110-54-3)	TWA	500 ppm 176 mg/m3	
Titanium Dioxide (CAS 13463-67-7)	TWA	50 ppm 10 mg/m3	Total dust.

**U.S. - OSHA
Components**

Components	Type	Value	Form
Petroleum Oil (CAS 64742-52-5)	PEL	5 mg/m3	Oil mist

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

Components	Type	Value	Form
ACETONE (CAS 67-64-1)	PEL	2400 mg/m3 1000 ppm	
N-HEXANE (CAS 110-54-3)	PEL	1800 mg/m3 500 ppm	
Titanium Dioxide (CAS 13463-67-7)	PEL	15 mg/m3	Total dust.

Biological limit values
ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
ACETONE (CAS 67-64-1)	50 mg/l	Acetone	Urine	*
N-HEXANE (CAS 110-54-3)	0.4 mg/l	2,5-Hexanedione, without hydrolysis	Urine	*

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

Exposure guidelines
Canada - Alberta OELs: Skin designation

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

Canada - British Columbia OELs: Skin designation

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

Canada - Manitoba OELs: Skin designation

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

Canada - Ontario OELs: Skin designation

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

Canada - Quebec OELs: Skin designation

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

Canada - Saskatchewan 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.

Engineering controls

Ensure adequate ventilation, especially in confined areas.

Personal protective equipment
Eye/face protection

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

Skin protection

Avoid contact with clothing. Wear suitable protective clothing. Chemical resistant gloves.

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.

9. Physical & Chemical Properties
Appearance

Liquid.

Physical state	Gas.
Form	Aerosol.
Color	White.
Odor	Slight petroleum odor
Odor threshold	Not available.
pH	Not available.
Vapor pressure	2200 - 2700 mm Hg @ 20 °C
Vapor density	3 (air =1)
Boiling point	158 °F (70 °C)
Melting point/Freezing point	Not applicable
Solubility (water)	Not soluble in water
Specific gravity	0.74 - 0.78 @ 20 °C (water =1)
Relative density	Not available.
Flash point	< 1.4 °F (< -17.0 °C) Tag Closed Cup
Flammability limits in air, upper, % by volume	9.5 % Estimated
Flammability limits in air, lower, % by volume	1.8 % Estimated
Auto-ignition temperature	Not available.
VOC	51.3 % per U.S. State and Federal Consumer Product Regulations
Evaporation rate	< 1 (Ethyl Ether =1)
Viscosity	700 - 1600 cP
Percent volatile	85 - 90 %
Partition coefficient (n-octanol/water)	< 1

10. Chemical Stability & Reactivity Information

Chemical stability	Risk of explosion.
Conditions to avoid	Aerosol containers are unstable at temperatures above 50°C. Avoid temperatures exceeding the flash point. Heat, flames and sparks.
Incompatible materials	Acids. Strong oxidizing agents.
Hazardous decomposition products	Upon decomposition this product emits acrid dense smoke with carbon dioxide, carbon monoxide, water and other products of combustion.
Possibility of hazardous reactions	Hazardous polymerization does not occur.

11. Toxicological Information

Toxicological data		
Components	Species	Test Results
ACETONE (CAS 67-64-1)		
Acute		
Dermal		
LD50	Guinea pig	> 7426 mg/kg, 24 Hours
		> 9.4 ml/kg, 24 Hours
	Rabbit	> 7426 mg/kg, 24 Hours
		> 9.4 ml/kg, 24 Hours
Inhalation		
LC50	Rat	55700 ppm, 3 Hours
		132 mg/l, 3 Hours
		76 mg/l, 4 Hours
		50.1 mg/l
		50.1 mg/l, 8 Hours

Components	Species	Test Results
<i>Oral</i> LD50	Mouse	5.2 g/kg
	Rat	5800 mg/kg
		2.2 ml/kg
N-HEXANE (CAS 110-54-3)		
Acute		
<i>Dermal</i> LD50	Rabbit	> 2000 mg/kg, 4 Hours
		> 5 ml/kg, 4 Hours
<i>Inhalation</i> LC50	Mouse	48000 ppm, 4 Hours
	Rat	> 5000 ppm, 24 Hours
		> 31.86 mg/l
		73860 ppm, 4 Hours
<i>Oral</i> LD50	Rat	24 ml/kg
		24 mg/kg
	Wistar rat	49 mg/kg
Petroleum Gases, Liquefied, Sweetened (CAS 68476-86-8)		
Acute		
<i>Inhalation</i> LC50	Mouse	1237 mg/l, 120 Minutes
		52 %, 120 Minutes
	Rat	1355 mg/l
Petroleum Oil (CAS 64742-52-5)		
Acute		
<i>Dermal</i> LD50	Rabbit	> 2000 mg/kg
		> 2000 mg/kg, 24 Hours
<i>Inhalation</i> LC50	Rat	2.18 mg/l, 4 Hours
<i>Oral</i> LD50	Rat	> 2000 mg/kg
Titanium Dioxide (CAS 13463-67-7)		
Acute		
<i>Inhalation</i> LC50	Rat	> 2.28 mg/l, 4 Hours
<i>Oral</i> LD50	Rat	> 2000 mg/kg
Acute effects	Narcotic effects.	
Sensitization	Not classified.	
Local effects	Components of the product may be absorbed into the body through the skin. Irritating to skin. Contact may irritate or burn eyes.	
Chronic effects	Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects. May be harmful if absorbed through skin.	
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.	
ACGIH Carcinogens		
ACETONE (CAS 67-64-1)	A4 Not classifiable as a human carcinogen.	

Titanium Dioxide (CAS 13463-67-7)
IARC Monographs. Overall Evaluation of Carcinogenicity

A4 Not classifiable as a human carcinogen.

Titanium Dioxide (CAS 13463-67-7)

2B Possibly carcinogenic to humans.

Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/irritation	Causes serious eye irritation.
Mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Reproductive effects	Suspected of damaging fertility or the unborn child.
Teratogenicity	Not available.
Symptoms and target organs	Irritant effects. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Defatting of the skin. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Behavioral changes. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.
Synergistic materials	Not available.
Further information	Symptoms may be delayed.

12. Ecological Information

Ecotoxicological data

Components	Species		Test Results
ACETONE (CAS 67-64-1)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	10294 - 17704 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	4740 - 6330 mg/l, 96 hours
N-HEXANE (CAS 110-54-3)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	2.101 - 2.981 mg/l, 96 hours
Titanium Dioxide (CAS 13463-67-7)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	> 1000 mg/l, 48 hours
Fish	LC50	Mummichog (Fundulus heteroclitus)	> 1000 mg/l, 96 hours
Ecotoxicity	Toxic to aquatic life with long lasting effects.		
Environmental effects	Toxic to aquatic organisms.		
Aquatic toxicity	Toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.		
Persistence and degradability	Not inherently biodegradable.		
Partition coefficient			
White Lithium	< 1		
2,3-DIMETHYLBUTANE	3.42		
2-METHYLPENTANE	3.74		
3-Methylpentane	3.6		
ACETONE	-0.24		
NEOHEXANE	3.82		
N-HEXANE	3.9		
Mobility in environmental media	The product is immiscible with water and will spread on the water surface.		
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 in accordance with all applicable 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

TDG

UN number	UN1950
UN proper shipping name	AEROSOLS, flammable
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Packing group	Not applicable.
Environmental hazards	Not available.
Special precautions for user	Not available.

IATA

UN number	UN1950
UN proper shipping name	Aerosols, flammable
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Packing group	Not applicable.
Environmental hazards	No.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling. Read safety instructions, MSDS and emergency procedures before handling.

Other information

Passenger and cargo aircraft	Allowed.
Cargo aircraft only	Allowed.

IMDG

UN number	UN1950
UN proper shipping name	AEROSOLS, flammable
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Packing group	Not applicable.
Environmental hazards	
Marine pollutant	No.
EmS	F-D, S-U
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IATA; IMDG; TDG



15. Regulatory Information

Canadian regulations	This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.
WHMIS status	Controlled
WHMIS classification	A - Compressed Gas B1 - Flammable Gases D2A - Other Toxic Effects-VERY TOXIC D2B - Other Toxic Effects-TOXIC

WHMIS labeling



International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
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)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
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.

Prepared by

Not available.

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

Product and Company Identification: Product and Company Identification
Composition / Information on Ingredients: Disclosure Overrides
Fire Fighting Measures: Hazardous combustion products
Chemical Stability & Reactivity Information: Conditions to avoid
Toxicological Information: Acute effects
Toxicological Information: Local effects
Toxicological Information: Reproductivity
Toxicological Information: Sensitization
Ecological Information: Ecotoxicity
Ecological Information: Other adverse effects
Regulatory Information: Other
HazReg Data: North America
GHS: Classification