

LITHIUM GREASE

8461

Safety Data Sheet

Section 1: Identification

Product Identifier and Other Means of Identification

Product Name: Lithium Grease

SDS Code: 8461

Related Part #: 8461-85ML, 8461-1P

Recommended Use and Restriction on Use

Use: Multi-purpose lubricant

Uses Advised Against: Not applicable

Details of Manufacturer or Importer

Manufacturer

MG Chemicals
1210 Corporate Drive
Burlington, Ontario L7L 5R6
CANADA

MG Chemicals (Head Office)
9347-193 Street
Surrey, British Columbia V4N 4E7
CANADA

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☎ +1-905-331-1396

FAX +1-800-340-0773

FAX +1-905-331-2682

E-MAIL support@mgchemicals.com

E-MAIL info@mgchemicals.com

WEB www.mgchemicals.com

E-MAIL (Competent Person): sds@mgchemicals.com

Emergency Phone Number

For hazardous material incidents ONLY—leaks, spills, fires, exposures or accidents
USA or CANADA: Call CHEMTREC ☎: **+1-800-424-9300**

For emergencies involving dangerous goods; Collect 24/7
CANADA: Call CANUTEC ☎: **+1-613-996-6666** or ***666** on cellular phones

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Section 2: Hazard(s) Identification

Classification of the Hazardous Material

GHS Categories

Criteria	Category	Signal Word	Pictograms
Environmental Hazard Chronic Aqua. Tox.	3	<i>none</i>	<i>None mandated</i>

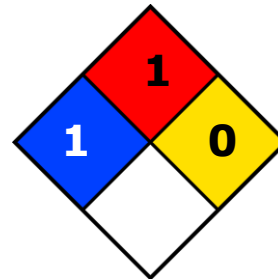
Note: The degree of severity is ranked within each hazard class from 1 (Highest Severity) to up to 5 (Lowest Severity), which is opposite to HMIS and NFPA conventions. Severity category rankings do not allow comparisons between classes.

Other Classifications

HMIS® RATING

HEALTH:	1
FLAMMABILITY:	1
PHYSICAL HAZARD:	0
PERSONAL PROTECTION:	

NFPA® 704 CODES



Approximate HMIS and NFPA Risk Ratings Legend:

0 (Low or none); 1 (Slight); 2 (Moderate); 3 (Serious); 4 (Severe)

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Label Elements

Signal Word	<i>No signal word</i>
Pictograms	Hazard Statements
<i>None mandated</i>	H412: Harmful to aquatic life with long lasting effects
Prevention	Precautionary Statements
P273	Avoid release to the environment
Disposal	Precautionary Statements
P501	Dispose of contents/container in accordance to local/regional/international regulations.

Hazards Not Otherwise Classified

When the product is exposed to very high heat such as welding or when mechanically aerosolized, this may cause harmful zinc oxide fumes.

Inhalation of fumes may cause metal fever and irritate the respiratory tract. The flu-like symptoms of metal fume fever may be delayed, occurring 4–12 hours after exposure. Repeated or prolonged exposure to aluminum oxide fumes may also lead to staining, pulmonary fibrosis (lung scarring), and pneumoconiosis (reaction to the deposition of dust in the lungs).

Section 3: Composition/Information on Ingredients

CAS #	Chemical Name	% Weight
64742-53-6	distillates (petroleum), hydrotreated light naphthenic ^{a)}	30–70%
64742-52-5	distillates (petroleum), hydrotreated heavy naphthenic ^{a)}	20–50%
7620-77-1	lithium soap	5–8%
13463-67-7	titanium dioxide	2–3%
1314-13-2	zinc oxide	1–2%

a) Highly refined mineral oil

LITHIUM GREASE**8461****Section 4: First-Aid Measures**

<i>Exposure Condition</i>	<i>GHS Code: Precautionary Statement</i>
IF IN EYES	P305 + P351 + P338, P337 + P313
Immediate Symptoms	<i>mild irritation, redness</i>
Response	Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.
IF ON SKIN	P303 + P352, P362 + P364
Immediate Symptoms	<i>mild irritation, redness</i>
Response	Wash with plenty of water/shower.
IF INHALED	P304 + P340, P312, P308 + P313
Immediate Symptoms	<i>none known</i>
Response	Remove person to fresh air and keep comfortable for breathing. If feeling unwell: Call a POISON CENTER/doctor.
IF SWALLOWED	P301 + P330 + P331
Immediate Symptoms	<i>nausea, abdominal pain, diarrhea</i>
Response	Rinse mouth. Do not induce vomiting. Call a POISON CENTRE/doctor if you feel unwell.

LITHIUM GREASE**8461****Section 5: Fire-Fighting Measures**

Auto-ignition Temperature	210 °C [410 °F]	Flash Point ^{a)}	185 °C [365 °F]	LFL [LEL] UFL [UEL] ^{b)}	Not available
In case of fire	P370 + P378				
Extinguishing Media	Use dry chemical, carbon dioxide, alcohol resistant foam or water spray to extinguish.				
Specific Hazards	In a fire, the zinc oxide fumes exposure may lead to metal fume fever. The flu-like symptoms of metal fume fever may be delayed, occurring 4–12 hours after exposure. Water may cause frothing.				
Combustion Products	Produces carbon oxides (CO, CO ₂), zinc oxide fumes.				
Fire-Fighter	Wear self-contained breathing apparatus for fire fighting				

a) Cleveland open cup

b) LFL = Lower Flammability [or Explosion] Limit (in volume %);
UFL = Upper Flammability [or Explosion] Limit (in volume %)**Section 6: Accidental Release Measures**

Personal Protection	Use personal protection recommended in Section 8.
Precautions for Response	Do not flush to sewer.
Environmental Precautions	Avoid releasing to the environment.
Containment Methods	None required
Cleaning Methods	Scoop or sweep grease in a waste container. Wipe residues with paper towels, and put them in the waste container. Wash spill area with soap and water to remove the last traces of residue.
Disposal Methods	Dispose spill waste according to Section 13.

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Section 7: Handling and Storage

- Prevention** Keep away from open flames/hot surfaces. No smoking.
 Avoid breathing fumes/mist/vapors.
 Do not eat, drink, or smoke when using this product.
- Handling** Wear protective gloves/eye protection.
 Wash hands thoroughly after handling.
- Storage** Keep container tightly closed. Keep away from oxidizing materials.

Section 8: Exposure Controls/Personal Protection

Routes of Entry

Eyes, ingestion, and skin

Substances with Occupational Exposure Limit Values

Chemical Name	Country	Long Term Exposure Limits (PEL)	Short Term Exposure Limits (STEL)
Mineral oils, highly refined (Mist)	ACGIH	5 mg/m ³	Not established
	U.S.A. OSHA PEL	5 mg/m ³	Not established
	Canada AB	5 mg/m ³	10 mg/m ³
	Canada BC	1 mg/m ³	Not established
	Canada ON	5 mg/m ³	10 mg/m ³
	Canada QC	5 mg/m ³	10 mg/m ³
titanium dioxide	ACGIH	10 mg/m ³	Not established
	U.S.A. OSHA PEL	15 mg/m ³	Not established
	Canada AB	10 mg/m ³	Not established
	Canada BC	10 mg/m ³	Not established
	Canada ON	10 mg/m ³	Not established
	Canada QC	10 mg/m ³	Not established

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zinc oxide (dust/mist)	ACGIH	2 mg/m ³	Not established
	U.S.A. OSHA PEL	2 mg/m ³	10 mg/m ³
	Canada AB	2 mg/m ³	10 mg/m ³
	Canada BC	2 mg/m ³	10 mg/m ³
	Canada ON	2 mg/m ³	10 mg/m ³
fumes dust	Canada QC	2 mg/m ³	10 mg/m ³
	Canada QC	2 mg/m ³	10 mg/m ³
	Canada QC	10 mg/m ³	Not established

Note: Ingredients are listed in descending weight contribution order (from greatest to least). The ACGIH², OSHA, and Canadian provinces exposure limits were consulted. Limits from by RTECS database¹ of the Canadian Centre for Occupational Health and Safety (CCOHS) a data from suppliers' SDS were also consulted. Short term exposure limits (STEL) are usually for 15 min and long term permissible exposure limits (PEL) for 8 h.

Engineering Controls

Ventilation

Titanium dioxide and zinc oxide particles are bound in the grease matrix, so general ventilation is sufficient under normal conditions of uses.

Keep airborne concentrations below exposure limits with a general or local exhaust system.

Personal Protective Equipment

Eye protection

Wear appropriate protective eyeglasses or chemical safety goggles.

RECOMMENDATION: Use safety glasses with lateral protection.

Skin Protection

Wear appropriate protective clothing to prevent skin contact.

RECOMMENDATION: Use nitrile, neoprene, butyl rubber, or other chemically resistant gloves.

Respiratory Protection

Not normally required, but if exposed to high levels of mist/vapors/fumes, wear respirator such as a half-mask respirator.

RECOMMENDATION: Consult your local safety supply store to ensure your respirator has a NIOSH (U.S.) approved filter cartridges appropriate for the ingredients listed in section 3 of this MSDS, and that the respirator is fitted to the employee by a professional. Ensure vapor cartridges are stored in sealed plastic bags when not being used.

General Hygiene Considerations

Wash hands with water and soap after use.

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Section 9: Physical and Chemical Properties

Physical State	Liquid, grease	Lower Flammability Limit	Not available
Appearance	White	Upper Flammability Limit	Not available
Odor	None	Vapor Pressure @20 °C	Not available
Odor Threshold	Not available	Vapor Density	Not available
pH	Not available	Specific Gravity @25 °C	0.89
Freezing/Melting Point	Not available	Solubility in Water	Immiscible
Boiling Point	371°C [700 °F]	Partition Coefficient	Not available
Flash Point ^{a)}	185 °C [365 °F]	Auto-ignition Temperature	210 °C [410 °F]
Evaporation Rate	Not available	Decomposition Temperature	Not available
Flammability (solid, gas)	Not available	Viscosity @40 °C	>> 20.5 mm ² /s

a) Cleveland open cup

Section 10: Stability and Reactivity

Reactivity	No hazardous reactivity known
Chemical Stability	Chemically stable at normal temperatures and pressures
Conditions to Avoid	Open flames, very high heat (such as soldering and welding temperatures), and incompatible substances
Incompatibilities	Strong oxidizing agents
Polymerization	Will not occur.
Decomposition	For thermal decomposition, see combustion products in Section 5

LITHIUM GREASE**8461****Section 11: Toxicological Information****Routes of Exposure**

Eyes, ingestion, and skin

Symptoms Summary

- Eyes** Causes mild irritation, redness.
- Skin** May cause mild skin irritation.
- Inhalation** No effects expected under normal use.
Under extreme heat, inhalation of fumes may lead to metal fume fever.
- Ingestion** May cause nausea, abdominal pain, diarrhea
- Chronic** Prolonged or repeated dermal exposure may defat skin and cause skin dryness and cracking, and local redness and discomfort.

Lethal Exposure Concentrations

Chemical Name	LD50 oral	LD50 dermal	LC50 inhalation	TCLo inhalation
titanium dioxide	60 g/kg Rat	Not available	Not available	Not available
zinc oxide	7 950 mg/kg Mouse	Not established	2 500 mg/m ³ Mouse	Not established

Note: Representative toxicity data from by RTECS database² of the Canadian Centre for Occupational Health and Safety (CCOHS) data from supplier (M)SDS were also consulted.

Other Toxicological Effects

- Skin corrosion/irritation** Mild irritant
- Serious eye damage/irritation** Mild irritant
- Respiratory and skin sensitization** (allergic reactions) No known effects

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LITHIUM GREASE**8461****Carcinogenicity**

(risk of cancer)

The titanium dioxide [13463-67-7] is possibly carcinogenic by airborne routes of exposures under WHMIS. Because the titanium is bound in grease mixture, it is not expected to be available as an airborne hazard (dust, mist, or spray) under normal use.

Titanium Dioxide [13463-67-7]

IARC Group 2B: Possibly carcinogenic to humans

ACGIH A4: Not classified as a human carcinogen

CA Prop 65: Listed as a carcinogen

NTP: Not listed

No known effects

Mutagenicity

(risk of heritable genetic effects)

Reproductive Toxicity

(risk to sex functions)

No known effects

Teratogenicity

(risk of fetus malformation)

No known effects

STOT-single exposure

No known effects

STOT-repeated exposure

No known effects.

Aspiration hazard

Not classified as an aspiration hazard. Mixture contains over 80% Cat 1 aspiration hazard components; however, the criteria is not met because the grease viscosity at 40 °C is >20.5 mm²/s.

Section 12: Ecological Information

The IMDG Code criteria and the raw-material SDS along with supporting data for the classification of registered substances from the European Chemical Agency database (<http://echa.europa.eu>) were used.

Contains 2% zinc oxide which is an acute and chronic category 1 solid (non-biodegradable, minimal LC50 of 0.042 mg/L) that is harmful to the environment.

Acute Ecotoxicity

Category 3

GHS Code: Hazard Statement

H402: Harmful to aquatic life

P273: Avoid release to the environment

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Chronic Ecotoxicity

Category 3

GHS Code: Hazard Statement

H412: Harmful to aquatic life with long lasting effects

Persistence and Biodegradability

Not available

Bioaccumulative Potential

Not available

Mobility in Soil

Not available

Other Effects

Not available

Section 13: Disposal Considerations

Dispose of contents in accordance with all local, provincial, state, and federal regulations.

Section 14: Transport Information

Ground

Refer to TDG regulations (Canadian Transportation of Dangerous Goods regulations);
USA DOT 49 CFR (Parts 100 to 185) **Regulations.**

Not regulated

Air

Refer to ICAO-IATA Dangerous Goods Regulations.

Not regulated

Sea

Refer to IMDG Regulations.

Not regulated

Section 15: Regulatory Information

Canada

WHMIS Classification

Does not meet classification criteria under WHMIS

Domestic Substance List (DSL)/Non-Domestic Substance Lists (NDSL)

All hazardous ingredients are listed on the DSL/NDSL.

Industry and Science Canada

MG Labels products intended for the workplace to conform to WHMIS labeling regulations. Product identification, net quantity declaration, minimum printing type size heights, and packaging of this product are in compliance.

Health Canada

Products produced by MG Chemicals intended for retail display conform to the Canadian Consumer Labeling Regulations.

USA

CAA (Clean Air Act, USA)

This product does not contain any class 1 ozone depleting substances.

This product does not contain any class 2 ozone depleting substances.

This product does not contain substances that are listed as hazardous air pollutants.

EPCRA (Emergency Planning and Right to Know Act, USA, 40 CFR 372.45)

This product does not contain substances, which are subject to the reporting requirements of section 313 Title III of the SARA of 1986 and 40 CFR part 372.

TSCA (Toxic Substances Control Act of 1976, USA)

All substances are TSCA listed.

California Proposition 65 (Chemicals known to cause cancer or reproductive toxicity, Sept 2, 2011 revision, USA).

This product does titanium dioxide, which is listed as a carcinogenic substances when airborne, as unbound particles of respirable size.

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Europe

RoHS

This product does not contain any lead, cadmium, mercury, hexavalent chromium, PBB's, or PBDE's, and complies with European RoHS regulations.

WEEE

This product is not a piece of electrical or electronics equipment, and is therefore not governed by this regulation.

Section 16: Other Information

MSDS Prepared by Michel Hachey
Date of Revision 27 July 2014
Supersedes 17 October 2013
Reason for Changes: Change to OSHA HSC 2012 format.

Reference

- 1) ACGIH 2013 TLVs and BEIs: Based on the documentation of the threshold limit values for chemical substances and physical agents & biological exposure indices, American Conference of Governmental of Industrial Hygienist Cincinnati, OH (2013).
- 2) All toxicological data were checked against the RTECS (Registry of Toxic Effects of Chemical Substances®)

Abbreviations

ACGIH	American Conference of Governmental Industrial Hygienists (USA)
EC50	Half maximal effective concentration
EL50	Half maximal effective loading
NOELR	No observable effect loading ratio
GHS	Globally Harmonized System of Classification of Labeling of Chemicals
LC50	Lethal Concentration 50%
LCLo	Lowest published lethal concentration
LD50	Lethal Dose 50%
PEL	Permissible Exposure Limit
STEL	Short-Term Exposure Limit
TCLo	Lowest published toxic concentration
TWA	Time Weighted Average
VOC	Volatile Organic Content

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Technical Queries Contact us regarding any questions, improvement suggestions, or problems with this product. Application notes, instructions, and FAQs are located at www.mgchemicals.com.

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