

LUBRIZOL® 6178

992694

Material Safety Data Sheet
LUBRIZOL® 6178

Prepared according to 29CFR 1910.1200.

limited slip differential

1	Chemical Product and Company Identification
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The Lubrizol Corporation
29400 Lakeland Boulevard
Wickliffe, Ohio 44092
Tel: (440) 943-4200

Product Trade Name LUBRIZOL® 6178
CAS Number Not applicable for mixtures.
Synonyms None.
Generic Chemical Name Mixture.
Product Type Automotive gear oil additive.
Preparation/Revision Date 14 October 2013
Transportation Emergency Phone No. FOR TRANSPORT EMERGENCY call CHEMTREC: (+1) 703-527-3887 (outside the U.S.), 1-800-424-9300 (in the U.S.)
MSDS No. 13737148-1712110-419311-102103

2	Hazards Identification
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Appearance Amber colored liquid.
Odor Mild petroleum
Principal Hazards Caution.

- May cause eye irritation.
- May cause skin irritation.

See Section 11 for complete health hazard information.

3	Composition/Information on Ingredients
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Hazardous Ingredients

Comp	CAS No.	Percentage (by wt.)	Carcinogen
Methanol	67-56-1	From 0.1 to 0.9 percent	N/E

(N/E) - None established

4	First Aid Measures
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Eyes Rinse cautiously with water for 30 minutes. Remove contact lenses, if present and easy to do. Get medical attention if eye irritation develops or persists. If eye irritation persists, get medical attention.
Skin Wash with soap and water for 20 minutes or until chemical is removed. Immediately remove all contaminated clothing. Get medical attention if irritation develops. Launder contaminated clothing before reuse.
Inhalation Remove exposed person to fresh air if adverse effects are observed. If breathing is labored, administer oxygen. If breathing has stopped, apply artificial respiration. If experiencing respiratory symptoms call a poison center or doctor.
Oral Swallowing is an unlikely route of exposure. Never give anything by mouth to a person who is losing consciousness, unconscious or convulsing. Call a poison center or doctor if exposed or you feel unwell.
Additional Information If exposed or concerned: Get medical attention.

5	Fire Fighting Measures
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Flash Point 154 °C, 309.2 °F PMCC (Typical)
Extinguishing Media CO₂, dry chemical, foam, water spray, water fog. Water can be used to cool and protect exposed material.
Firefighting Procedures Wear full protective firegear including self-containing breathing apparatus operated in the positive pressure mode with full facepiece, coat, pants, gloves and boots. Do not direct a solid stream of water on spilled material. Use flooding amounts of water as a fog. Use water to cool containers exposed to fire. Do not release chemically contaminated water into drains, soil or surface water.
Unusual Fire & Explosion Hazards Burning may produce irritating, toxic and obnoxious fumes. DO NOT USE a solid stream of water. See section 10 for additional information.

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6	Accidental Release Measures					
Spill Procedures	Only trained personnel should be permitted in area. Personal Protective Equipment must be worn, see Personal Protection Section for PPE recommendations. Take precautions to avoid release to the environment. Ventilate area if spilled in confined space or other poorly ventilated areas. Prevent entry into sewers and waterways, dispose of in accordance with all federal, state and local environmental regulation. Material on floors may be slippery. Pick up free liquid for recycle and/or disposal. Residual liquid can be absorbed on inert material. Wash spill area with soap and water. Pump any free liquid into an appropriate closed container.					
7	Handling and Storage					
Pumping Temperature	Not determined.					
Maximum Handling Temperature	60 °C, 140 °F					
Handling Procedures	Use with adequate ventilation. Keep containers closed and upright when not in use. Do not discharge into drains or the environment, dispose to an authorized waste collection point. Use appropriate containment to avoid environmental contamination. Avoid eye contact. Avoid repeated or prolonged skin contact. When handling, do not eat, drink, or smoke. Avoid drinking, tasting, swallowing or ingesting this product. Avoid breathing dust, fume, gas, mist, vapors or spray. Use grounding and bonding connection when transferring material to prevent static discharge, fire and explosion. Use spark-resistant tools. Avoid overheating. Wash thoroughly after handling. Launder contaminated clothing before reuse. Do not reuse empty containers. Empty containers retain material residue. Do not cut, weld, braze, solder, drill, grind or expose containers to heat, flame, spark or other sources of ignition. Dispose of packaging or containers in accordance with local, regional, national and international regulations.					
Maximum Storage Temperature	45 °C, 113 °F					
Storage Procedures	Take precautions to avoid release to the environment. Store in a cool, dry, well-ventilated area. Store separately from incompatible materials. Keep container tightly closed. Do not store in open, unlabeled or mislabeled containers. See section 10 for incompatible materials.					
Maximum Loading Temperature	60 °C, 140 °F					
8	Exposure Controls/Personal Protection					
Exposure Limits						
Comp	Exposure Guidelines					
	OSHA		ACGIH		Other	
	TWA	STEL	TWA	STEL	TWA	STEL
Methanol	200 ppm	N/E	200 ppm (s)	250 ppm	N/E	N/E
(s) - Skin exposure						
(p) - Proposed limit						
(c) - Ceiling exposure						
(l) - Recommended exposure limit						
(u) - Supplier recommended exposure limit						
(N/E) - None established						
Confidential - See section 1 for HMIRA exemption status						
Other Exposure Limits	Contains mineral oil. Under conditions which may generate mists, observe the OSHA PEL of 5 mg per cubic meter, ACGIH TWA of 5 mg per cubic meter.					
Engineering Controls	Material should be handled in enclosed vessels and equipment, in which case general (mechanical) room ventilation should be sufficient. Local exhaust ventilation should be used at points where dust, mist, vapors or gases can escape into the room air. Additional ventilation or exhaust may be required to maintain air concentrations below recommended exposure limits.					
Gloves Procedures	Nitrile. Consult clothing/glove manufacturer to determine appropriate type of glove for given situation. Gloves should always be inspected before each use and discarded if they show tears, pinholes, or signs of wear. Use good industrial hygiene practices to avoid skin contact. If contact with the material may occur wear chemically protective gloves.					
Eye Protection	Safety glasses. If potential for splash or mist exists, wear chemical goggles or faceshield.					
Respiratory Protection	Use NIOSH/MSHA approved full face respirator with a combination organic vapor and high efficiency filter cartridge if the recommended exposure limit is exceeded. Use self-contained breathing apparatus for entry into confined space, for other poorly ventilated areas and for large spill clean-up sites. Consult with an industrial hygienist to determine the appropriate respiratory protection for your specific use of this material. A respiratory protection program compliant with all applicable regulations must be followed whenever workplace conditions require the use of a respirator.					
Clothing Recommendation	Gloves, coveralls, apron, boots as necessary to minimize contact. Do not wear rings, watches or similar apparel that could entrap the material and cause a skin reaction. Launder contaminated clothing before reuse.					
9	Physical and Chemical Properties					
Flash Point	154 °C, 309.2 °F PMCC (Typical)					
Upper Flammable Limit	Not determined.					
Lower Flammable Limit	Not determined.					
Autoignition Point	Not determined.					
Explosion Data	Material does not have explosive properties.					
Vapor Pressure	Not determined.					

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pH	Not determined.
Specific Gravity	0.92 (15.6 °C)
Bulk Density	Not determined.
Water Solubility	Insoluble.
Percent Solid	Not determined.
Percent Volatile	Not determined.
Volatile Organic Compound	Not determined.
Vapor Density	Not determined.
Evaporation Rate	Not determined.
Odor	Mild petroleum
Appearance	Amber colored liquid.
Viscosity	35 Centistokes (40 °C) 6.3 Centistokes (100 °C)
Odor Threshold	Not determined.
Boiling Point	Not determined.
Pour Point Temperature	-15 °C, 5 °F
Melting / Freezing Point	Not determined.

The above data are typical values and do not constitute a specification. Vapor pressure data are calculated unless otherwise noted.

10	Stability and Reactivity
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Stability	Material is normally stable at moderately elevated temperatures and pressures.
Decomposition Temperature	Not determined.
Incompatibility	Acids. Oxidizing agents.
Polymerization	Will not occur.
Thermal Decomposition	Smoke, carbon monoxide, carbon dioxide, aldehydes and other products of incomplete combustion. Under combustion conditions, oxides of the following elements will be formed: phosphorus.
Conditions to Avoid	Do not expose to excessive heat, ignition sources, or oxidizing materials.

11	Toxicological Information
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– ACUTE EXPOSURE –

Eye Irritation	May cause eye irritation. Does not meet Canadian D2B or EU R36 criteria. Based on data from similar materials.
Skin Irritation	May cause slight skin irritation. Does not meet Canadian D2B or EU R38 criteria. Based on data from components or similar materials. Prolonged or repeated skin contact as from clothing wet with material may cause dermatitis. Symptoms may include redness, edema, drying, and cracking of the skin.
Respiratory Irritation	If material is misted or if vapors are generated from heating, exposure may cause irritation of mucous membranes and the upper respiratory tract. Based on data from components or similar materials.
Dermal Toxicity	The LD50 in rabbits is > 2000 mg/Kg. Based on data from components or similar materials.
Inhalation Toxicity	No data available to indicate product or components may be a toxic inhalation hazard.
Oral Toxicity	The LD50 in rats is > 2000 mg/Kg. Based on data from components or similar materials. Swallowing material may cause irritation of the gastrointestinal lining, nausea, vomiting, diarrhea, and abdominal pain.
Dermal Sensitization	No data available to indicate product or components may be a skin sensitizer.
Inhalation Sensitization	No data available to indicate product or components may be respiratory sensitizers.

– CHRONIC EXPOSURE –

Chronic Toxicity	No data available to indicate product or components present at greater than 1% are chronic health hazards.
Carcinogenicity	This product contains mineral oils which are considered to be severely refined and not considered to be carcinogenic under IARC. All of the oils in this product have been demonstrated to contain less than 3% extractables by the IP 346 test.
Mutagenicity	Product contains between 0.1% and 1% methanol. In-vitro tests on methanol indicate limited evidence of mutagenicity.
Reproductive Toxicity	No data available to indicate either product or components present at greater than 0.1% that may cause reproductive toxicity.
Teratogenicity	Product contains between 0.1% and 1% methanol. Methanol has been reported to cause birth defects in rats exposed to very high levels of vapor (20,000 ppm).

– ADDITIONAL INFORMATION –

Other	No other health hazards known.
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12	Ecological Information
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– ENVIRONMENTAL TOXICITY –

Freshwater Fish Toxicity	The acute LC50 is 100 - 1000 mg/L based on component data.
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Freshwater Invertebrates Toxicity The acute EC50 is 10 - 100 mg/L based on component data. Chronic effects expected at 10 - 100 mg/L based on component data.

Algal Inhibition The acute EC50 is 10 - 100 mg/L based on component data.

Saltwater Fish Toxicity Not determined.

Saltwater Invertebrates Toxicity Not determined.

Bacteria Toxicity Not determined.

Miscellaneous Toxicity Not determined.

– ENVIRONMENTAL FATE –

Biodegradation At least 25% of the components in this product show limited biodegradation based on OECD 301-type test data.

Bioaccumulation 25% or greater of the components display no potential to bioconcentrate.

Soil Mobility Not determined.

13	Disposal Considerations
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Waste Disposal This material, if discarded, is not a hazardous waste under RCRA Regulation 40 CFR 261. Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations.

14	Transport Information
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ICAO/IATA I Not regulated.

ICAO/IATA II Not regulated.

IMDG Not regulated.

IMDG EMS Fire Not applicable.

IMDG EMS Spill Not applicable.

IMDG MFAG Not applicable.

MARPOL Annex II Not determined.

USCG Compatibility Not determined.

U.S. DOT Bulk Not regulated.

DOT NAERG Not applicable.

U.S. DOT (Intermediate) Not regulated.

U.S. DOT Intermediate NAERG Not applicable.

U.S. DOT Non-Bulk Not regulated.

U.S. DOT Non-Bulk NAERG Not applicable.

Canada Not regulated.

Mexico Not regulated.

Bulk Quantity 85000 KG, 187391 lbs.

Intermediate Quantity 11000 KG, 24251 lbs.

Non-Bulk Quantity 400 KG, 882 lbs.

Review classification requirements before shipping materials at elevated temperatures.

15	Regulatory Information
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– Global Chemical Inventories –

USA All components of this material are on the US TSCA Inventory or are exempt.

Other TSCA Reg. None known.

EU To obtain information on the REACH compliance status of this product, please visit Lubrizol.com/REACH, or e-mail us at REACH_MSDS_INQUIRIES@Lubrizol.com

Japan All components are in compliance with the Chemical Substances Control Law of Japan.

Australia All components are in compliance with chemical notification requirements in Australia.

New Zealand All components are in compliance with chemical notification requirements in New Zealand.

Canada All components are in compliance with the Canadian Environmental Protection Act and are present on the Domestic Substances List.

Switzerland All components are in compliance with the Environmentally Hazardous Substances Ordinance in Switzerland.

Korea All components are in compliance in Korea.

Philippines All components are in compliance with the Philippines Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990 (R.A. 6969).

China All components of this product are listed on the Inventory of Existing Chemical Substances in China.

Taiwan All components of this product are listed on the Taiwan inventory.

– Other U.S. Federal Regulations –

SARA Ext. Haz. Subst. This product does not contain greater than 1.0% of any chemical substance on the SARA Extremely Hazardous Substances

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SARA Section 313

list

This product does not contain greater than 1.0% (greater than 0.1% for carcinogenic substance) of any chemical substances listed under SARA Section 313.

SARA 311 Classifications

Acute Hazard	No
Chronic Hazard	No
Fire Hazard	No
Reactivity Hazard	No

CERCLA Hazardous Substances

None known.

– State Regulations –

Cal. Prop. 65

This product contains the following chemical(s) known to the state of California to cause cancer and/or birth defects: 0.120% Methanol, CAS no. 67-56-1

– Product Registrations –

U.S. Fuel Registration Not applicable.
 Finnish Registration Number Not Registered
 Swedish Registration Number 490229-2
 Norwegian Registration Number Not Registered
 Danish Registration Number Not Registered
 Swiss Registration Number 611500
 Italian Registration Number 6178

– Other / International –

Miscellaneous Regulatory Information

Not determined.

16

Other Information

US NFPA Codes

Health	Fire	Reactivity	Special
1	1	0	N/E

(N/E) - None established

HMIS Codes

Health	Fire	Reactivity
1	1	0

Precautionary Labels

Caution.

- May cause eye irritation.
- May cause skin irritation.

Revision Indicators

Section: 2 Principal hazards.	Changed: 23 July 2013
Section: 3 Hazardous ingredients.	Changed: 23 July 2013
Section: 4 Additional first aid measures.	Changed: 14 May 2013
Section: 4 Eyes first aid.	Changed: 23 July 2013
Section: 4 Inhalation first aid.	Changed: 4 June 2013
Section: 4 Oral first aid.	Changed: 14 May 2013
Section: 4 Skin first aid.	Changed: 14 May 2013
Section: 5 Extinguishing media.	Changed: 14 May 2013
Section: 5 Special firefighting procedures.	Changed: 14 May 2013
Section: 5 Unusual fire & explosion hazards.	Changed: 14 May 2013
Section: 6 Spill procedures.	Changed: 23 July 2013
Section: 7 Handling procedures.	Changed: 23 July 2013
Section: 7 Storage procedures.	Changed: 23 July 2013
Section: 8 Clothing recommendations.	Changed: 14 May 2013
Section: 8 Eye protection.	Changed: 14 May 2013
Section: 8 Glove protection.	Changed: 14 May 2013
Section: 8 Hazardous ingredients.	Changed: 23 July 2013
Section: 8 Respiratory protection.	Changed: 14 May 2013
Section: 8 Ventilation procedures.	Changed: 14 May 2013
Section: 10 Conditions to avoid.	Changed: 14 May 2013
Section: 10 Incompatibility.	Changed: 14 May 2013
Section: 10 Stability.	Changed: 14 May 2013
Section: 11 Eye irritation.	Changed: 23 July 2013
Section: 11 Inhalation toxicity.	Changed: 4 June 2013
Section: 11 Mutagenicity.	Changed: 14 May 2013
Section: 11 Oral toxicity.	Changed: 23 July 2013
Section: 11 Skin irritation.	Changed: 23 July 2013

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Section: 11 Teratogenicity.	Changed: 14 May 2013
Section: 12 Algae toxicity.	Changed: 23 July 2013
Section: 12 Bacteria toxicity.	Changed: 14 May 2013
Section: 12 Accumulation.	Changed: 17 May 2013
Section: 12 Freshwater invertebrate toxicity.	Changed: 23 July 2013
Section: 15 California proposition 65.	Changed: 17 May 2013
Section: 15 SARA section 311/312.	Changed: 4 June 2013
Section: 16 HMIS codes.	Changed: 23 July 2013
Section: 16 NFPA Codes.	Changed: 14 May 2013
Section: 16 Principal hazards.	Changed: 23 July 2013

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