

MATERIAL SAFETY DATA SHEET

Pathfinder Lubricants Inc.

(4 pages)

SECTION 1 – Chemical Product and Company Identification

Manufacturer: Pathfinder Lubricants Inc.
12118 Rowan Place, Unit 1118, Richmond, British Columbia, Canada, V6V 2S6

Product: TRIJET
Product Use: Multi-purpose biodegradable lubricating fluid
Chinese HS code: 2916-1500

MSDS prepared by: Jimmy Tan, 604-273-9969; 1-800-363-6457
MSDS prepared on: March 21, 2017

SECTION 2 – Composition/Information on Ingredients

A. Mixed di-esters and poly-esters of the following acids	Oleic acid	CAS# 112-80-1
	Linoleic acid	CAS# 60-33-3
	Erucic acid	CAS# 112-86-7
	Erucic acid ester	CAS# 1120-34-9
B. Condensation products of the following chemicals	Tall oil fatty acids	CAS# 61790-12-3
	Oleic acid (Sorbitan Oleate)	CAS# 1338-43-8
	Linoleic acid (Sorbitan Linoleate)	CAS# 93907-64-3
	Sorbitol	CAS# 50-70-4
C. Light hydro-treated petroleum distillate		CAS# 64742-47-8
D. Combustion catalysts	1,1-Bis (tert-butyl-peroxy) cyclohexane	CAS# 3006-86-8
	Tert-butyl peroxy-2-methylbenzoate	CAS# 22313-62-8
	Cumene hydroperoxide	CAS# 80-15-9

SECTION 3 – Hazards Identification



Routes of entry: Inhalation, ingestion and skin absorption

Potential health effects: May be fatal or cause liver or kidney damage if inhaled, swallowed or absorbed through the skin. Avoid all contact and use with adequate ventilation. Keep container closed. Wash thoroughly after use.

SECTION 4 – First Aid Measures

SKIN CONTACT: Flush skin with water for at least 15 minutes while removing contaminated clothing and shoes. Thoroughly clean clothing and shoes before use.

EYE CONTACT: Wash eyes with plenty of water for at least 15 minutes lifting lids occasionally. Seek medical aid immediately.

INHALATION: Remove to fresh air. If not breathing give artificial respiration. If breathing is difficult give oxygen. Seek medical aid immediately.

INGESTION: If swallowed, induce vomiting immediately after drinking two glasses of water. Seek medical aid immediately. Never give anything by mouth to an unconscious person.

SECTION 5 – Fire Fighting Measures

This product is flammable	Flashpoint	160°C
	Upper flammable limit in air (% by volume)	10.6%
	Lower flammable limit in air (% by volume)	1.1%
	Auto ignition temperature	Not applicable
Means of extinction	Water spray, dry chemical, carbon dioxide, alcohol form of extinguisher	
Fire/Explosion	Unknown	
Firefighting procedure	Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and clothing.	

SECTION 6 – Accidental Release Measures

Leak and spills procedures: Absorb spill with inert material, then place in a chemical waste container. Remove and dispose of in a manner consistent with local, provincial and federal laws and regulations.

SECTION 7 – Handling and Storage

Handling procedures	Use in a well ventilated area and avoid contact with skin, eyes and clothing. Keep away from heat and flame.
Storage requirements	Store in a closed container in a cool, dry, well ventilated area.

SECTION 8 – Exposure Control/ Personal Protection

Respiratory protection	NIOSH/MSHA – approved respirator
Hand protection	Latex or vinyl gloves to prevent skin exposure
Eye protection	Safety glasses with side shades
Ventilation	Local exhaust system if in an enclosed area

SECTION 9 – Physical and Chemical Properties

Melting point	Information not available	Specific gravity	0.86
Boiling range	160°C - 180°C	% volatile by volume	100%
Vapor pressure	0.6mmHg	Evaporation rate	0.06
Vapor density	4.07	Evaporation standard	Butylacetate = 1
Solubility in water	100% soluble	Auto ignition temperature	Not applicable
Appearance and odor	Clear liquid	Lower flamm. limit in air	1.1%
Flash point	160°C	Upper flamm. limit in air	10.6%

SECTION 10 – Stability and Reactivity

Chemical stability	Stable
Incompatibility with other substances	Incompatible with reducing agents, oxidizing agents and alkalies
Reactivity	Avoid temperatures above 50°C
Hazardous decomposition products	Carbon dioxide; carbon monoxide. Hazardous polymerization will not occur.

SECTION 11 – Toxicological Information

Effects of acute exposure: Headache, nausea, dizziness, vomiting, tearing or clouding of the eyes, shortness of breath, and irritation of the eyes, nose and throat may occur. People with pre-existing eye, skin, liver, kidney, or respiratory conditions may be more susceptible. If inhaled, ingested or absorbed through the skin, may be fatal or cause liver or kidney damage.

Effects of chronic exposure: This material is a hemolytic agent and prolonged exposure may cause liver or kidney damage in addition to the symptoms described above.

The effects of acute or prolonged exposure have not been fully investigated and other symptoms may occur.

SECTION 12 – Ecological Information

Aquatic toxicity	Not known
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SECTION 13 – Disposal Considerations

Waste disposal	Do not puncture or incinerate containers even when empty. Dispose of containers and any unused product in accordance with local, provincial and federal laws and regulations.
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SECTION 14 – Transport Information

T.D.G. classification	Not classified
D.O.T. classification	Not classified

SECTION 15 – Regulatory Information

Canadian Regulations		
WHMIS 1988 Classification	B2; D2B	
CEPA (Canadian Environmental Protection Act)	All substances in this product are on the Canadian Domestic Substances list (DSL) or are not required to be listed	
U.S. Regulations	HMIS rating - Health	2
	HMIS rating - Flammability	2
	HMIS rating - Reactivity	1
	HMIS rating – Personal protection	B

SECTION 16 – Other Information

Notice	The information in this material Safety Data Sheet is provided by Pathfinder Lubricants Inc. free of charge. While it is believed to be reliable, it is intended for use by skilled persons at their own risk. Pathfinder Lubricants Inc. assumes no responsibility for events resulting or damages incurred from its use. The information in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.
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