



SAFETY DATA SHEET

According to Canadian Hazardous Products Regulations (HPR) (SOR/2015/17)

SDS # : 089204

MULTIS COMPLEX EP 2

Date of the previous version: not applicable

Revision Date: 2019-06-21

Version 1

1. IDENTIFICATION

Product identifier

Product name MULTIS COMPLEX EP 2

Other means of identification

Product Code(s) 089204

Number TE9
Substance/mixture Mixture

Recommended use of the chemical and restrictions on use

Identified uses Lithium Grease

Uses advised against Do not use for any purpose other than the one for which it is intended.

Details of the supplier of the safety data sheet

Supplier TOTAL CANADA INC.
220, LAFLEUR
LASALLE, QUEBEC
H8R 4C9
Tel: (514) 595-7579
Fax: (514) 595-5950

Contact Point service HSE

E-mail Address ProductSafety@total.com

Emergency telephone number

Emergency telephone

Company Phone Number

1-800-463-3955

1-866-928-0789 (For Emergencies, call CARECHEM 24/7 Domestic)

1-215-207-0061 (For Emergencies, call CARECHEM 24/7 International)

2. HAZARDS IDENTIFICATION

Classification

The product is not classified as hazardous according to WHMIS

Label elements

The product is not classified as hazardous according to WHMIS

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Hazard Statements

None

Other information

Physical-Chemical Properties

Contaminated surfaces will be extremely slippery.

Environmental properties

The product may form an oil film on the water surface that may stop the oxygen exchange.
Should not be released into the environment.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Chemical nature

Mineral oil of petroleum origin.

Chemical Name	EC-No	CAS-No	Weight %
Residual Oils (Petroleum), Solvent Dewaxed	265-166-0	64742-62-7	40<50
Dilithium azelate	254-184-4	38900-29-7	1<3
Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts	270-608-0	68457-79-4	1<2.5

Additional information

Product containing mineral oil with less than 3% DMSO extract as measured by IP 346

4. FIRST AID MEASURES

First aid measures for different exposure routes

General advice

IN CASE OF SERIOUS OR PERSISTENT CONDITIONS, CALL A DOCTOR OR
EMERGENCY MEDICAL CARE.

Eye contact

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing.

Skin contact

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. High pressure jets may cause skin damage. Take victim immediately to hospital.

Inhalation

Remove casualty to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration.

Ingestion

Clean mouth with water. Do NOT induce vomiting. Never give anything by mouth to an

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unconscious person. Call a physician or Poison Control Center immediately.

Protection of First-aiders

First aider needs to protect himself. See Section 8 for more detail. Do not use mouth-to-mouth method if victim ingested or 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.

Most important symptoms/effects, acute and delayed**Skin contact**

Not classified based on available data. High pressure injection of the products under the skin may have very serious consequences even though no symptom or injury may be apparent.

Eye contact

Not classified based on available data.

Inhalation

Not classified based on available data. Inhalation of vapors in high concentration may cause irritation of respiratory system.

Ingestion

Not classified based on available data. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Symptoms

No information available.

Indication of immediate medical attention and special treatment needed, if necessary**Notes to physician**

Treat symptomatically.

5. FIRE-FIGHTING MEASURES**Suitable Extinguishing Media**

Carbon dioxide (CO₂). ABC powder. Foam. Water spray or fog.

Unsuitable Extinguishing Media

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

Special Hazard

Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot. These may be highly dangerous if inhaled in confined spaces or at high concentration. Combustion products include sulphur oxides (SO₂ and SO₃) and Hydrogen sulphide H₂S, Mercaptans, Phosphorous oxides, Nitrogen oxides (NO_x), Zinc oxides.

Explosion Data**Sensitivity to Mechanical Impact
Sensitivity to Static Discharge**

None.
None.

Special protective equipment for fire-fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Evacuate non-essential personnel.

6. ACCIDENTAL RELEASE MEASURES

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Personal precautions, protective equipment and emergency procedures

General Information Do not touch or walk through spilled material. Contaminated surfaces will be extremely slippery. Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition.

Other information See Section 12 for additional information.

Environmental precautions

General Information Do not allow material to contaminate ground water system. Prevent entry into waterways, sewers, basements or confined areas. Local authorities should be advised if significant spillages cannot be contained.

Methods and material for containment and cleaning up

Methods for containment If necessary dike the product with dry earth, sand or similar non-combustible materials.

Methods for cleaning up Dispose of contents/container in accordance with local regulation. In case of soil contamination, remove contaminated soil for remediation or disposal, in accordance with local regulations.

7. HANDLING AND STORAGE**Precautions for safe handling**

Advice on safe handling For personal protection see section 8. Use only in well-ventilated areas. Avoid contact with skin, eyes and clothing.

Prevention of fire and explosion Take precautionary measures against static discharges.

Hygiene measures Ensure the application of strict rules of hygiene by the personnel exposed to the risk of contact with the product. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product. Provide regular cleaning of equipment, work area and clothing. Do not use abrasives, solvents or fuels. Do not dry hands with rags that have been contaminated with product. Do not put product contaminated rags into workwear pockets.

Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions Keep away from food, drink and animal feedstuffs. Keep in a bonded area. Keep container tightly closed. Keep preferably in the original container. Otherwise reproduce all indication of the regulation label on the new container. Do not remove the hazard labels of the containers (even if they are empty). Design the installations in order to avoid accidental emissions of product (due to seal breakage, for example) onto hot casings or electrical contacts. Store at room temperature. Protect from moisture.

Materials to Avoid Strong oxidizing agents.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Control parameters****Exposure limits**

Mineral oil mist:

USA: OSHA (PEL) TWA 5 mg/m³, NIOSH (REL) TWA 5 mg/m³, STEL 10 mg/m³, ACGIH (TLV) TWA 5 mg/m³ (highly refined).**Legend**

See section 16

Exposure controls**Engineering Measures**

Apply technical measures to comply with the occupational exposure limits. Ensure adequate ventilation, especially in confined areas. When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment.

Individual protection measures, such as personal protective equipment**General Information**

Protective engineering solutions should be implemented and in use before personal protective equipment is considered. These recommendations apply to the product as supplied.

Eye/face protection

If splashes are likely to occur, wear safety glasses with side-shields.

Skin and body protection

Wear suitable protective clothing. Protective shoes or boots.

Hand Protection

Hydrocarbon-proof gloves: Fluorinated rubber. Nitrile rubber. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.

Respiratory protection

None under normal use conditions. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Respirator with combination filter for vapor/particulate. Warning ! filters have a limited use duration. The use of breathing apparatus must comply strictly with the manufacturer's instructions and the regulations governing their choices and uses.

9. PHYSICAL AND CHEMICAL PROPERTIES**Physical and chemical properties**

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Color		No information available	
Physical State @20°C		solid	
Odor		Characteristic	
Odor Threshold		No information available	
<u>Property</u>	<u>Values</u>	<u>Remarks</u>	<u>Method</u>
pH		Not applicable	
Melting point/range		No information available	
Boiling point/boiling range		No information available	
Flash point	235 °C 455 °F	Not applicable	ASTM D92 ASTM D92.
Evaporation rate		No information available	
Flammability Limits in Air			
upper		No information available	
Lower		No information available	
Vapor Pressure		No information available	
Vapor density		No information available	
Relative density	0.913	@ 20 °C	
Density	913 kg/m ³	@ 20 °C	
Water solubility		Insoluble	
Solubility in other solvents		No information available	
logPow		No information available	
Autoignition temperature		No information available	
Decomposition temperature		No information available	
Viscosity, kinematic	165 mm ² /s	Not applicable	ASTM D445
Explosive properties	Not explosive		
Oxidizing Properties	Not applicable		
Possibility of hazardous reactions	None under normal processing		
<u>Other information</u>			
Freezing Point		No information available	

10. STABILITY AND REACTIVITY

<u>Reactivity</u>	None under normal processing.
<u>Chemical stability</u>	Stable under recommended storage conditions.
<u>Possibility of hazardous reactions</u>	No dangerous reaction known under conditions of normal use.
<u>Conditions to avoid</u>	Keep away from open flames, hot surfaces and sources of ignition. Keep away from heat and sparks.
<u>Incompatible materials</u>	Strong oxidizing agents.
<u>Hazardous Decomposition Products</u>	Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot. Combustion

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products include sulphur oxides (SO₂ and SO₃) and Hydrogen sulphide H₂S, Mercaptans, Phosphorous oxides, Nitrogen oxides (NO_x), Zinc oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Symptoms	No information available.
Skin contact	Not classified based on available data. High pressure injection of the products under the skin may have very serious consequences even though no symptom or injury may be apparent.
Eye contact	Not classified based on available data.
Inhalation	Not classified based on available data. Inhalation of vapors in high concentration may cause irritation of respiratory system.
Ingestion	Not classified based on available data. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Acute toxicity - Product Information

Oral	Not classified based on available data
ATEmix (oral)	11,281.00 mg/kg
Dermal	Not classified based on available data
Inhalation	Not classified based on available data

Acute toxicity - Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Dilithium azelate 38900-29-7	LD50 >300 mg/kg bw (rat)	LD50 >2000 mg/kg bw (rat)	
Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts 68457-79-4	LD50 3600 mg/kg (Rat - OECD 401)	LD50 > 20000 mg/kg (Rabbit - OECD 402)	

Skin corrosion/irritation	Not classified based on available data. The supplier of one or more of the components contained within this formulation has indicated that he has data on the components and/or similar mixtures, which confirms that at the concentration used, classification is not required.
Serious eye damage/eye irritation	Not classified based on available data. The supplier of one or more of the components contained within this formulation has indicated that he has data on the components and/or similar mixtures, which confirms that at the concentration used, eye damage classification

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Respiratory or skin sensitization is not required.
 Germ cell mutagenicity Not classified based on available data.
 Carcinogenicity Not classified based on available data.

Reproductive toxicity Not classified based on available data.
 Target Organ Effects (STOT) None known.
 STOT - single exposure Not classified based on available data.
 STOT - repeated exposure Not classified based on available data.
 Aspiration hazard Not classified based on available data.

12. ECOLOGICAL INFORMATION

Ecotoxicity No information available

Acute aquatic toxicity - Product Information

No information available

Acute aquatic toxicity - Component Information

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates	Toxicity to microorganisms
Residual Oils (Petroleum), Solvent Dewaxed 64742-62-7		LL50(96h) 100 mg/l (Pimephales promelas - OECD 203)	EL50(48h) 10000 mg/l (Daphnia magna - OECD 202)	
Dilithium azelate 38900-29-7	LC50 >100 mg/l	LC50 >100 mg/l	LC50 >100 mg/l	
Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts 68457-79-4	EbL50 (72h) 21 mg/l (Scenedesmus subspicatus - OECD 201)	LC50 (96h) 4.5 mg/l (Cyprinodon variegatus - OECD 203)	EC50 (48h) 23 mg/l (Daphnia magna - OECD 202)	

Chronic aquatic toxicity - Product Information

No information available

Chronic aquatic toxicity - Component Information

Chemical Name	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates	Toxicity to fish	Toxicity to microorganisms
Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts		NOEC(21d) 0.8 mg/l Daphnia magna		

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Effects on terrestrial organisms No information available.**Persistence and degradability**

No information available

Bioaccumulative potential**Product Information** No information available.**logPow** No information available**Component Information**

Chemical Name	log Pow
Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts 68457-79-4	0.69

Mobility

Soil Given its physical and chemical characteristics, the product has no soil mobility.
Air Loss by evaporation is limited
Water The product is insoluble and floats on water

Other adverse effects**General Information** No information available**13. DISPOSAL CONSIDERATIONS****Waste treatment**

Waste from residues/unused products Should not be released into the environment. Do not empty into drains. Dispose of in accordance with all applicable national environmental laws and regulations. Where possible recycling is preferred to disposal or incineration. Other Regulatory Status: No Canadian federal standard; however, for general discharge guidance, federal installations limited to 15 mg/L for total oil and grease. Provincial criteria are likely and should be requested when notifying provincial authorities.

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal.

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14. TRANSPORT INFORMATION

<u>TDG</u>	Not regulated
<u>ICAO/IATA</u>	Not regulated
<u>IMDG/IMO</u>	Not regulated
<u>ADR/RID</u>	Not regulated

15. REGULATORY INFORMATION

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) (SOR/2015/17) and the Safety Data Sheet (SDS) contains all the information required by the HPR

International Inventories

All the substances contained in this product are listed or exempted from listing in the following inventories:
 China (IECSC)
 Philippines (PICCS)
 Australia (AICS)
 Korea (KECL)
 Canada (DSL/NDSL)
 U.S.A. (TSCA)

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

<u>NFPA</u>	Health Hazard 1	Flammability 1	Instability 0	Special hazards -
<u>HMIS</u>	Health Hazard 1	Flammability 1	Physical Hazard 0	Personal protection X

Revision Date: 2019-06-21
Revision Note Initial Release

Abbreviations, acronyms

ACGIH = American Conference of Governmental Industrial Hygienists

bw = body weight

bw/day = body weight/day

EC x = Effect Concentration associated with x% response

GLP = Good Laboratory Practice

IARC = International Agency for Research of Cancer

LC50 = 50% Lethal concentration - Concentration of a chemical in air or a chemical in water which causes the death of 50% (one half) of a group of test animals

LD50 = 50% Lethal Dose - Chemical amount, given at once, which causes the death of 50% (one half) of a group of test animals

LL = Lethal Loading

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NIOSH = National Institute of Occupational Safety and Health

NOAEL = No Observed Adverse Effect Level

NOEC = No Observed Effect Concentration

NOEL = No Observed Effect Level

OECD = Organization for Economic Co-operation and Development

OSHA = Occupational Safety and Health Administration

UVCB = Substance of unknown or Variable composition, Complex reaction products or Biological material

NTP = National Toxicology Program

Section 8

TWA - Time Weight Average

STEL - Short Term Exposure Limits

+	Sensitizer	*	Skin designation
C:	Carcinogen	R:	Toxic to reproduction
Ceiling:	Ceiling Limit Value		

This safety data sheet serves to complete but not to replace the technical product sheets. The information contained herein is given in good faith and is accurate to the best of knowledge at the date indicated above. It is understood by the user that any use of the product for purposes other than those for which it was designed entails potential risk. The information given herein in no way dispenses the user from knowing and applying all provisions regulating his activity. The user bears sole liability for the precautions required when using the product. The regulatory texts indicated herein are intended to aid the user to fulfil his obligations. This list is not to be considered complete and exhaustive. It is the user's responsibility to ensure that he is subject to no other obligations than those mentioned.

End of the Safety Data Sheet