SAFETY DATA SHEET

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

SDS # : 080084

DYNATRANS VX FE

Date of the previous version: 2018-06-18 **Revision Date:** *2019-06-27* **Version** *2*

1. IDENTIFICATION

Product identifier

Product name DYNATRANS VX FE

Other means of identification

Product Code(s) 080084

Number 4ZO
Substance/mixture Mixture

Recommended use of the chemical and restrictions on use

Identified uses Manual Transmission Fluid

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

Skin sensitization - Category 1

Label elements

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WARNING

Hazard Statements
May cause an allergic skin reaction

Precautionary Statements - Prevention
Avoid breathing dust/fume/gas/mist/vapors/spray
Contaminated work clothing should not be allowed out of the workplace
Wear protective gloves

Precautionary Statements - Response
• Specific treatment (see supplemental first aid instructions on this label)
Skin
IF ON SKIN: Wash with plenty of water and soap
If skin irritation or rash occurs: Get medical advice/attention
Take off contaminated clothing and wash it before reuse

Precautionary Statements - Disposal
Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

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 %
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	276-738-4	72623-87-1	30-<40
Distillates (petroleum), hydrotreated heavy paraffinic	265-157-1	64742-54-7	1-<2.5
Zinc bis[O,O-bis(2-ethylhexyl)]	224-235-5	4259-15-8	1-<2.5

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bis(dithiophosphate)			
Calcium long chain alkaryl sulfonate	-	722503-68-6	1-<2.5
Benzenesulfonic acid, propenated, calcium salt, overbased	271-877-7	68610-84-4	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 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 May cause an allergic skin reaction. 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

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Notes to physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media Carbon dioxide (CO_2). 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 (NOx), Hydrogen fluoride, Hydrogen chloride, Sodium oxides, Silicon dioxide, Zinc oxides.

Explosion Data

Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge 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

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.

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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 feedingstuffs. Keep in a bunded 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.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits Mineral oil mist:
USA: OSHA (PEL) TWA 5 mg/m^3, NIOSH (REL) TWA 5 mg/m^3, STEL 10 mg/m^3, ACGIH (TLV) TWA 5 mg/m^3 (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

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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

Appearance		limpid	
Color		amber	
Physical State @20°C		liquid	
Odor		Characteristic	
Odor Threshold		No information available	
Property	**Values**	**Remarks**	**Method**
pH		Not applicable	
Melting point/range		Not applicable	
Boiling point/boiling range		No information available	
Flash point	**254 °C** 489 °F		Cleveland Open Cup (COC) Cleveland Open Cup (COC).
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	0.855	@ 15 °C	

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Density	855 kg/m³	@ 15 °C	
Water solubility		Insoluble	
Solubility in other solvents		No information available	
logPow		No information available	
Autoignition temperature		Not applicable	
Decomposition temperature		No information available	
Viscosity, kinematic	40 mm2/s	@ 40 °C	ASTM D445
Explosive properties	Not explosive		
Oxidizing Properties	Not applicable		
Possibility of hazardous reactions	None under normal processing		
Other information			

Freezing Point No information available

10. STABILITY AND REACTIVITY

Reactivity None under normal processing.

Chemical stability Stable under recommended storage conditions.

Possibility of hazardous reactions No dangerous reaction known under conditions of normal use.

Conditions to avoid Keep away from open flames, hot surfaces and sources of ignition. Keep away from heat and sparks.

Incompatible materials Strong oxidizing agents.

Hazardous Decomposition Products Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot. Combustion products include sulphur oxides (SO2 and SO3) and Hydrogen sulphide H2S, Mercaptans, Phosphorous oxides, Nitrogen oxides (NOx), Zinc oxides. Hydrogen chloride. Silicon dioxide. Ammonia. Hydrogen fluoride.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Symptoms No information available.

Skin contact May cause an allergic skin reaction. 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.

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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
Dermal	Not classified based on available data
Inhalation	Not classified based on available data
ATEmix (inhalation-dust/mist)	12.50 mg/l
ATEmix (inhalation-vapor)	365.90 mg/l

Acute toxicity - Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based 72623-87-1	LD50 > 5000 mg/kg bw (rat - OECD 401)	LD50 > 5000 mg/kg bw (rabbit - OECD 402)	LC50 (4h) > 5 mg/l (aerosol) (rat - OECD 403)
Distillates (petroleum), hydrotreated heavy paraffinic 64742-54-7	LD50 > 5000 mg/kg bw (rat - OECD 420)	LD50 > 5000 mg/kg bw (rabbit - OECD 402)	LC50 (4h) > 5 mg/l (aerosol) (rat - OECD 403)
Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) 4259-15-8	LD50 3100 mg/kg (Rat - OECD 401)	LD50 > 5000 mg/kg (Rabbit - OECD 402)	
Benzenesulfonic acid, propenated, calcium salt, overbased 68610-84-4	LD50 > 5000 mg/kg (Rat - OECD 423)	LD50 > 5000 mg/kg (Rat - OECD 402)	

Skin corrosion/irritation	Not classified based on available data.
Serious eye damage/eye irritation	Not classified based on available data.
Respiratory or skin sensitization	Contains sensitizer(s). May produce an allergic reaction.
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

Acute aquatic toxicity - Product Information

No information available

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Acute aquatic toxicity - Component Information

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates	Toxicity to microorganisms
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based 72623-87-1	EL50 (48h) > 100 mg (Pseudokirchnerella subcapitata - OECD 201)	LL50 (96h) > 100 mg/l (Oncorhynchus mykiss - OECD 203)	EL50 (48h) > 10000 mg/l (Daphnia magna - OECD 202) LL50 (24h) > 10000 mg/l (Gammarus pulex - OECD 202) LL50 (48h) > 10000 mg/l (Gammarus pulex - OECD 202) LL50 (72h) > 10000 mg/l (Gammarus pulex - OECD 202) LL50 (96h) > 10000 mg/l (Gammarus pulex - OECD 202)	
Distillates (petroleum), hydrotreated heavy paraffinic 64742-54-7	EL50 (48h) > 100 mg/l (Pseudokirchnerella subcapitata - OECD 201)	LL50 (96h) > 100 mg/l (Oncorhynchus mykiss - OECD 203)	EL50 (48h) > 10000 mg/l (Daphnia magna - OECD 202)	
Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) 4259-15-8	EC50 (72h) > 240 mg/L (Desmodesmus subspicatus)	LC50(96h) 46 mg/l	EC50(48h) 75 mg/l	
Benzenesulfonic acid, propenated, calcium salt, overbased 68610-84-4	LC50 (72h) 1000 mg/l (Pseudokirchnerella subcapitata - static)	LC50 (96h) 100 mg/l (Oncorhynchus mykiss - semi static - OECD 203)	EL50 (48h) > 1000 mg/l (Daphnia magna - static)	

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
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based 72623-87-1	NOEL (72h) >= 100 mg/l (Pseudokirchnerella subcapitata - OECD 201)	NOEL (21d) 10 mg/l (Daphnia magna - OECD 211)	NOEL (14/28d) > 1000 mg/l (Oncorhynchus mykiss - QSAR Petrotox) NOEL (96h) > 100 mg/l (Pimephales promelas - OECD 203)	
Distillates (petroleum), hydrotreated heavy		NOEL (21d) 10 mg/l (Daphnia magna - QSAR	NOEL (14/28d) > 1000 mg/l (Oncorhynchus mykiss -	

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paraffinic 64742-54-7		Petrotox)	QSAR Petrotox)	
Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) 4259-15-8		NOEC(21d) 0.4-0.8 mg/l		
Benzenesulfonic acid, propenated, calcium salt, overbased 68610-84-4		NOELR (48h) 1.8 mg/l (Daphnia magna - OECD 202)		

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
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based 72623-87-1	4.1
Distillates (petroleum), hydrotreated heavy paraffinic 64742-54-7	-
Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) 4259-15-8	3.59

Mobility

Soil Given its physical and chemical characteristics, the product generally shows low soil mobility

Air Loss by evaporation is limited

Water The product is insoluble and floats on water The product is insoluble and sinks in water

Other adverse effects

General Information No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment

Waste from residues/unused Should not be released into the environment. Do not empty into drains. Dispose of in

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products	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.

14. TRANSPORT INFORMATION

TDG	Not regulated
ICAO/IATA	Not regulated
IMDG/IMO	Not regulated
ADR/RID	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:
Australia (AICS)
Canada (DSL/NDSL)
New Zealand (NZIoC)
U.S.A. (TSCA)
Korea (KECL)
Philippines (PICCS)
Europe (EINECS/ELINCS/NLP)

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

NFPA	**Health Hazard** 2	**Flammability** 1	**Instability** 0	**Special hazards** -
HMIS	**Health Hazard** 2	**Flammability** 1	**Physical Hazard** 0	**Personal protection** X

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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
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