



MSDS

(Material Safety Data Sheet)

SECTION #1 PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME: **TOTAL EQUIVIS ZS 15, 22, 32, 36, 46, 68 and 100**

CHEMICAL NAME AND SYNONYMS: MIXTURE

MANUFACTURER/SUPPLIER'S NAME: TOTAL LUBRICANTS CANADA INC.
220, LAFLEUR
LASALLE, QUEBEC
H8R 4C9
Tel.: (514) 595-7579 or 1-800-463-3955

24 HOURS EMERGENCY: Call CHEMTREC 1-800-424-9300 or 703-527-3887

PRODUCT USE: ANTI-WEAR HIGH VISCOSITY LUBRICANT FOR HYDRAULIC SYSTEMS

WHMIS CLASS AND DESCRIPTION -



This product is not regulated by the WHMIS.

Other Hazardous System Classification: According to the NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) and Hazardous Materials Identification System (HMIS, USA):

NFPA		HMIS	
0	HEALTH	0	NO SIGNIFICANT RISK
1	FLAMMABILITY	1	PRESENT A WEAK RISK
0	RÉACTIVITY	0	NO SIGNIFICANT RISK
	INDIVIDUAL PROTECTION	B	Eye protection and gloves are recommended

SECTION #2 COMPOSITION/INFORMATION ON INGREDIENTS

NOM	%	No CAS
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- No hazardous ingredients as defined by the Canadian Hazardous Products Act (BILL C70) or by OSHA 29 CFR 1910.1200.

ADDITIONAL REGULATORY INFORMATION

- Canadian DSL and NDSL status: All ingredients are listed.
- * No components of this product have been found carcinogenic or potential carcinogen. Does not contain ingredients that are listed as carcinogenic or potential carcinogen by OSHA, IARC or the U.S. National Toxicology Program (NTP). This product or its components have no teratogenic or mutagenic effects known.

SECTION #3 PHYSICAL DATA

PHYSICAL STATE AT 25°C

BOILING POINT:

POUR POINT (°C):

Liquid

> 250°C

EQUIVIS ZS 15 : -42

EQUIVIS ZS 22: -42

EQUIVIS ZS 32: -39

EQUIVIS ZS 46: -39

EQUIVIS ZS 68: -36

EQUIVIS ZS 100: -36

EQUIVIS ZS 150: -36

DENSITY (g/cm³ at 15°C):

EQUIVIS ZS 15:0.858

EQUIVIS ZS 22 : 0.861

EQUIVIS ZS 32 : 0.870

EQUIVIS ZS 46 : 0.874

EQUIVIS ZS 68 : 0.882

EQUIVIS ZS 100 : 0.885

EQUIVIS ZS 150 :0.889

Vapor Density (mg/m³):

Negligible

VAPOR PRESSURE (mm Hg at 20°C):

Negligible

pH:

Not Applicable

VISCOSITY (cSt at 40°C):

EQUIVIS ZS 15 : 14.7

EQUIVIS ZS 22 : 22.42

EQUIVIS ZS 32 : 32.3

EQUIVIS ZS 46 : 45.96

EQUIVIS ZS 68 : 67.5

EQUIVIS ZS 100 : 100.8

EQUIVIS ZS 150 : 149.4

VISCOSITY (cSt at 100°C):

EQUIVIS ZS 15 : 3.75

EQUIVIS ZS 22 : 5.08

EQUIVIS ZS 32 : 6.5

EQUIVIS ZS 46 : 8.4

EQUIVIS ZS 68 : 11.3

EQUIVIS ZS 100 : 15.6

EQUIVIS ZS 150 : 20.65

INDICE ACIDE (mg KOH/g):

0.65

EVAPORATION RATE: (ethyl ether =1):

< 1

SOLUBILITY IN WATER:

Negligible

APPEARANCE:

Clear, yellow to amber

ODOR :

Characteristic

COLOR (ASTM D1500)

EQUIVIS ZS 15 : ≤ 0.5

EQUIVIS ZS 22 : ≤ 0.5

EQUIVIS ZS 32 : ≤ 1.0

EQUIVIS ZS 46 : ≤ 1.0

EQUIVIS ZS 68 : ≤ 1.0

EQUIVIS ZS 100 : ≤ 1.5

EQUIVIS ZS 150: ≤ 2.5

SECTION #4 STABILITY AND REACTIVITY

STABILITY:	Stable under normal conditions of use.
CONDITIONS TO AVOID:	Avoid excessive heat, open flames and formation of oil mist.
PRODUCTS TO AVOID:	Oxidizing agents, strong acids and bases.
HAZARDOUS DECOMPOSITION PRODUCTS:	N/A
POLYMERIZATION:	Will not occur

SECTION #5 FIRE FIGHTING MEASURES

FLASH POINT (ISO 2592):	EQUIVIS ZS 15 : $\geq 174^{\circ}\text{C}$ EQUIVIS ZS 22 : $\geq 202^{\circ}\text{C}$ EQUIVIS ZS 32 : $\geq 208^{\circ}\text{C}$ EQUIVIS ZS 46 : $\geq 215^{\circ}\text{C}$ EQUIVIS ZS 68 : $\geq 220^{\circ}\text{C}$ EQUIVIS ZS 100 : $\geq 230^{\circ}\text{C}$ EQUIVIS ZS 150 : $\geq 248^{\circ}\text{C}$
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FLAMMABILITY LIMITS IN AIR (% PAR VOLUME):	LEL: Not available UEL: Not available
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AUTOIGNITION TEMPERATURE ($^{\circ}\text{C}$):	$> 250^{\circ}\text{C}$ (ASTM E 659)
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EXTINGUISHING MEDIA:	Foam, Dry chemical and CO_2
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HAZARDOUS COMBUSTION PRODUCTS:	Normal combustion products, CO and CO_2 .
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SPECIAL FIRE FIGHTING PROCEDURES:	Do not enter confined fire space without adequate protective clothing and an approved positive self-contained breathing apparatus. Use water to cool fire exposed containers.
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SECTION #6 TOXICOLOGICAL INFORMATION

SPECIES	LD ₅₀ ORAL	LD ₅₀ DERMAL	LC ₅₀ INHALATION	HRS
Rat	$> 5000 \text{ mg/Kg}$	$> 2000 \text{ mg/Kg}$	N/A	---

This product is not considered toxic.

INHALATION:	This product should not be harmful through inhalation. Prolonged exposure to high vapor concentration of this product can cause headache, dizziness and nausea. Short-term overexposure can cause an irritation to the respiratory passages. Exposure limit to the mist = 5 mg/m^3 (TLV/TWA, ACGIH).
CONTACT WITH EYES:	This product should not cause eye irritation. Repeated and prolonged contact may cause eye irritation.
SKIN CONTACT:	This product should not cause skin irritation. Prolonged and repeated contact with this product can cause skin drying, which may result in skin irritation and dermatitis.
INGESTION:	This product is not considered toxic by ingestion. In large amount it can cause digestive distress and diarrhea.

SECTION #7 ACCIDENTAL RELEASE MEASURES

SPILL AND LEAK PROCEDURES: Eliminate all ignition sources. Stop leak only if safe to do so. Absorb residue or small spills with absorbent material and remove to non-leaking containers for disposal.

SECTION #8 HANDLING AND STORAGE

STORAGE AND HANDLING: Store in cool, dry, ventilated area, away from heat and ignition sources. Use good personal hygiene. Always keep the container close.

SECTION #9 EXPOSURE CONTROLS / PERSONAL PROTECTION

VENTILATION: Mechanical ventilation is recommended.

RESPIRATORY PROTECTION: If mist present, chemical cartridge respirator is recommended.

GLOVES: Resistant gloves (Viton, Nitrile, Neoprene) are recommended when handling this material.

EYE PROTECTION: Chemical safety goggles are recommended.

OTHER PROTECTION: In confined spaces or where the risk of skin exposure is higher, resistant clothing or apron should be worn.

SECTION #10 DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHODS: Consult relevant local authorities. Reclaim or dispose of at a licensed waste disposal company. Incinerate with approval of appropriate local authority.

SECTION #11 FIRST AID

INHALATION: Remove person to fresh air. See a physician if irritation persists.

CONTACT WITH EYES: Flush immediately with water for at least 15 minutes.

CONTACT WITH SKIN: Wash contaminated skin with mild soap and water. See a physician if irritation persists.

INGESTION: This product has a low toxicity. May cause nausea and have a laxative effect. Do not induce vomiting. Contact an Anti-Poison Center (1-800-463-5060).

INHALATION:	This product should not be harmful through inhalation. Prolonged exposure to high vapor concentration of this product can cause headache, dizziness and nausea. Short-term overexposure can cause an irritation to the respiratory passages. Exposure limit to the mist = 5 mg/m ³ (TLV/TWA, ACGIH).
CONTACT WITH EYES:	This product should not cause eye irritation. Repeated and prolonged contact may cause eye irritation.
SKIN CONTACT:	This product should not cause skin irritation. Prolonged and repeated contact with this product can cause skin drying, which may result in skin irritation and dermatitis.
INGESTION:	This product is not considered toxic by ingestion. In large amount it can cause digestive distress and diarrhea.

BIODEGRADABILITY: THE MINERAL OIL BASE OF THIS PRODUCT IS CONSIDERED INHERENTLY BIODEGRADABLE. HOWEVER SOME COMPONENTS PRESENT IN THIS PRODUCT MAY NOT READILY BIODEGRADABLE.

Other agencies:	
USDOT :	Not regulated by that agency as an hazardous material.
IMO/IMDG (SEA):	Not regulated as a hazardous material for maritime transport.
IATA (AIR):	Not regulated as a hazardous material for air transport.
ADNR (INLAND WATERWAY TRANSPORT):	Not regulated by that agency as a hazardous material.
ADR/RID :	Not regulated as an hazardous material for land transport.

SECTION #15 REGULATORY INFORMATION

This product has been classified in accordance with the hazard criteria of the Controlled Products. Regulations (CPR) and the MSDS contains all the information required by the CPR.

THIS PRODUCT IS NOT A WHMIS CONTROLLED SUBSTANCE.

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.

DSL/NDSL Status: This product, or all components, are listed on the Domestic Substances List, as required under the Canadian Environmental Protection Act. This product and/or all components are listed on the U.S. EPA TSCA Inventory.

SECTION #16 ADDITIONAL INFORMATION

Prepared by: André St-Jean, Chemist

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