



MATERIAL SAFETY DATA SHEET **FL Viscosity Oil Co.**

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

CASE AKCELA TSM-BIO FLUID

CAS Number: Mixture

SYNONYMS: Biodegradable Tractor Hydraulic Fluid

Company Information

FL Viscosity Oil Company
600-H Joliet Road
Willowbrook, IL 60527

Transportation Emergency Response

CHEMTREC (800) 424-9300

Product Information

MSDS Requests: (630) 850-4000 Website: www.viscosityoil.com

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SECTION 2 COMPOSITION / INFORMATION ON INGREDIENTS

Components	Hazardous (Y/N)	CAS Number	Amount
Base Lubricating Oils	No	Mixture	26-29 %
Synthetic Oils	No	Mixture	57-60 %
Additive Package containing Zn, Ca, S, N, P, antioxidants and copolymers	No	Mixture	12-16 %

SECTION 3 HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

- MAY CAUSE EYE DISCOMFORT UPON DIRECT CONTACT
- MAY CAUSE MINOR SKIN IRRITATION UPON PROLONGED CONTACT

IMMEDIATE HEALTH EFFECTS

Eye contact: May cause mild, short-lasting discomfort to eyes, based on testing of similar products and/or components.

Skin contact: Negligible irritation to skin at ambient temperatures. Prolonged or repeated contact may result in oil acne which is characterized by blackheads with possible secondary infection. Injection of pressurized hydrocarbons under the skin can cause inflammation and swelling, as well as severe, permanent tissue damage. The initial wound at the injection site may not appear to be serious at first, but, if left untreated, could result in disfiguration or amputation of the affected part.

Inhalation: This product has a low vapor pressure and is not expected to present an inhalation hazard at ambient conditions. Caution should be taken to prevent the formation of an aerosol or misting of this product. The permissible exposure limit (PEL) and threshold limit value (TLV) for this product as oil mist is 5 mg/m³. Exposures below 5 mg/m³ appear to be without significant health risk. The short-term exposure limit for this product as an oil mist is 10 mg/m³.

Ingestion: This product is relatively low toxicity by ingestion. This product has laxative properties and may result in abdominal cramps and diarrhea.

DELAYED OR OTHER HEALTH EFFECTS

Cancer: None of the components in this material are listed as carcinogens by IARC, NTP, ACGIH or OSHA.

Other: On rare occasions, prolonged and repeated exposure to oil mist poses a risk of pulmonary disease such as chronic lung inflammation. This condition is usually asymptomatic as a result of repeated small aspirations. Shortness of breath and cough are the most common symptoms.

This product is not considered hazardous according to EC directives. Prolonged or repeated contact may cause irritations or dermatitis.

See Section 11 for additional information. Risk depends on duration and level of exposure.

SECTION 4 FIRST AID MEASURES

Eye contact: Immediately flush eyes with large amounts of water and continue flushing until irritation subsides. If material is hot, treat for thermal burns and take victim to hospital immediately.

Skin contact: Remove contaminated clothing. Wash contaminated area thoroughly with soap and water. If redness or irritation occurs, seek medical attention. If material is hot, submerge injured area in cold water. If victim is severely burned, remove to a hospital immediately. If material is injected under the skin, seek medical attention immediately.

Note to physicians: In an accident involving high-pressure equipment, this type of product may be injected under the skin. Immediate treatment at a surgical emergency center is recommended, no matter how small and insignificant the wound may appear.

Inhalation: This material has a low vapor pressure and is not expected to present an inhalation exposure at ambient conditions. If exposure causes the person to be unconscious, remove exposed person to fresh air and obtain medical attention

Ingestion: Do not induce vomiting. Seek medical attention.

SECTION 5 FIRE FIGHTING MEASURES

FIRE CLASSIFICATION:

OSHA Classification (29 CFR 1910.1200): Not classified by OSHA as flammable or combustible.

NFPA RATINGS: Health: 1 Flammability: 1 Reactivity: 0
(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:-Personal Protective Equipment Index recommendation)

FLAMMABLE PROPERTIES:

Flash point: 460 °F (ASTM D-92 Cleveland Open Cup)

Autoignition temperature: > 800 °F

Flammable (Explosive) limits (% by volume in air) Lower: No Data Upper: No Data

Extinguishing Media: Use dry chemical, foam, or carbon dioxide.

Special Fire Fighting Procedures: Water may be ineffective but can be used to cool containers exposed to heat or flame. Caution should be exercised when using water or foam as frothing may occur, especially if sprayed into containers of hot, burning liquid.

Unusual Fire and Explosive Conditions: Dense smoke may be generated while burning. Carbon monoxide, carbon dioxide, compounds of sulfur, phosphorus and nitrogen may be generated as products of combustion.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Protective Measures: Eliminate all sources of ignition in vicinity of spilled material. Consult Hazards Identification Information in Section 3, Personal Protection information in Section 8, Fire Fighting Measures in Section 5, and Reactivity data in Section 9.

Spill Management: Contain spill immediately. Do not allow spill to enter sewers or watercourses. Remove all sources of ignition. Absorb with appropriate inert material such as sand, clay, etc. Large spills may be picked up using vacuum pumps, shovels, buckets, or other means and placed in drums or other suitable containers.

Reporting: Report spills to local authorities and/or the U.S. Coast Guard's National Response Center at (800) 424-8802 as appropriate or required.

SECTION 7 HANDLING AND STORAGE

Do not transfer to unmarked containers. Store in closed containers away from heat, sparks, open flame or oxidizing materials. Fire extinguishers should be kept readily available. See NFPA 30 and OSHA 1910.106--flammable and combustible liquids.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

HMIS RATINGS: Health: 1 Flammability: 1 Reactivity: 0 PPE: See note 1.
(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:-Personal Protective Equipment Index recommendation)

PERSONAL PROTECTIVE EQUIPMENT

Eye protection: Eye protection is not required under normal conditions of use. If material is handled such that it could be splashed into eyes, wear plastic face shield or splash-proof safety goggles.

Skin protection: No skin protection is required for single, short duration exposures. For prolonged or repeated exposures, use impervious clothing (boots, gloves, aprons, etc.) over parts of the body subject to exposure. If handling hot material, use insulated protective clothing (boots, gloves, aprons, etc.). Launder soiled clothes. Properly dispose of contaminated leather articles including shoes, which cannot be decontaminated.

Respiratory Protection: Respiratory protection is not required under conditions of normal use. If vapor or mist is generated when the material is heated or handled, use an organic vapor respirator with a dust and mist filter. All respirators must be NIOSH certified. Do not use compressed oxygen in hydrocarbon atmospheres.

Ventilation: If vapor or mist is generated when the material is heated or handled, adequate ventilation in accordance with good engineering practice must be provided to maintain concentrations below the specified exposure or flammable limits.

Other: Consumption of food and beverage should be avoided in work areas where hydrocarbons are present. Always wash hands and face with soap and water before eating, drinking, or smoking.

Occupational Exposure Limits (OSHA)

Component	TWA	STEL
Base Lubricating Oils	5 mg/m ³	10 mg/m ³
Synthetic Oils	5 mg/m ³	10 mg/m ³
Additive Package containing Zn, Ca, S, N, P, antioxidants and copolymers	No Data Available	No Data Available

Note 1: Employers must determine appropriate PPE for the actual conditions under which this material is used in their workplace.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

The data below are typical values and do not constitute a specification.

Boiling point:	> 800 °F
Pour point:	- 40 °F
Percent volatile:	No Data
Vapor density (air=1):	No Data
Appearance:	Amber liquid
Evaporation rate (ethyl ether=1):	No Data
Odor:	Hydrocarbon Odor
Specific gravity:	0.93
Vapor pressure:	No Data
Molecular weight:	No Data
Solubility:	Insoluble in water; Soluble in hydrocarbons

SECTION 10 STABILITY AND REACTIVITY

Stability (thermal, light, etc.):	Stable
Conditions to avoid:	Keep the product distant from heat sources. Avoid temperatures over the flash point.
Hazardous polymerization:	Will Not Occur
Incompatibility materials to avoid:	May react with strong oxidizing agents, strong acids and bases.
Hazardous decomposition products:	Oxides of carbon, compounds of sulfur, phosphorus, nitrogen and hydrogen sulfide.

SECTION 11 TOXICOLOGICAL INFORMATION

IMMEDIATE HEALTH EFFECTS

Eye Irritation: The eye irritation hazard is based on evaluation of data for similar materials or product components.

Skin Irritation: The skin irritation hazard is based on evaluation of data for similar materials or product components.

Skin Sensitization: The skin sensitization hazard is based on evaluation of data for similar materials or product components.

Oral Toxicity: The oral toxicity hazard is based on evaluation of data for similar materials or product components.

Inhalation Toxicity: The inhalation toxicity hazard is based on evaluation of data for similar materials or product components.

SECTION 12 ECOLOGICAL INFORMATION

Ecotoxicity: This material is not expected to be toxic beyond to aquatic organisms. The ecotoxicity hazard is based on evaluation of data for similar materials or product components.

Ready Biodegradability: This product is biodegradable higher than 90% (CEC-L 33 A 93128), ECO-compatible (OECD 201, 202 and 203) and with WGK=0. The product exceeds VAMIL qualification (NL).

SECTION 13 DISPOSAL CONSIDERATIONS

All disposals must comply with federal, state, and local regulations. The material, if spilled or discarded, may be a regulated waste. Refer to state and local regulations. Caution! If regulated solvents are used to clean up spilled material, the resulting waste mixture may be regulated. Department of Transportation (DOT) regulations may apply for transporting this material when spilled. Waste material may be landfilled or incinerated at an approved facility. Materials should be recycled if possible.

SECTION 14 TRANSPORTATION INFORMATION

The description shown may not apply to all shipping situations. Consult 40CFR, or appropriate Dangerous Goods Regulations, for additional requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

Dot Shipping Description: Not regulated as a hazardous material for transportation.

IMO/IMDG Shipping Description: Not regulated as dangerous goods for transportation under the IMDG code.

SECTION 15 REGULATORY INFORMATION

EPCRA 311/312 CATEGORIES:

Immediate (acute) health effects:	Yes
Delayed (chronic) health effects	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactivity hazard	No

LISTED CHEMICALS:

This product contains the following SARA Title II, Section 313 chemicals:

Zinc Compounds CAS# None WT. % 1.5

CHEMICAL INVENTORIES:

All components comply with the chemical inventory requirements of TSCA (United States).

WHMIS CLASSIFICATION:

This product is not a controlled substance under the Canadian WHMIS regulations.

SECTION 16 OTHER INFORMATION

This mixture may be formulated in part with components purchased from other companies. In many instances, especially when proprietary or trade secret materials are used, FL Viscosity Oil Company must rely upon the hazard evaluation of such components submitted to Viscosity Oil by that product's manufacturer or importer.

DISCLAIMER OF WARRANTY:

The information contained herein is based upon data available to us, and reflects our best professional judgment. However, no warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of such data, the results to be obtained from the use thereof, or that any such use does not infringe any patent. Since the information contained herein may be applied under conditions of use beyond our control and with which we may be unfamiliar, we do not assume any responsibility for the results of such application. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.