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MATERIAL SAFETY DATA SHEET

SECTION 1 - IDENTIFICATION

Product identifier : Case Akcela Actifull OT Premix

: Not reported

Product Code(s) : Not available.
Product Use : Mixture

Chemical Family

Supplier's name and address: Manufacturer's name and address:

Viscosity Oil Company Refer to Supplier

600-H Joliet Road Willowbrook, IL, U.S.A.

60527

Information Telephone # : (630) 850-4000

24 Hr. Emergency Tel # : Chemtrec 1-800-424-9300 (Within Continental U.S.); Chemtrec 703-527-3887 (Outside

U.S.).

SECTION 2 - HAZARDS IDENTIFICATION

Classification

: WHMIS information: This product is a WHMIS Controlled Product. It meets one or more of the criteria for a controlled product provided in Part IV of the Canadian Controlled Products Regulations (CPR). WHMIS classification:

Class D1B (Materials Causing Immediate and Serious Toxic Effects, Toxic Material);

Class D2A (Materials Causing Other Toxic Effects, Very Toxic Material) Class D2B (Materials Causing Other Toxic Effects, Toxic Material) .

OSHA: This material is classified as hazardous under OSHA regulations (29CFR

1910.1200). Hazardous classification:

Acute Health Hazard; Chronic Health Hazard.

Emergency Overview

: Fluorescent yellow liquid. Chemical odour.

Warning! POISON! Moderate to severe eye irritant. May cause mild to moderate skin irritation. Harmful or fatal if swallowed. Harmful if absorbed through the skin. May cause nausea, vomiting, headache and other central nervous system effects. Could also cause convulsions, coma, respiratory arrest and death. Can cause kidney damage. May cause liver effects. Possible birth defect hazard - contains material that may cause birth defects, based on animal data.

POTENTIAL HEALTH EFFECTS:

Signs and symptoms of short-term (acute) exposure

Inhalation: May cause irritation to the nose, throat and upper respiratory tract. If mists are inhaled, may cause

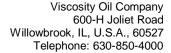
tearing, general anesthesia, headache, coughing, respiratory stimulation, nausea, vomiting, pulmonary,

kidney and liver damage.

Skin : May cause mild to moderate skin irritation. Product may be absorbed and cause symptoms similar to

those listed for ingestion.

Eyes: May cause moderate to severe irritation. Symptoms may include inflammation and tearing.





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Ingestion: Harmful or fatal if swallowed. Human poison by ingestion (lethal dose of Ethylene glycol for humans reported to be 100 mL). Symptoms may include pain, headache, nausea, vomiting, dizziness, drowsiness and other central nervous system effects. Initially, the central nervous system is stimulated, followed by depression. Could cause cyanosis (bluish discoloration of the skin due to deficient oxygenation of the blood). May potentially result in lethal kidney damage. Could also cause convulsions, coma, respiratory arrest and death.

Effects of long-term (chronic) exposure

: Prolonged or repeated ingestion may cause bladder or kidney stones.

: See TOXICOLOGICAL INFORMATION, Section 11. Carcinogenic status

: Potential teratogen. See TOXICOLOGICAL INFORMATION, Section 11. Additional health hazards

Potential environmental effects

See ECOLOGICAL INFORMATION, Section 12.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS#	Wt.%
Ethylene glycol	107-21-1	40.00 - 70.00
Sebacic acid	111-20-6	0.50 - 1.50
Potassium hydroxide	1310-58-3	1.00 - 5.00

SECTION 4 - FIRST AID MEASURES

Inhalation	: Immediately remove person to fresh air. If breathing has stopped, give artificial respiration. Get medical attention.
Skin contact	: Immediately flush with plenty of water, while removing contaminated clothing. If irritation persists, seek prompt medical attention. Launder clothing before reuse.
Eye contact	: Immediately flush eye(s) with plenty of water. After initial flushing, remove any contact lenses if worn, and continue flushing for at least 5 to 10 minutes. If irritation persists, seek prompt medical attention.
Ingestion	 Toxic if swallowed. Call a physician or poison control centre immediately. Induce vomiting ONLY under the direct supervision of qualified medical personnel or a poison control centre. Never give anything by mouth to an unconscious person.
Notes For Physician	: Prompt medical attention is important. Delayed treatment may result in fatality. This product is a CNS depressant. Use of ethanol may be helpful to counter the toxic effects of ethylene glycol by interfering with the absorption rate in the stomach and intestine.

SECTION 5 - FIRE FIGHTING MEASURES

Fire hazards/conditions of flammability

Not flammable under normal conditions of handling. However, may ignite if exposed to extreme heat and flame. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure.

Flammability classification (OSHA 29 CFR 1910.1200)

: Non-flammable.

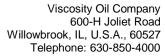
Oxidizing properties : None known.

Explosion data: Sensitivity to mechanical impact / static discharge

: Not expected to be sensitive to mechanical impact or static discharge.

Use media suitable to the surrounding fire such as water fog or fine spray, alcohol foams, Suitable extinguishing media :

carbon dioxide and dry chemical.





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Special fire-fighting procedures/equipment

: Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. Move containers from fire area if safe to do so. Water spray may be useful in cooling equipment exposed to heat and flame.

Hazardous combustion products

Carbon oxides, formaldehyde and other irritating fumes and smoke.

0 - Minimal 1 - Slight 3 - Serious 2 - Moderate NFPA Rating

> Health: 2 Instability: 0 Flammability: 1 Special Hazards: None

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions

: Restrict access to area until completion of clean-up. Ensure clean-up is conducted by trained personnel only. All persons dealing with clean-up should wear the appropriate protective equipment including self-contained breathing apparatus. Refer to Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION, for additional information on acceptable personal protective equipment.

Environmental precautions

Ensure spilled product does not enter drains, sewers, waterways, or confined spaces. If necessary, dike well ahead of the spill to prevent runoff into drains, sewers, or any natural waterway or drinking supply.

Spill response/cleanup

Remove all sources of ignition. Ventilate area of release. Stop spill or leak at source if safely possible. Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand), then place absorbent material into a container for later disposal (see Section 13). Contaminated absorbent material may pose the same hazards as the spilled product. Notify the appropriate authorities as required.

Prohibited materials

: Use non-flammable absorbent only.

Special spill response procedures

If a spill/release in excess of the EPA reportable quantity is made into the environment, immediately notify the national response center in the United States (phone: 1-800-424-8802).

US CERCLA Reportable quantity (RQ): Ethylene glycol (5000 lbs / 2270 kg).

SECTION 7 - HANDLING AND STORAGE

Safe Handling procedures

This material is a harmful liquid. Wear suitable protective equipment during handling. Refer to Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION, for additional information on acceptable personal protective equipment. Use with adequate ventilation. Do not ingest. Avoid breathing vapour or mist. Avoid contact with eyes, skin and clothing. Wash with soap and water after handling. Keep away from extreme heat and flame. Keep away from acids and other incompatibles. Use caution when opening cap. Keep containers tightly closed when not in use. Empty containers retain residue (liquid and/or vapour) and can be dangerous.

Storage requirements

Store in a cool, dry, well-ventilated area. Store away from areas of excessive heat, open flames, sparks, and other possible sources of ignition. Keep away from incompatibles. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks.

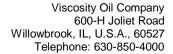
Incompatible materials

Strong oxidizing agents; Strong acids; Strong alkalis; Strong bases.

Special packaging materials

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

Always keep in containers made of the same materials as the supply container.





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Exposure Limits				
	ACGIF	I TLV	OSHA	PEL
<u>Ingredients</u>	TWA	STEL	PEL	STEL
Ethylene glycol	100 mg/m³ (as aerosol) (Ceiling)	N/Av	50 ppm (Ceiling) (final rule limit)	N/Av
Sebacic acid	N/Av	N/Av	N/Av	N/Av
Potassium hydroxide	2 mg/m³ (Ceiling)	N/Av	2 mg/m³ (Ceiling) (final rule limit)	N/Av

Ventilation and engineering measures

: Use sufficient mechanical ventilation to maintain exposures below the TLV. Use local

exhaust if mist or spray is generated.

Respiratory protection : Respiratory protection is required if the concentrations exceed the TLV. NIOSH-approved

respirators are recommended. Seek advice from respiratory protection specialists. Respirators should be selected based on the form and concentration of contaminants in air,

and in accordance with OSHA (29 CFR 1910.134) or CSA Z94.4-02.

Skin protection : Wear impervious gloves, such as butyl rubber. Advice should be sought from glove

suppliers.

Eye / face protection : Chemical goggles are recommended when there is a potential for splashing.

Other protective equipment : Emergency showers and eyewash facilities should be nearby. Wear a chemically resistant

apron and long sleeves when dispensing, to prevent skin contact.

General hygiene considerations

Avoid breathing vapour or mist. Avoid contact with eyes, skin and clothing. When using do not eat or drink. When using do not smoke. Upon completion of work, wash hands before eating, drinking, smoking or use of toilet facilities. Remove soiled clothing and wash it thoroughly before reuse.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical state : Liquid. Appearance : Fluorescent yellow

Odour : Chemical odour. Odour threshold : N/Av

pH : 7.9

Boiling point: 109°C (228.2°F)Specific gravity: 1.070Melting/Freezing point: - 37°C (-34.6°F)Coefficient of water/oil distribution

: N/Av

Vapour pressure (mmHg @ 20° C / 68° F) Solubility in water : Complete

: N/Av

Vapour density (Air = 1) : N/Av Evaporation rate (n-Butyl acetate = 1)

: N/Av

Volatile organic Compounds (VOC's) Volatiles (% by weight) : N/Av

N/Av

Flash point : N/Av

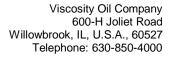
Flash point Method : N/Av Auto-ignition temperature : N/Av Lower flammable limit (% by vol.)

Upper flammable limit (% by vol.)

N/Av : N/Av

Flame Projection Length : N/Ap Flashback observed : N/Ap

Viscosity : < 10 cSt @ 20°C (68°F)





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Absolute pressure of container

: N/Ap

SECTION 10: STABILITY AND REACTIVITIY

Stability and reactivity

: Stable under the recommended storage and handling conditions prescribed.

Hazardous polymerization

: Will not occur.

Conditions to avoid

Avoid excessive heat, sparks and open flame. Do not use in areas without adequate

ventilation. Avoid contact with incompatible materials.

Materials To Avoid And Incompatibility

: Incompatible materials (see Section 7).

Hazardous decomposition products

: None known, refer to hazardous combustion products in Section 5.

SECTION 11 - TOXICOLOGICAL INFORMATION

Target organs : Eyes, skin, respiratory system, central nervous system, liver and kidneys.

Routes of exposure : Inhalation: YES Skin & Eyes: YES Ingestion: YES

Toxicological data : There is no available data for the product itself, only for the ingredients. See below for

individual ingredient acute toxicity data.

	LC50(4hr)	LD	50	
<u>Ingredients</u>	ngredients inh, rat		(Rabbit, dermal)	
Ethylene glycol	2725 mg/m³ (aerosol)	4000 mg/kg	9530 mg/kg	
Sebacic acid	N/Av	14375 mg/kg	N/Av	
Potassium hydroxide	N/Av	205 mg/kg	> 1260 mg/kg	

Carcinogenic status : No components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.

Reproductive effects

: None known.

Teratogenicity

: Contains ethylene glycol, which may cause teratogenic effects at doses which are not

maternally toxic, based on animal data.

Mutagenicity: None known.Epidemiology: Not available.

Sensitization to material : N

Not expected to be a skin or respiratory sensitizer.

Synergistic materials

: Not available.

Irritancy

Mild to moderate skin irritant. Moderate to severe eye irritant.

other important hazards

: CNS depression may result from extreme exposures.

Conditions aggravated by overexposure

: Pre-existing skin or eye disorders, and impaired liver or kidney functions.

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity	: The ecological characteristics of this product have not been fully investigated. The product should not be allowed to enter drains or water courses, or be deposited where it can affect
	ground or surface waters



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Ecotoxicity data:

<u>Ingredients</u>	24211	Toxicity to Fish				
	CAS No	LC50 / 96h	NOEC / 21 day	M Factor		
Ethylene glycol	107-21-1	Oncorhynchus mykiss (rainbow trout) = 41000 mg/L	N/Av	N/Ap		
Sebacic acid	111-20-6	N/Av	N/Av	N/Ap		
Potassium hydroxide	1310-58-3	Gambusia affinis (Mosquito fish) = 80 mg/L	N/Av	N/Ap		

<u>Ingredients</u>	CAS No	Toxicity to Daphnia				
		EC50 / 48h	NOEC / 21 day	M Factor		
Ethylene glycol	107-21-1	Daphnia magna (Water flea) = 46300 mg/L	N/Av	N/Ap		
Sebacic acid	111-20-6	N/Av	N/Av	N/Ap		
Potassium hydroxide	1310-58-3	Ceriodaphnia Dubia (water flea) = 56 mg/L	N/Av	N/Ap		

<u>Ingredients</u>	CAS No	Toxicity to Algae				
		EC50 / 96h or 72h	NOEC / 96h or 72h	M Factor		
Ethylene glycol	107-21-1	Green algae = 6500 - 13000mg/L/96hr	N/Av	N/Ap		
Sebacic acid	111-20-6	N/Av	N/Av	N/Ap		
Potassium hydroxide	1310-58-3	N/Av	N/Av	N/Ap		

Mobility : No data is available on the product itself.

Persistence : Ethylene glycol is considered to be readily biodegradable.

Bioaccumulation potential: No data is available on the product itself.

Other Adverse Environmental effects

Methods of Disposal

: No data is available on the product itself.

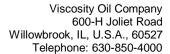
SECTION 13 - DISPOSAL CONSIDERATIONS

Handling for Disposal : Handle waste according to recommendations in Section 7.

: Dispose in accordance with all applicable federal, state, provincial and local regulations.

Contact your local, state, provincial or federal environmental agency for specific rules.

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RCRA

: If this product, as supplied, becomes a waste in the United States, it may meet the criteria of a hazardous waste as defined under RCRA, Title 40 CFR 261. It is the responsibility of the waste generator to determine the proper waste identification and disposal method. For disposal of unused or waste material, check with local, state and federal environmental agencies.

SECTION 14: TRANPORT INFORMATION

Regulatory Information	UN Number	Shipping Name	Class	Packing Group	Label
49CFR/DOT	None	Not regulated.	Not regulated	none	\otimes
49CFR/DOT Additional information		Ethylene glycol is greater than 5000 pounds per container, the vironmentally hazardous substances, liquid, n.o.s. (Ethylene gl		hipping desc	ription applies:
TDG	None	Not regulated.	Not regulated	none	\otimes
TDG Additional information	None.				

SECTION 15 - REGULATORY INFORMATION

US Federal Information:

Components listed below are present on the following U.S. Federal chemical lists:

lucius diserts	TSCA Inventory		CERCLA Reportable	SAR A TITLE III: Sec. 302, Extremely Hazardous	Specific Toxic Chemical		
ingredients	Ingredients CAS # Inventory Quantity(RQ) (40 CFR 117.302):	Substance, 40 CFR 355:	Toxic Chemical	de minimus Concentration			
Ethylene glycol	107-21-1	Yes	5000 lbs 2270 kg		Yes	1%	
Sebacic acid	111-20-6	Yes	N/Ap	N/Av	No	NS	
Potassium hydroxide	1310-58-3	Yes	1000 lb/ 454 kg	N/Av	No	NS	

SARA TITLE III: Sec. 311 and 312, MSDS Requirements, 40 CFR 370 Hazard Classes: Immediate (Acute) health hazard; Chronic health hazard. Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are 500 pounds for the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

US State Right to Know Laws:

The following chemicals are specifically listed by individual States:



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<u>Ingredients</u>	CAS#	California Proposition 65			State "Right to Know" Lists					
	CAS #	Listed	Type of Toxicity	CA	MA	MN	NJ	PA	RI	
Ethylene glycol	107-21-1	No		Yes	Yes	NS	Yes	Yes	NS	
Sebacic acid	111-20-6	No	N/Ap	No	No	No	No	No	No	
Potassium hydroxide	1310-58-3	No	N/Ap	Yes	Yes	Yes	Yes	Yes	Yes	

Canadian Information:

WHMIS information: Refer to Section 2 for a WHMIS Classification for this product.

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on the Domestic Substances List (DSL).

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

International Information:

Components listed below are present on the following International Inventory list:

<u>Ingredients</u>	CAS#	European EINECs	Australia AICS	Philippines PICCS	Japan ENCS	Korea KECI/KECL	China IECSC	NewZealand IOC
Ethylene glycol	107-21-1	203-473-3	Present	Present	(2)-230	KE-13169	Present	HSR001534
Sebacic acid	111-20-6	203-845-5	Present	Present	(2)-878	KE-09402	Present	HSR003130
Potassium hydroxide	1310-58-3	215-181-3	Present	Present	(1)-369	KE-29139	Present	HSR001546

SECTION 16 - OTHER INFORMATION

0 - Minimal 1 - Slight 3 - Serious *- Chronic hazard 2 - Moderate **HMIS Rating**

Health: Flammability: Reactivity:

Legend ACGIH: American Conference of Governmental Industrial Hygienists

CA: California

CAS: Chemical Abstract Services

CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of

1980

CFR: Code of Federal Regulations CNS: Central Nervous System COC: Cleveland Open Cup

CSA: Canadian Standards Association

DOT: Department of Transportation EPA: Environmental Protection Agency

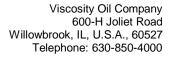
HMIS: Hazardous Materials Identification System HSDB: Hazardous Substances Data Bank

IARC: International Agency for Research on Cancer

Inh: Inhalation

LC: Lethal Concentration

LD: Lethal Dose





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MA: Massachusetts
MN: Minnesota
N/Ap: Not Applicable
N/Av: Not Available

NFPA: National Fire Protection Association

NIOSH: National Institute of Occupational Safety and Health

NJ: New Jersey

NTP: National Toxicology Program

OSHA: Occupational Safety and Health Administration

PA: Pennsylvania

PEL: Permissible exposure limit

RCRA: Resource Conservation and Recovery Act

RI: Rhode Island

RTECS: Registry of Toxic Effects of Chemical Substances SARA: Superfund Amendments and Reauthorization Act

STEL: Short Term Exposure Limit TLV: Threshold Limit Values TWA: Time Weighted Average

WHMIS: Workplace Hazardous Materials Identification System

References

- : 1. ACGIH, Threshold Limit Values and Biological Exposure Indices for 2013.
 - 2. International Agency for Research on Cancer Monographs, searched 2013.
 - 3. Canadian Centre for Occupational Health and Safety, CCInfoWeb databases, 2013

(Chempendium and RTECs).

- 4. Material Safety Data Sheet from manufacturer.
- 5. US EPA Title III List of Lists October 2012 version.
- 6. California Proposition 65 List February 8, 2013 version.

Prepared for:

Viscosity Oil Company

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Please direct all enquiries to Viscosity Oil.



Prepared by:

ICC The Compliance Center Inc.

http://www.thecompliancecenter.com



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