



VIKOFLEX (R) 4050 Epoxidized Vegetable Oil

Material Safety Data Sheet

Arkema Inc.

1 PRODUCT AND COMPANY IDENTIFICATION

Functional Additives

2000 Market Street
21st Floor
Philadelphia, PA 19103-3222

EMERGENCY PHONE NUMBERS:

Chemtrec: (800) 424-9300 (24hrs) or (703) 527-3887
Medical: Rocky Mountain Poison Control Center
(866) 767-5089 (24Hrs)

Information Telephone Numbers	Phone Number	Available Hrs
Customer Service Number	(800) 331-7654	8:00 AM - 5:00 PM EST

Product Name VIKOFLEX (R) 4050 Epoxidized Vegetable Oil
Product Synonym(s)

Chemical Family Epoxidized fatty acid ester
Chemical Formula NA
Chemical Name 2-ethylhexyl epoxy soyate
EPA Reg Num NA
Product Use Epoxide Source

2 COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient Name	CAS RegistryNumber	Typical %	OSHA
Fatty acids, soya, epoxidized, 2-ethylhexyl esters	68082-34-8	100	N

The substance(s) marked with a "Y" in the OSHA column, are identified as hazardous chemicals according to the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200)

While this material is not classified as hazardous under Federal OSHA regulations, this MSDS contains valuable information critical to the safe handling and proper use of this product. This MSDS should be retained and available for employees and other users of this product.

The components of this product are all on the TSCA Inventory list.

3 HAZARDS IDENTIFICATION

Emergency Overview

Light yellow mobile oil with bland odor.

HANDLE IN ACCORDANCE WITH GOOD INDUSTRIAL HYGIENE AND SAFETY PRACTICES.

Potential Health Effects

Inhalation and skin contact are expected to be the primary routes of occupational exposure to this material. On the basis of available information, exposure to this material is not expected to produce significant adverse human health effects; however, use of appropriate good industrial hygiene and safety precautions to control exposure is recommended when handling or using this material.

4 FIRST AID MEASURES

IN CASE OF CONTACT, flush the area with plenty of water. Remove material from clothing. Wash clothing before reuse.

**4 FIRST AID MEASURES**

IF SWALLOWED, induce vomiting as directed by medical personnel. Get medical attention. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

IF INHALED, remove to fresh air.

5 FIRE FIGHTING MEASURES**Fire and Explosive Properties**

Auto-Ignition Temperature	NA	
Flash Point	590 F	Flash Point Method
Flammable Limits- Upper	NA	
Lower	NA	

Extinguishing Media

Use water spray. A solid stream of water can cause frothing and spattering. Fire fighters and others who may be exposed to products of combustion should wear full fire fighting turn out gear (full Bunker Gear) and self-contained breathing apparatus (pressure demand NIOSH approved or equivalent). Fire fighting equipment should be thoroughly decontaminated after use.

Fire Fighting Instructions

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Fire and Explosion Hazards

When burned, hazardous products of combustion including carbon monoxide and carbon dioxide can be formed. Acrolein can be generated at 550 F.

6 ACCIDENTAL RELEASE MEASURES**In Case of Spill or Leak**

Isolate hazard area and deny entry to unnecessary or unprotected personnel. Contain spilled liquid with sand or earth. Clean up spill immediately, observing precautions in the Personal Protection section of MSDS. Avoid runoff into storm sewers and ditches which lead to waterways.

7 HANDLING AND STORAGE**Handling**

Handle in accordance with good industrial hygiene and safety practices. These practices include avoiding unnecessary exposure and removal of material from eyes, skin and clothing.

Storage

This material is not hazardous under normal storage conditions; however, material should be stored in closed containers, in a secure area to prevent container damage and subsequent spillage. It is recommended that containers be raised above floor or ground during extended storage periods to prevent container corrosion due to standing water.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION**Engineering Controls**

Investigate engineering techniques to reduce exposures. Provide ventilation if necessary to minimize

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

exposures. If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment.

Eye / Face Protection

Use good industrial practice to avoid eye contact.

Skin Protection

Minimize skin contamination by following good industrial hygiene practice. Wearing rubber gloves is recommended. Wash hands and contaminated skin thoroughly after handling.

Respiratory Protection

Where airborne exposure is likely, use NIOSH approved respiratory protection equipment appropriate to the material and/or its components. If exposures cannot be kept at a minimum with engineering controls, consult respirator manufacturer to determine appropriate type equipment for a given application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions where there may be a potential for significant exposure, use an approved full face positive-pressure, self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply. Respiratory protection programs must comply with 29 CFR § 1910.134.

Airborne Exposure Guidelines for Ingredients

The components of this product have no established Airborne Exposure Guidelines

- Only those components with exposure limits are printed in this section.
- Skin contact limits designated with a "Y" above have skin contact effect. Air sampling alone is insufficient to accurately quantitate exposure. Measures to prevent significant cutaneous absorption may be required.
- ACGIH Sensitizer designator with a value of "Y" above means that exposure to this material may cause allergic reactions.
- WEEL-AIHA Sensitizer designator with a value of "Y" above means that exposure to this material may cause allergic skin reactions.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance/Odor	Light yellow mobile oil with bland odor.
pH	NE
Specific Gravity	0.94
Vapor Pressure	very low
Vapor Density	Nonvolatile
Melting Point	NE
Freezing Point	0 (32 F)
Boiling Point	Decomposes
Solubility In Water	Insoluble
Evaporation Rate	very low
Percent Volatile	0.1
Other Physical Data	White solid suspended in clear liquid, characteristic odor.

10 STABILITY AND REACTIVITY**Stability**

This material is chemically stable under specified conditions or storage, shipment and/or use. See HANDLING AND STORAGE section of this MSDS for specified conditions.

Hazardous Polymerization

Hazardous polymerization may occur if contaminated with strong mineral acid.

Incompatibility

Contact with strong acid may result in volume expansion. Do not expose to temperatures greater than 400 F.

Hazardous Decomposition Products

None known.

11 TOXICOLOGICAL INFORMATION**Toxicological Information**

Data on this material and/or a similar material are summarized below.

Soybean oil, epoxidized

Single exposure (acute) studies indicate that this material is practically non-toxic if swallowed (rat LD50 22,400 mg/kg) or absorbed through skin (rat LD50 19,900 mg/kg) and slightly irritating to rabbit eyes and skin.

Exposure to concentrated vapors for 8 hrs produced no deaths in rats.

No skin allergy was observed in guinea pigs following repeated exposure. Long-term dietary administration to rats produced increased mortality, reduced body weight gains, kidney and liver changes (enlarged, fatty infiltration of the liver), degeneration of the testes, and slight changes in the uterus. Life-time application to the skin of mice or life-time administration in the diet to rats did not increase the incidence of tumors. No effects were seen on the ability of male or female rats to reproduce or on the development of the offspring when exposed orally prior to mating. No genetic changes were observed in tests using bacteria and human or animal cells.

12 ECOLOGICAL INFORMATION**Ecotoxicological Information**

Data on this material and/or a similar material are summarized below.

Soybean oil, epoxidized

LC50 in fish and EC50 in algae and daphnia are greater than the limit of water solubility.

Chemical Fate Information

Data on this material and/or a similar material are summarized below.

Soybean oil, epoxidized

The measured chemical oxygen demand (COD) was determined to be 2.24 mg/mg. This material is considered biodegradable in the aquatic environment.



13 DISPOSAL CONSIDERATIONS

Waste Disposal

Recover, reclaim or recycle when practical.

Disposal via incineration is recommended. Appropriate pretreatment and disposal in an authorized landfill is acceptable. In all cases, dispose of material in accordance with all applicable federal, state and local laws and regulations. Consult appropriate regulatory officials or your attorney for information on such disposal.

Note: Chemical additions to, processing of, or otherwise altering this material may make this waste management information incomplete, inaccurate, or otherwise inappropriate. Furthermore, state and local waste disposal requirements may be more restrictive or otherwise different from federal laws and regulations.

14 TRANSPORT INFORMATION

DOT Name	Not regulated
DOT Technical Name	
DOT Hazard Class	
UN Number	
DOT Packing Group	PG
RQ	NA

15 REGULATORY INFORMATION

Hazard Categories Under Criteria of SARA Title III Rules (40 CFR Part 370)

Immediate (Acute) Health	N	Fire	N
Delayed (Chronic) Health	N	Reactive	N
		Sudden Release of Pressure	N

The components of this product are all on the TSCA Inventory list.

Ingredient Related Regulatory Information:

SARA Reportable Quantities

Fatty acids, soya, epoxidized, 2-ethylhexyl esters

CERCLA RQ

SARA TPQ

NE

16 OTHER INFORMATION

Revision Information

Revision Date	25 JAN 2007	Revision Number	11
Supersedes Revision Dated	02-JAN-2007		

Revision Summary

Updated Sec 9

Key

NE= Not Established NA= Not Applicable (R) = Registered Trademark



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