1. PRODUCT AND COMPANY IDENTIFICATION

Company

Arkema Inc.
900 First Avenue
King of Prussia, Pennsylvania 19406

Oxygenated and Derivatives

Customer Service Telephone Number: 1-800-346-5757
(Monday through Friday, 8:00 AM to 5:00 PM EST)

Emergency Information

Transportation: CHEMTREC: (800) 424-9300
(24 hrs., 7 days a week)
Medical: Rocky Mountain Poison Center: (866) 767-5089
(24 hrs., 7 days a week)

Product Information

Product name: VIKOFLEX® 7190 EPOXIDIZED LINSEED OIL
Synonyms: Not available
Molecular formula: Complex substance
Chemical family: Epoxidized vegetable oil
Product use: Plasticiser

2. HAZARDS IDENTIFICATION

Emergency Overview
Color: yellow
Physical state: liquid
Form: viscous
Odor: slight, vegetable oils

***Classification of the substance or mixture:**
Not a hazardous substance or mixture.

GHS-Labelling

Not a hazardous substance or mixture.

Supplemental information:

Potential Health Effects:
The product, in the form supplied, is not anticipated to produce significant adverse human health effects.

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Other:
Handle in accordance with good industrial hygiene and safety practice.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	Wt/Wt	GHS Classification**
Linseed oil, epoxidized	8016-11-3	<= 100 %	Not classified

**For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

4.1. Description of necessary first-aid measures:

Inhalation:
If inhaled, remove victim to fresh air.

Skin:
In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eyes:
Immediately flush eye(s) with plenty of water.

Ingestion:
If swallowed, DO NOT induce vomiting. Get medical attention. Never give anything by mouth to an unconscious person.

4.2. Most important symptoms/effects, acute and delayed:

For most important symptoms and effects (acute and delayed), see Section 2 (Hazard Statements and Supplemental Information) and Section 11 (Toxicology Information) of this SDS.

4.3. Indication of immediate medical attention and special treatment needed, if necessary:

Unless otherwise noted in Notes to Physician, no specific treatment noted; treat symptomatically.

5. FIREFIGHTING MEASURES

Extinguishing media (suitable):
Water spray, Carbon dioxide (CO2), Foam, Dry chemical

Protective equipment:

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).

Further firefighting advice:
Do not use a solid stream of water.
A solid stream of water can cause frothing and spattering.

Fire fighting equipment should be thoroughly decontaminated after use.

Fire and explosion hazards:
When burned, the following hazardous products of combustion can occur:
Carbon oxides
Hazardous organic compounds

Acrolein can be generated at 550 F.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, Emergency procedures, Methods and materials for containment/clean-up:
Prevent further leakage or spillage if you can do so without risk. Ventilate the area. Avoid generation of vapors. Contain and collect spillage with non-combustible absorbent material such as clean sand, earth, diatomaceous earth or non-acidic clay and place into suitable properly labeled containers for prompt disposal. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.

Protective equipment:
Appropriate personal protective equipment is set forth in Section 8.

7. HANDLING AND STORAGE

Handling

General information on 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

General information on storage conditions:
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.

Storage stability – Remarks:
Stable under normal conditions.

Storage incompatibility – General:
Store separate from:

Mineral acids

Strong acids

Temperature tolerance – Do not store above:
399 °F (204 °C)

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Airborne Exposure Guidelines:

Engineering controls:
Investigate engineering techniques to reduce exposures below airborne exposure limits or to otherwise reduce exposures. Provide ventilation if necessary to minimize exposures or to control exposure levels to below airborne exposure limits (if applicable see above).If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment.

Respiratory protection:
Where airborne exposure is likely or airborne exposure limits are exceeded (if applicable, see above), use NIOSH approved respiratory protection equipment appropriate to the material and/or its components. 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 or where exposure limit may be significantly exceeded, 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.

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

Eye protection:
Use good industrial practice to avoid eye contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

Color:	yellow
Physical state:	liquid
Form:	viscous
Odor:	slight, vegetable oils
Odor threshold:	No data available
Flash point	590 °F (310 °C) (Cleveland open cup)
Auto-ignition temperature:	No data available

Lower flammable limit (LFL):	No data available
Upper flammable limit (UFL):	No data available
pH:	No data available
Density:	1.03 g/cm3 No data available
Specific Gravity (Relative density):	1.03 Water=1 (liquid)
Vapor pressure:	< 0.1 mmHg (77 °F (25 °C))
Vapor density:	No data available
Boiling point/boiling range:	Decomposes on heating.
Melting point/range:	No data available.
Freezing point:	32 °F (0 °C)
Evaporation rate:	No data available
Solubility in water:	0.01 %
Viscosity, dynamic:	No data available
Oil/water partition coefficient:	No data available
Thermal decomposition	No data available
Flammability:	See GHS Classification in Section 2

10. STABILITY AND REACTIVITY

Stability:
This material is chemically stable under normal and anticipated storage, handling and processing conditions.

Hazardous reactions:
Hazardous polymerization may occur.

Materials to avoid:
Strong acids
Mineral acids
Contact with strong acid may result in volume expansion
Hazardous polymerization may occur if contaminated with strong mineral acids.

Conditions / hazards to avoid:
See HANDLING AND STORAGE section of this SDS for specified conditions. See Hazardous Decomposition Products below.

Hazardous decomposition products:

Thermal decomposition giving flammable and toxic products
Carbon oxides
Hazardous organic compounds
At high temperature :
Acrolein

11. TOXICOLOGICAL INFORMATION

Data for VIKOFLEX® 7190 EPOXIDIZED LINSEED OIL

Acute toxicity

Oral:
Practically nontoxic. (rat) LD50 = 15,000 mg/kg.

Skin Irritation:
Causes mild skin irritation. (rabbit)

Eye Irritation:
Causes mild eye irritation. (rabbit) (data for a similar material)

Other information
The information presented is from representative materials in this chemical class. The results may vary depending on the test substance.

Data for Soybean oil, epoxidized (8013-07-8)

Acute toxicity

Oral:
Practically nontoxic. (rat) LD50 > 5,000 mg/kg.

Dermal:
Practically nontoxic. (rabbit) LD50 > 19,900 mg/kg.

Inhalation:
No deaths occurred. (rat) 8 h Exposure time (concentrated vapor)

Skin Irritation:
Causes mild skin irritation. (rabbit) Irritation Index: 2.6 / 8.0. (24 h) (occluded exposure)

Eye Irritation:
Causes mild eye irritation. (rabbit) Irritation Index: 2.7 / 110.

Skin Sensitization:
Not a sensitizer. Repeated skin exposure. (guinea pig) No skin allergy was observed

Repeated dose toxicity

Repeated dietary administration to rat / affected organ(s): kidney, liver, testes, uterus / increased mortality (Repeated exposure at high concentrations)

Carcinogenicity
Chronic oral administration to rat / signs: No increase in tumor incidence was reported.

Chronic dermal administration to mice / signs: No increase in tumor incidence was reported.

Genotoxicity

Assessment in Vitro:
No genetic changes were observed in laboratory tests using: bacteria, animal cells, human cells

Developmental toxicity

Exposure during pregnancy. Oral (rat) / No birth defects were observed.

Reproductive effects
Reproduction Test. Oral (rat) / No toxicity to reproduction.

Other information
The information presented is from representative materials in this chemical class. The results may vary depending on the test substance.

12. ECOLOGICAL INFORMATION

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

Data for VIKOFLEX® 7190 EPOXIDIZED LINSEED OIL

Octanol Water Partition Coefficient:
log Pow > 6.2

Data for Soybean oil, epoxidized (8013-07-8)

Biodegradation:
Readily biodegradable. (Modified Sturm Test, 28 d) biodegradation 79 % / OECD Test Guideline 301 B

Chemical Oxygen Demand:
COD 2,240 mg/g

Low potential to bioaccumulate

Octanol Water Partition Coefficient:
log Pow > 6.2

Additional Information:
Information given is based on data obtained from similar substances.

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

Data for Soybean oil, epoxidized (8013-07-8)

Information given is based on data obtained from similar substances.

Aquatic toxicity data:
Fish LC50 > limit of water solubility

Algae:
Algae EC50 > limit of water solubility

13. DISPOSAL CONSIDERATIONS

Waste disposal:
Where possible recycling is preferred to disposal or incineration. If recycling is not an option, incinerate or dispose of in accordance with federal, state, and local regulations. Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits. 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

US Department of Transportation (DOT): not regulated

International Maritime Dangerous Goods Code (IMDG): not regulated

15. REGULATORY INFORMATION

Chemical Inventory Status

EU. EINECS	EINECS	Conforms to
United States TSCA Inventory	TSCA	The components of this product are all on the TSCA Inventory.
Canadian Domestic Substances List (DSL)	DSL	All components of this product are on the Canadian DSL
China. Inventory of Existing Chemical Substances in China (IECSC)	IECSC (CN)	Conforms to
Japan. ENCS - Existing and New Chemical Substances Inventory	ENCS (JP)	Conforms to
Japan. ISHL - Inventory of Chemical Substances	ISHL (JP)	Conforms to
Korea. Korean Existing Chemicals Inventory (KECI)	KECI (KR)	Conforms to
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	PICCS (PH)	Conforms to

Australia Inventory of Chemical Substances (AICS)	AICS	Conforms to

United States – Federal Regulations

SARA Title III – Section 302 Extremely Hazardous Chemicals:

The components in this product are either not SARA Section 302 regulated or regulated but present in negligible concentrations.

SARA Title III - Section 311/312 Hazard Categories:
No SARA Hazards

SARA Title III – Section 313 Toxic Chemicals:
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) - Reportable Quantity (RQ):

The components in this product are either not CERCLA regulated, regulated but present in negligible concentrations, or regulated with no assigned reportable quantity.

United States – State Regulations

New Jersey Right to Know

No components are subject to the New Jersey Right to Know Act.

Pennsylvania Right to Know

Chemical name	CAS-No.
Linseed oil, epoxidized	8016-11-3

California Prop. 65
This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive defects.

16. OTHER INFORMATION

Latest Revision(s):

Reference number:	000000032766
Date of Revision:	05/06/2016
Date Printed:	05/30/2016

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It is the sole responsibility of the manufacturer of the medical device to determine the suitability (including biocompatibility) of all raw materials, products and components, including any medical grade Arkema products, in order to ensure that the final end-use product is safe for its end use; performs or functions as intended; and complies with all applicable legal and regulatory requirements (FDA or other national drug agencies) It is the sole responsibility of the manufacturer of the medical device to conduct all necessary tests and inspections and to evaluate the medical device under actual end-use requirements and to adequately advise and warn purchasers, users, and/or learned intermediaries (such as physicians) of pertinent risks and fulfill any postmarket surveillance obligations. Any decision regarding the appropriateness of a particular Arkema material in a particular medical device should be based on the judgment of the manufacturer, seller, the competent authority, and the treating physician.