ARKEMA

VIKOL 1

Material Safety Data Sheet

Arkema inc.

1 PRODUCT AND COMPANY IDENTIFICATION

Additives Experimental

2000 Market Street

28th 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

Product Name

VIKOL 1

Product Synonym(s)

Chemical Family

Vegetable oil polyol

Chemical Formula Chemical Name EPA Reg Num

Product Use

Coating applications, lube additive, sealants

2 COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient Name	CAS RegistryNumber	Typical %	OSHA
Polyolpolyester	Proprietary	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.

FOR RESEARCH AND DEVELOPMENT USE ONLY BY TECHNICALLY QUALIFIED INDIVIDUALS UNDER SECTION 5(h)(3) OF THE TOXIC SUBSTANCES CONTROL ACT. THE PROPERTIES OF THIS MATERIAL HAVE NOT BEEN FULLY INVESTIGATED. USE DUE CAUTION IN HANDLING AND USE OF THIS MATERIAL.

3 HAZARDS IDENTIFICATION

Emergency Overview

Light yellow oil, with bland-sweet 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. No information on the health effects of this material was found in a search of the scientific literature. Therefore, use of appropriate good industrial hygiene and safety precautions to control exposure is recommended when handling or using this material.

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Flash Point Method

Arkema Inc.

4 FIRST AID MEASURES

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

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

>200 F

Flammable Limits- Upper NA

Lower

NA

Extinguishing Media

Use water spray, carbon dioxide, foam or dry chemical.

Fire Fighting Instructions

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 and Explosion Hazards

Irritating or toxic vapors

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.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

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8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls

Investigate engineering techniques to reduce exposures. Provide ventilation if necessary to minimize 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 oil, with bland-sweet odor.
pН	NE
Specific Gravity	<0.95
Vapor Pressure	NE
Vapor Density	NE
Melting Point	NE
Freezing Point	NE
Boiling Point	> 300 F
Solubility In Water	Neglibible

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10 STABILITY AND REACTIVITY

Stability

This material is chemically stable under normal and anticipated storage and handling conditions.

Hazardous Polymerization

Does not occur.

Incompatibility

Avoid contact with strong acids and bases.

Hazardous Decomposition Products

None known.

11 TOXICOLOGICAL INFORMATION

Toxicological Information

No data are available.

12 ECOLOGICAL INFORMATION

Ecotoxicological Information

No data are available.

Chemical Fate Information

No data are available.

13 DISPOSAL CONSIDERATIONS

Waste Disposal

Incineration is the recommended method for disposal observing all local, state and federal regulations.

14 TRANSPORT INFORMATION

DOT Name

Not regulated

DOT Technical Name

DOT Hazard Class

UN Number

DOT Packing Group

PG

RQ

15 REGULATORY INFORMATION

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

Immediate (Acute) Health N

Fire

Delayed (Chronic) Health N

Reactive

Ν

Sudden Release of Pressure

Ν

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Ingredient Related Regulatory Information:

SARA Reportable Quantities

CERCLA RQ

SARA TPQ

Polyoipolyester

ΝE

NE

16 OTHER INFORMATION

Revision Information

Revision Date

22 JUL 2005

Revision Number 4

Supercedes Revision Dated

11-OCT-2004

Revision Summary

Change material name and chemical family

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

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July 22, 2005

Dear Customer:

One or more of the chemicals we are shippping you are not on the Toxic Substance Control Act (TSCA) Inventory list and is being sent to you as a research and development (R&D) chemical. In order to be exempt from Premanufacturing Notification (PMN) requirements, the EPA requires that these chemicals be used solely for R&D and that all research is supervised by a "technically qualified individual" as defined in 40 C.F.R. 720.3(ee) (see below).

The chemical, physical, and toxicological properties of these chemicals may not have been fully investigated. Use due caution in the handling of this material and follow appropriate good industrial hygiene and safety precautions to control exposure. Consult the enclosed (attached) Material Safety Data Sheet (MSDS) for additional information.

Because the conditions of handling and use are beyond our control, we make no guarantee of results and assume no liability for injuries, damages, or penalties resulting from the use whether or not our suggestions are followed. Such recommendations are not to be taken as a license to operate under or to infringe any patent.

Very Truly Yours,

Director, Regulatory Affairs and Product Safety-Arkema Inc.

Additives Experimental (215) 419-5804

40 C.F.R. 720.3(ee): Technically qualified individual means a person or persons (1) who, because of education, training, or experience, or a combination of these factors, is capable of understanding the health and environmental risks associated with the chemical substance which is used under his or her supervision, (2) who is responsible for enforcing appropriate methods of conducting scientific experimentation, analysis, or chemical research to minimize such risks, and (3) who is resposible for the safety assessments and clearances related to the procurement, storage, use, and disposal of the chemical substance required within the scope of conducting a research and developmental activity.

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