

**KALO**

SDS Revision Date: 05/09/2016

SAFETY DATA SHEET

SECTION 1**IDENTIFICATION**

Company Name KALO, Inc.
Address 13200 Metcalf Ave, Suite 250
City, State, Zipcode Overland Park, KS 66213
Phone Numbers 1-800-255-5196 / 1-913-491-9146 (fax)
 www.kalo.com

24 HOUR EMERGENCY NUMBER/CHEMTREC (USA)
 1-800-424-9300

Poison Control Center (USA)
 1-800-222-1212

Product Identity VIGOR FOR SOYBEANS - PART A NITROGEN FIXING INOCULANT CONCENTRATE
Reference/Item Number VIGTP, VIIGOR-CS, VIGA
Intended Use Bradyrhizobium bacteria in an aqueous solution
Application Method See technical data sheet.

SECTION 2**HAZARD(S) IDENTIFICATION**

Using the toxicity data listed in Sections 11 and 12, the product is labeled as follows:

HAZARD COMMUNICATION STANDARD (HCS) PICTOGRAM(S)
 Not Required.

[EYE IRRITANT]:

H320: May cause mild eye irritation.

[PREVENTION]:

P264: Wash thoroughly after handling.

P280: Wear protective gloves and eye/face protection.

[RESPONSE]:

P305+351+338: IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do; continue rinsing.

P302+352: IF ON SKIN: Wash with plenty of soap and water.

P304+340: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P314: Get medical advice/attention if you feel unwell.

[STORAGE]:

P234: Store in original container.

P402+235: Store in a cool, dry place.

P410: Protect from sunlight.

[DISPOSAL]:

P501: Dispose of contents/container in accordance with local/national regulations.

SECTION 3**COMPOSITION/INFORMATION ON INGREDIENTS**

This product is labeled with the following GHS classifications, as it contains substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations. This product is a proprietary blend and the ingredients and mixture percentages are being withheld as confidential business information.

Ingredient/Chemical Designations	CAS Number	GHS Classification	Notes
Live culture of nitrogen-fixing Rhizobium bacteria	Proprietary	Eye Irrit., H320	[1]

[1] There are no known health effects caused by Rhizobium bacteria contained in this product.

SECTION 4**FIRST AID MEASURES****[DESCRIPTIONS]:**

General: In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.

Inhalation: Remove victim to fresh air. Seek medical attention if respiratory irritation or distress continues.

Eyes: Flush eyes with water for at least 15 minutes. Get medical attention if irritation persists.

Skin: Immediately wash skin with plenty of soap and water. If irritation persists, seek medical advice/attention.

Ingestion: If victim is conscious and alert, give 1 to 2 glasses of water to drink. Do not give anything by mouth to an unconscious person. Seek medical attention if necessary.

[MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED]:

Eyes: May cause mild eye irritation.

SECTION 5**FIRE FIGHTING MEASURES**

Flashpoint: None

Auto-Ignition Temp: Not determined

Explosive Limits (LEL): Not applicable

Explosive Limits (UEL): Not applicable

Extinguishing Media: Use media suitable for the surrounding fire

Unusual Fire/Explosion Hazards: None known

Fire Fighting Instructions: No special requirements

SECTION 6**ACCIDENTAL RELEASE MEASURES**

Spill: Contain spill and recover for use or disposal. Spilled liquid may cause slippery residue on hard floors. Flush spill area with water to wash away any slippery residue. Always follow federal, state and local regulations regarding waste disposal.

SECTION 7**HANDLING AND STORAGE****Precautions For Safe Handling:**

Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics or using the toilet. Wash exposed skin promptly to remove accidental splashes of contact with this material. Follow normal hygiene and housekeeping standards for agricultural products. See Section 2 for further details [PREVENTION].

Conditions For Safe Storage:

Store between 40°F (4°C) and 77°F (25°C). Do not store, use, and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored. Store in original package in a cool, dry place. Avoid repeated freeze/thaw cycles. Open package only when ready to use. Use before expiration date printed on package. See Section 2 for further details [STORAGE].

Incompatible Materials:

Not applicable

SECTION 8**EXPOSURE CONTROLS/PERSONAL PROTECTION****Exposure Data:**

This product contains no ingredients with established limits for exposure.

Carcinogen Data:

This product contains no ingredients that are suspected of being or known to be a carcinogen under OSHA, NTP, IARC.

[EXPOSURE CONTROLS]:**Respiratory:**

None required when used according to label instructions.

Eyes:

No special requirements.

Skin:

No special requirements.

Equipment:

Clean application equipment with detergent and water after use.

Other Work Practices:

See Section 8 for further details [HANDLING AND STORAGE].

SECTION 9**PHYSICAL AND CHEMICAL PROPERTIES****Appearance:**

Yellow to brown liquid

Upper Flammability Limits:

Upper Explosive Limit: Not measured

Odor:

Mild

Lower Flammability Limits:

Lower Explosive Limit: Not measured

Odor Threshold:

Not determined

Vapor Pressure (Pa):

Not determined

pH:

6.5 to 7.4

Vapor Density:

Not determined

Melting/Freezing Points (°C):

Melting: Not determined / Freezing: 25°F (-4°C)

Solubility in Water:

Soluble

Initial Boiling Point/Range (°C):

216°F (102°C)

Partition Co-efficient n-octanol/water (Log Kow):

Not determined

Flash Point:

Not determined

Auto-Ignition Temperature (°C):

Not determined

Evaporation Rate (Ether=1):

Not determined

Decomposition Temperature:

Not determined

Flammability (Solid, Gas):

Not determined

Viscosity (cSt):

Not determined

Specific Gravity @ 20°C

1.0g/cc

VOC%:

Not determined

SECTION 10**STABILITY AND REACTIVITY****Stability:**

Stable

Conditions to Avoid:

None

Hazardous Polymerization:

Will not occur

Chemical Incompatibilities:

Some seed applied chemicals, including fungicides, may be harmful to the bacteria in this product. See product label for further information on the use of fungicides or other chemicals in conjunction with seed treatment.

Hazardous Products of Decomposition:

Oxides of carbon

SECTION 11**TOXICOLOGICAL INFORMATION****Acute Toxicity:****Ingredients****Oral LD50 mg/kg****Skin LD50mg/kg****Inhalation Vapor/Dust/Mist LD50mg/L/4hr**

Nitrogen Fixing Rhizobium Bacteria

>5,000 (Rat)/Category: NA

>2,000 (Rabbit)/Category: NA

ND

Category --:

Item: Acute Toxicity (mouth) / Hazard: Not applicable.

Category --:

Item: Acute Toxicity (skin) / Hazard: Not applicable.

Category --:

Item: Acute Toxicity (inhalation) / Hazard: Not applicable.

Category --:

Item: Skin Corrosion/Irritation / Hazard: Not applicable.

Category --:

Item: Eye Damage/Irritation / Hazard: **May cause mild eye irritation.**

Category --:

Item: Sensitization (skin) / Hazard: **Not a skin sensitizer.**

Category --:

Item: Germ Toxicity / Hazard: Not applicable.

Category --:

Item: Carcinogenicity / Hazard: Not applicable.

Category --:

Item: Reproductive Toxicity / Hazard: Not applicable.

Category --:

Item: Specific Target Organ Systemic Toxicity (single exposure) / Hazard: Not applicable.

Category --:

Item: Specific Target Organ Systemic Toxicity (repeated exposure) / Hazard: Not applicable.

Category --:

Item: Aspiration Hazard / Hazard: Not applicable.

SECTION 12 ECOLOGICAL INFORMATION

Toxicity:	No additional information provided for this product. See Section 3 for chemical specific data.
Aquatic Ecotoxicity:	This product is not expected to be toxic to the aquatic environment.
Persistence and Degradability:	There is no data available on the preparation itself.
Bioaccumulative Potential:	Not measured.
Mobility in Soil:	No data available.
Results of PBT and vPvB Assess:	This product contains no PBT/vPvB chemicals.
Other:	This product contains Rhizobacterial strains(s) that occur(s) naturally in soil.

SECTION 13 DISPOSAL CONSIDERATIONS

Waste Treatment Methods:	Small amounts of product which cannot be used according to label instructions may be disposed of in a landfill. Always follow Federal, State and Local regulations regarding waste disposal.
RCRA Waste Status:	This product is not regulated as a hazardous waste. State and local regulations may affect the disposal of this product. Consult your State, Local or Provential environmental agency for disposal of waste other than by use according to label instructions.

SECTION 14 TRANSPORT INFORMATION

UN Number:	Not applicable	
UN Proper Shipping Name:	Not regulated	
	This product is not regulated as a hazardous material for all modes of transportation within the U.S. and Canada.	
Transport Hazard Class(es):	DOT (Domestic Surface Transportation):	IMO/IMDG (Ocean Transportation):
	DOT Proper Shipping: Not regulated	IMDG Proper Shipping Name: Not regulated
	DOT Hazard Class: Not applicable	IMDG Hazard Class: Not applicable
	DOT Label: None	Sub Class: Not applicable
	UN/NA Number: Not applicable	IMDG Packing Group: Not applicable
	DOT Packing Group CERCLA/DOT RQ: NA gal. / NA lbs.	
Special Precautions For User:	Not applicable	
Transport:	Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable	
Environmental Hazards IMDG:	Marine Pollutant: No	
Packing Group:	Not applicable	

SECTION 15 REGULATORY INFORMATION

Regulatory Overview:	The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented. All ingredients of this product are listed on the TSCA (Toxic Substance Control Act) inventory or are not required to be listed on the TSCA inventory.
OSHA Hazard Classification:	Non-hazardous
WHMIS/CPR Classification:	This product has been classified in accordance with the hazard criteria for the Controlled Products Regulations (CPR) and this SDS contains all of the information required by the CPR.
US EPA Tier II Hazards:	Fire: <u>No</u> / Sudden Release of Pressure: <u>No</u> / Reactive: <u>No</u> / Immediate (acute): <u>No</u> / Delayed (chronic): <u>No</u>
EPCRA 311/312:	Chemicals and RQs (>0.1%): No product ingredients listed
EPCRA 302:	Extremely Hazardous (>0.1%): No product ingredients listed
EPCRA 313	Toxic Chemicals (>0.1%): Contains no reportable components
Proposition 65	Carcinogens (>0.0%): Contains no components subject to warning requirements
Proposition 65:	Developmental Toxins (>0.0%): Contains no components subject to warning requirements
Proposition 65:	Female Repro Toxins (>0.0%): Contains no components subject to warning requirements
Proposition 65:	Male Repro Toxins (>0.0%): Contains no components subject to warning requirements
N.J. RTK Substance (>1%):	No product ingredients listed.
Penn RTK Substances (>1%):	No product ingredients listed.

SECTION 16 OTHER INFORMATION

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.