

SAFETY DATA SHEET



KALO

SECTION 1: IDENTIFICATION

Company Information	KALO, Inc., 13200 Metcalf Ave., Ste. 250, Overland Park, KS 66213
Phone Numbers	800-255-5196 / 913-491-9146 FAX
Website	www.kalo.com
Product Identity	LEGACY
Reference/Item Number	LEG4CS
Intended Use	Seed Treatment
Application Method	Refer to product label.
24 HOUR EMERGENCY NUMBER/CHEMTREC (USA)	1-800-424-9300
POISON CONTROL CENTER (USA)	1-800-222-1212

SECTION 2: HAZARDS IDENTIFICATION

HAZARD COMMUNICATION STANDARD (HCS) PICTOGRAM(S) AND SIGNAL WORD(S)

CAUTION

Eye Irrit:	H320: May cause mild eye irritation.
Prevention:	P280: Wear protective gloves/clothing and eye/face protection. P264: Wash thoroughly after handling.
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. P337+313: If eye irritation persists, get medical advice/attention. P302+352: IF ON SKIN: Wash with plenty of soap and water. P332+313: If skin irritation occurs, get medical advice/attention. P362: Take off contaminated clothing and wash before reuse.
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 a trade secret.

Ingredient/Chemical Designations:	Inerts
CAS No.:	7732-18-5
Weight %:	99.75
Ingredient/Chemical Designations:	Chitosan (poly-D-glucosamine)
CAS No.:	9012-76-4
Weight %:	0.25

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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 to fresh air. Keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious, place in the recovery position and obtain immediate medical attention. Give nothing by mouth.
Eyes:	Irrigate copiously with clean fresh water for at least 10 minutes, holding the eyelids apart and seek medical attention.
Skin:	Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser. Do NOT use solvents or thinners.
Ingestion:	If accidentally swallowed, obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

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

Overview:	No adverse symptoms or effects anticipated under normal handling conditions. See Section 2 for further details.
Eyes:	May cause mild eye irritation.
Ingestion:	Not considered to be significant.
Skin:	May dry the skin if chronic (daily exposures) are encountered.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing Media:	Alcohol resistant foam, CO ₂ , powder, or water spray. Do not use water jet.
Special Hazards:	Combustion may yield smoke, carbon monoxide, and other products of incomplete combustion. Oxides of sulfur, nitrogen or phosphorus may also be formed. Never use welding or cutting torches on or near container, even if empty.
Advice For Firefighters:	Evacuate area. Prevent contamination from run-off of adjacent areas, streams, drinking water and sewers. Do not flush down sewers or other drainage systems. Exposed firefighters must wear standard protective equipment and in enclosed areas self-contained breathing apparatus. Use water-spray to cool fire-exposed surfaces and personnel.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Precautions/Procedures:	Keep all sources of ignition away from spill/release. In case of a major spill or spillage in a confined space evacuate the area and check vapor levels.
Environmental Precautions:	Do not allow spills to enter drains or water courses.
Methods and Material For Containment and Cleaning Up:	Ventilate the area and avoid breathing vapors. Take the personal protective measures listed in Section 8. Contain and absorb spillage with non-combustible materials (e.g. sand/earth/vermiculite). Place in closed containers outside buildings and dispose of according to the Waste Regulations (see Section 13). Clean, preferably with a detergent. Do not use solvents. Do not allow spills to enter drains or water courses. If drains, sewers, streams or lakes are contaminated, inform the local water company immediately. In the case of contamination of rivers, streams, or lakes, the Environmental Protection Agency should also be informed.

SECTION 7: HANDLING AND STORAGE

Precautions For Safe Handling:	Do not get in eyes, on skin, or on clothing. Do not breathe vapors or mists. Keep container closed. Use only with adequate ventilation. Use good personal hygiene practices. Wash hands before eating, drinking, smoking. Remove contaminated clothing and wash before reuse. Destroy contaminated belts and shoes and other items that cannot be decontaminated. Have eyewash accessible to use in handling area. See Section 2 for further details.
Conditions For Safe Storage:	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.
Incompatible Materials:	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.
Specific End Use(s):	Refer to package label.

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Data:	This product contains no ingredients (at greater than 0.1%) with established limits for exposure under OSHA, ACGIH and/or NIOSH.
Carcinogen Data:	This product contains no ingredients (at greater than 0.1%) that are suspected of being or known to be a carcinogen under OSHA, NTP or IARC.
[PERSONAL PROTECTIVE EQUIPMENT]	
Respiratory:	Wear a dust mask when working in dusty conditions. Standard household ventilation should be adequate.
Eyes:	The use of dust proof goggles when using this product is recommended.
Skin:	Overalls, which cover the body, arms, and legs, should be worn. Skin should not be exposed. All parts of the body should be washed after contact.
Equipment Cleaning:	Clean application equipment with detergent and water after use.
Other Work Practices:	See technical data sheet.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Light Brownish-Yellow Liquid
Odor:	Slight Odor
Odor Threshold:	Not Measured
pH:	5.0-7.0
Specific Gravity:	1.07 q/ml @ 20°C (estimated from components)
Flashpoint and Method:	Non-Flammable
Solubility in Water:	100% v/v
Viscosity (cSt):	Not Measured
VOC%:	Not Measured
Vapor Pressure (Pa):	Approx. 21 mm Hg (estimated from components)
Vapor Density:	1.8 (air=1) (estimated from components)
Density:	Not Measured
Melting/Freezing Points:	Liquid at Room Temperature
Initial Boiling Point/Range (°F/°C):	212°F (at NTP) (estimated from components)
Flammability (Solid,Gas):	Not Measured
Upper Flammability/Explosive Limits:	Not Measured
Lower Flammability/Explosive Limits:	Not Measured
Decomposition Temperature:	Not Measured
Auto-Ignition Temperature:	Not Measured
Partition Co-Efficient n-octanol/water (Log Kow):	Not Measured
Evaporation Rate (Water=1):	1
Molecular Weight:	Mixture
Volatility:	<1%
Other:	No other relevant information.

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SECTION 10: STABILITY AND REACTIVITY

Reactivity:	Not chemically reactive.
Chemical Stability:	Stable under normal ambient and anticipated conditions of use.
Hazardous Reactions:	Hazardous reactions not anticipated.
Conditions To Avoid:	Extended exposure to high temperatures can cause decomposition. Avoid all possible sources of ignition.
Incompatible Materials:	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 Decomposition Products:	Not anticipated under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

		[ACUTE TOXICITY ESTIMATE]
Ingredients:		Chitosan (poly-D-glucosamine)
Oral LD50mg/kg:		No Data Available
Skin LD50mg/kg:		No Data Available
Inhalation Vapor LC50mg/L/4hr:		No Data Available
Inhalation Dust/Mist LC50mg/L/4hr:		No Data Available
ITEM	HAZARD	CATEGORY
Acute Toxicity (mouth):	Not Applicable	--
Acute Toxicity (skin):	Not Applicable	--
Acute Toxicity (inhalation):	Not Applicable	--
Skin Corrosion/Irritation:	Not Applicable	--
Eye Damage/Irritation:	May cause mild eye irritation.	--
Sensitization (respiratory):	Not Applicable	--
Sensitization (skin):	Not Applicable	--
Germ Toxicity:	Not Applicable	--
Carcinogenicity:	Not Applicable	--
Reproductive Toxicity:	Not Applicable	--
Specific Target Organ Systemic Toxicity-Single Exposure:	Not Applicable	--
Specific Target Organ Systemic Toxicity-Repeated Exposure:	Not Applicable	--
Aspiration Hazard:	Not Applicable	--

SECTION 12: ECOLOGICAL INFORMATION

Toxicity:	This product is not expected to be toxic to the aquatic environment. No additional information provided for this product.
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 Adverse Effects:	This product contains Rhizobacterial strain(s) that occur(s) naturally in soil.

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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. Consult your state, local or provincial environmental agency for disposal of waste other than by use according to label instructions.

SECTION 14: TRANSPORT INFORMATION

DOT Proper Shipping Name: Not Regulated

DOT Hazard Class: Not Applicable

DOT Packing Group: Not Applicable

DOT Label: None

IMDG Proper Shipping Name: Not Regulated

IMDG Hazard Class: Not Applicable

IMDG Packing Group: Not Applicable

IMDG Marine Pollutant: No

ICAO/IATA: See Bill of Lading

SECTION 15: REGULATORY INFORMATION

Regulatory Overview: The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.

Toxic Substance Control Act (TSCA): All ingredients of this product are listed on the TSCA inventory, or are not required to be listed on the TSCA inventory.

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.

U.S. EPA Tier II Hazards: Fire=NO / Sudden Release of Pressure=NO / Reactive=NO / Immediate (acute)=NO / Delayed (chronic)=NO

EPCRA 302–Extremely Hazardous (0.1%): To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

EPCRA 311/312–Chemicals and RQs (>0.1%): To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

EPCRA 313–Toxic Chemicals (>0.1%): To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65–Carcinogens (>0.0%): To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65–Developmental Toxins (>0.0%): To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65–Female Repro Toxins (>0.0%): To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65–Male Repro Toxins (>0.0%): To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

N.J. RTK Substances (>1%): To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

PENN RTK Substances (>1%): To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

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. Company accepts 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.