

SAFETY DATA SHEET

Section 1: IDENTIFICATION

1.1 PRODUCT IDENTIFIER

Kannar® SEEDKOTE™ in various colors for cotton, corn, soy, wheat, and soy.

Product Code:	Product Name	Product Version
CANBAS10	SeedKOTE™ Canola Base	v1.0
CANNEU10	SeedKOTE™ Canola Neutral	v1.0
CANBLU10	SeedKOTE™ Canola Blue	v1.0
CANRED10	SeedKOTE™ Canola Red	v1.0
CANGRE10	SeedKOTE™ Canola Green	v1.0
CANVIO10	SeedKOTE™ Canola Violet	v1.0
COTBAS20	SeedKOTE™ Cotton Base	v2.0
COTNEU20	SeedKOTE™ Cotton Neutral	v2.0
COTBLU20	SeedKOTE™ Cotton Blue	v2.0
COTRED20	SeedKOTE™ Cotton Red	v2.0
COTGRE20	SeedKOTE™ Cotton Green	v2.0
COTVIO20	SeedKOTE™ Cotton Yellow	v2.0
COTYLW20	SeedKOTE™ Cotton Violet	v2.0
CORBAS28	SeedKOTE™ Corn Base	v2.8
CORNEU28	SeedKOTE™ Corn Neutral	v2.8
CORBLU28	SeedKOTE™ Corn Blue	v2.8
CORRED28	SeedKOTE™ Corn Red	v2.8
CORGRE28	SeedKOTE™ Corn Green	v2.8
CORVIO28	SeedKOTE™ Corn Violet	v2.8
SOYBAS24	SeedKOTE™ Soy Base	v2.4
SOYNEU24	SeedKOTE™ Soy Neutral	v2.4
SOYBLU24	SeedKOTE™ Soy Blue	v2.4
SOYRED24	SeedKOTE™ Soy Red	v2.4
SOYGRE224	SeedKOTE™ Soy Green	v2.4
SOYVIO24	SeedKOTE™ Soy Violet	v2.4
WHEBAS22	SeedKOTE™ Wheat Base	v1.7
WHENEU22	SeedKOTE™ Wheat Neutral	v1.7
WHEBLU22	SeedKOTE™ Wheat Blue	v1.7
WHERED22	SeedKOTE™ Wheat Red	v1.7
WHEGRE22	SeedKOTE™ Wheat Green	v1.7
WHEVIO2	SeedKOTE™ Wheat Violet	v1.7

SAFETY DATA SHEET

1.2 RECOMMENDED USE OF CHEMICAL AND RESTRICTIONS ON USE

Use: Seed Coatings

1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Name/Address: Kannar Earth Science, Ltd.
2220 Northmont Parkway, Suite 250
Duluth, GA 30096, USA

Telephone Number: +1 (678) 475-1155
Toll free: +1(877) 4-KANNAR / +1(877) 452-6627

1.4 EMERGENCY TELEPHONE NUMBER

Emergency Telephone Number: CHEMTREC at +1 (800) 424-9300 (Within in the US)
CHEMTREC at +1 (703) 527-3887 (Outside USA and Canada;
collect calls accepted))

Section 2: HAZARD(S) IDENTIFICATION

2.1 CLASSIFICATION OF THE CHEMICAL

Hazard class

Serious eye irritation 2A
Skin Irritation 2

2.2 LABEL ELEMENTS

Hazard Pictogram:



Signal Word: Warning

Hazard Statement: Causes serious eye irritation. Causes skin irritation.

Prevention: Wash hands thoroughly after handling. Wear eye protection/face protection. Wear protective gloves.

Response: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. If on skin: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.

Storage: Not applicable.

Disposal: Not applicable.

2.3 ADDITIONAL INFORMATION

Hazards not otherwise specified: Not applicable.

Less than 40.0% of the mixture consists of ingredient(s) of unknown acute toxicity

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 MIXTURES

Ingredient	CAS No	Wt. %
Mica	12001-26-2	5 - 30
Titanium dioxide	13463-67-7	2 - 10

The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.

SAFETY DATA SHEET

Section 4: FIRST- AID MEASURES

4.1 DESCRIPTION OF THE FIRST AID MEASURE

Eye:	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses, if worn. Get medical attention if irritation develops and persists.
Skin:	In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician if irritation develops and persists.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical advice/attention.
Ingestion:	If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical advice/attention.

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

Eye:	Irritating to eyes. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.
Skin:	Irritating to skin. Symptoms may include redness, edema, drying, defatting and cracking of the skin.
Inhalation:	May cause respiratory tract irritation. Vapours may cause drowsiness and dizziness.
Ingestion:	May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENTS NEEDED

Note to Physicians:	Symptoms may not appear immediately.
Specific Treatments:	In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

Section 5: FIRE-FIGHTING MEASURES

5.1 EXTINGUISHING MEDIA

Suitable Extinguishing Media:	Water, water spray, dry powder, sand, foam, CO ₂ .
Unsuitable Extinguishing Media:	None known.

5.2 SPECIAL HAZARDS ARISING FROM THE CHEMICAL

Products of Combustion:	Strong oxidizing agents, highly corrosive acids and bases, reactive materials such as aluminum, zinc copper, nickel, magnesium, etc.
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5.3 SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE FIGHTERS

Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

Section 6: ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Avoid any contact with the skin and eyes.

6.2 METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING - UP

Methods for Containment:	Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).
Methods for Cleaning-Up:	Scoop up material and place in a disposal container. Provide ventilation.

SAFETY DATA SHEET

Section 7: HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING

Handling: Avoid contact with skin and eyes. Do not swallow. Do not breathe gas/fumes/vapor/spray. Handle and open container with care. Use with adequate ventilation. Empty containers retain product residue and can be hazardous. Do not reuse container. (See section 8)

General Hygiene Advice: Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Storage: Keep out of the reach of children. Keep container tightly closed and in a well-ventilated place. Store in a cool, dry area, away from incompatibles. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Protect from freezing and direct sunlight. (See section 10)

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 CONTROL PARAMETERS

Exposure Guidelines

Occupational Exposure Limits		
Ingredient	OSHA-PEL	ACGIH-TLV
Mica	20 mppcf	10 mg/m ³ (total); 3 mg/m ³ (resp)
Titanium dioxide	15 mg/m ³ (total dust)	10 mg/m ³

8.2 EXPOSURE CONTROLS

Engineering Controls: Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

8.3 INDIVIDUAL PROTECTIVE MEASURES

Personal Protective Equipment:

Eye/Face Protection: Wear approved eye (properly fitted dust- or splash-proof chemical safety goggles) / face (face shield) protection.

Skin Protection:

Hand Protection: Wear chemical-resistant gloves.

Body Protection: Wear suitable protective clothing.

Respiratory Protection: In case of insufficient ventilation, wear suitable respiratory equipment. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

General Health and Safety Measures: Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Viscous.

Color: As indicated in product name, with "Base" implying white while wet and color neutral when dry.

Odor: Mild ammonia.

Odor Threshold: Not available.

Physical State: Liquid.

SAFETY DATA SHEET

pH:	7.0 – 9.0
Melting Point/Freezing Point:	Not available.
Initial Boiling Point and Boiling Range:	50 - 150 °C (122 - 302°F)
Flash Point:	100°C (212°F)
Evaporation Rate:	Slower than ether.
Flammability:	Not Flammable.
Lower Flammability/Explosive Limit:	Not available.
Upper Flammability/Explosive Limit:	Not available.
Vapor Pressure:	Not available.
Vapor Density:	Same as water.
Relative Density/Specific Gravity:	1.0 - 1.5 at 25°C (77°F) Density is noted on front right of product label.
Solubility:	Miscible.
Partition coefficient: n-octanol/water:	Not available.
Auto-ignition Temperature:	Not available.
Decomposition Temperature:	Not available.
Viscosity:	Not available.
Oxidizing Properties:	Not available.
Explosive Properties:	Not available.

Section 10: STABILITY AND REACTIVITY

10.1 REACTIVITY

No dangerous reaction known under conditions of normal use.

10.2 CHEMICAL STABILITY

Stable under normal storage conditions.

10.3 POSSIBILITY OF HAZARDOUS REACTIONS

No dangerous reaction known under conditions of normal use.

10.4 CONDITIONS TO AVOID

Heat. Incompatible materials.

10.5 INCOMPATIBLE MATERIALS

Strong oxidizing agents, highly corrosive acids and bases, reactive materials such as aluminum, zinc copper, nickel, magnesium, etc.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS

May produce CO, CO₂, H₂O, N_xO, and other products from burning aliphatic and/or aromatic hydrocarbons.

Section 11: TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS

Likely Routes of Exposure: Skin contact, eye contact, inhalation, and ingestion.

Symptoms related to physical/chemical/toxicological characteristics:

Eye: Irritating to eyes. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Skin: Irritating to skin. Symptoms may include redness, edema, drying, defatting and cracking of the skin.

SAFETY DATA SHEET

Ingestion: May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

Inhalation: May cause respiratory tract irritation. Vapours may cause drowsiness and dizziness.

Acute Toxicity:

Ingredient	LC50	LD50
Mica	Not available.	Not available.
Titanium dioxide	Not available.	Oral Rat >10000 mg/kg Dermal Rabbit >10000mg/kg

Calculated overall Chemical Acute Toxicity Values

LC50 (inhalation)	LD50 (oral)	LD50 (dermal)
90000 mg/m3 4hr, rat	54793.3 mg/kg, rat	56359.5 mg/kg, rat

Ingredient	Chemical Listed as Carcinogen or Potential Carcinogen (NTP, IARC, OSHA, ACGIH, CP65)*
Mica	Not listed.
Titanium dioxide	G-A4, I-2B, O, CP65

11.2 DELAYED, IMMEDIATE, AND CHRONIC EFFECTS OF SHORT- AND LONG-TERM EXPOSURE

Skin Corrosion/Irritation: Causes skin irritation.

Serious Eye Damage/Irritation: Causes serious eye irritation.

Respiratory Sensitization: Based on available data, the classification criteria are not met.

Skin Sensitization: Based on available data, the classification criteria are not met.

STOT-Single Exposure: Based on available data, the classification criteria are not met.

Chronic Health Effects:

Carcinogenicity: This product is not classified as a carcinogen.

Germ Cell Mutagenicity: This product is not classified as a mutagen.

Reproductive Toxicity:

Developmental: This product does not contain known reproductive or developmental toxins.

Fertility: No known significant effects or critical hazards.

STOT-Repeated Exposure: Based on available data, the classification criteria are not met.

Aspiration Hazard: Not expected to occur.

Other Information: Not available.

Section 12: ECOLOGICAL INFORMATION

12.1 ECOTOXICITY

Acute/Chronic Toxicity: May cause long-term adverse effects in the aquatic environment.

12.2 PERSISTENCE AND DEGRADABILITY

Not available.

12.3 BIOACCUMULATIVE POTENTIAL

Bioaccumulation: Not available.

12.4 MOBILITY IN SOIL

Not available.

12.5 OTHER ADVERSE EFFECTS

Not available.

Section 13: DISPOSAL CONSIDERATIONS

SAFETY DATA SHEET

13.1 WASTE TREATMENT METHODS

Disposal Method: This material must be disposed of in accordance with all local, state, provincial, and federal regulations.

Other disposal recommendations: Not available.

Section 14: TRANSPORT INFORMATION

14.1 UN NUMBER

Not available.

14.2 UN PROPER SHIPPING NAME

Not available.

14.3 TRANSPORT HAZARD CLASS(ES)

Not available.

14.4 PACKING GROUP

Not available.

14.5 ENVIRONMENTAL HAZARDS

Not available.

14.6 TRANSPORT IN BULK ACCORDING TO ANNEX II OF MARPOL 73/78 AND THE IBC CODE

Do not handle until all safety precautions have been read and understood.

14.7 SPECIAL PRECAUTIONS FOR USER

Not available.

Section 15: REGULATORY INFORMATION

15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/ LEGISLATIONS SPECIFIC FOR THE CHEMICAL

MSDS prepared pursuant to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012

SARA Title III				
Ingredient	Section 302 (EHS) TPQ (lbs.)	Section 304 EHS RQ (lbs.)	CERCLA RQ (lbs.)	Section 313
Mica	Not listed.	Not listed.	Not listed.	Not listed.
Titanium dioxide	Not listed.	Not listed.	Not listed.	Not listed.

State Regulations

California Proposition 65:

This product contains a chemical known to the State of California to cause cancer.

Global Inventories:

Ingredient	USA TSCA
Mica	No.
Titanium dioxide	Yes.

NFPA-National Fire Protection Association:

Health:	1
Fire:	1

SAFETY DATA SHEET

Reactivity:	0
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Hazard Rating: 0 = minimal, 1 = slight, 2 = moderate, 3 = severe, 4 = extreme

SOURCE AGENCY CARCINOGEN CLASSIFICATIONS:

OSHA (O) Occupational Safety and Health Administration.

ACGIH (G) American Conference of Governmental Industrial Hygienists.

A1 - Confirmed human carcinogen.

A2 - Suspected human carcinogen.

A3 - Animal carcinogen.

A4 - Not classifiable as a human carcinogen.

A5 - Not suspected as a human carcinogen.

IARC (I) International Agency for Research on Cancer.

1 - The agent (mixture) is carcinogenic to humans.

2A - The agent (mixture) is probably carcinogenic to humans; there is limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals.

2B - The agent (mixture) is possibly carcinogenic to humans; there is limited evidence of carcinogenicity in humans in the absence of sufficient evidence of carcinogenicity in experimental animals.

3 - The agent (mixture, exposure circumstance) is not classifiable as to its carcinogenicity to humans.

4 - The agent (mixture, exposure circumstance) is probably not carcinogenic to humans.

NTP (N) National Toxicology Program.

1 - Known to be carcinogens.

2 - Reasonably anticipated to be carcinogens.

Section 16: OTHER INFORMATION

Date of Preparation: August 29, 2014

Version: 1.1

Revision Date: September 13, 2016

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End of Safety Data Sheet