

# MATERIAL SAFETY DATA SHEET

Mixture

# Matreya LLC

Date-Issued: 09/09/2004

MSDS Ref. No: 1119

Date-Revised: 07/27/2007

Revision No: 1

## Plant Sterol Mix

### 1. PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** Plant Sterol Mix**PRODUCT DESCRIPTION:** Plant sterol mix.....25mg/ml, 1ml chloroform**PRODUCT CODE:** 1119**MANUFACTURER**

Matreya  
168 Tressler Street  
Pleasant Gap, PA 16823  
Ph # 814-359-5060

**24 HR. EMERGENCY TELEPHONE NUMBERS**

800-424-9300

### 2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>Wt.%</u>	<u>CAS#</u>	<u>EINECS#</u>
Chloroform	<98	67-66-3	- -
Brassicasterol, (5,22-Cholestadien-24 $\beta$ -methyl-3 $\beta$ -OL)	<1	474-67-9	
Campesterol, (5-Cholesten-24 $\alpha$ -methyl-3 $\beta$ -ol)	<1	474-62-4	
Stigmasterol, (5,22-Cholestadien-24 $\beta$ -ethyl-3 $\beta$ -ol), (5,22-Stigmastadien-3 $\beta$ -ol)	<1	83-48-7	
$\beta$ -sitosterol	>1	83-46-5	

**EEC LABEL SYMBOL AND CLASSIFICATION**

R38 - Irritating to skin.

R40 - Possible risks of irreversible effects.

R48/20/22 - Harmful : danger of serious damage to health by prolonged exposure through inhalation and if swallowed.

### 3. HAZARDS IDENTIFICATION

**EMERGENCY OVERVIEW****PHYSICAL APPEARANCE:** Liquid**IMMEDIATE CONCERNS:** R20/22 - Harmful by inhalation and if swallowed.**POTENTIAL HEALTH EFFECTS****EYES:** Hazardous in case of eye contact (irritant). Inflammation of the eye is characterized by redness, watering, and itching.**SKIN:** May be hazardous in case of skin contact (irritant). Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.**SKIN ABSORPTION:** May be absorbed through the skin in harmful amounts.**INGESTION:** Harmful if swallowed.**INHALATION:** Harmful if inhaled.**SIGNS AND SYMPTOMS OF OVEREXPOSURE****EYES:** Hazardous in case of eye contact (irritant). Inflammation of the eye is characterized by redness, watering, and itching.**SKIN:** Hazardous in case of skin contact (irritant). Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

**SKIN ABSORPTION:** Not Available

**INGESTION:** Hazardous in case of ingestion.

**INHALATION:** Hazardous in case of inhalation.

**ACUTE TOXICITY:** Hazardous in case of eye contact (irritant) Inflammation of the eye is characterized by redness, watering, and itching. May be hazardous in case of skin contact (irritant). Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering. Hazardous in case of ingestion.

**CHRONIC:** Cancer Hazard (contains material which) can cause cancer.

**CARCINOGENICITY:** Possible cancer hazard - (contains material which) may cause cancer based on animal data.

#### REPRODUCTIVE TOXICITY

**REPRODUCTIVE EFFECTS:** orl-rat TDLo: 4 gm/kg (6-15D preg); REPRODUCTIVE (Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus))

**TERATOGENIC EFFECTS:** Tests on laboratory animals for teratogenic effects are cited in Registry of Toxic Effects on Chemical Substances (RTECS).

**ROUTES OF ENTRY:** Skin Eyes Inhalation Ingestion

**TARGET ORGAN STATEMENT:** Causes damage to the following organs: KINDEYS, LIVER, HEART, SKIN, CENTRAL NERVOUS SYSTEM, EYE, LENS OR CORNEA.

**CANCER STATEMENT: WARNING:** This product contains a chemical(s) known to the State of California to cause cancer.

**IRRITANCY:** Harmful by inhalation, contact with skin/eyes, and if swallowed.

**SENSITIZATION:** Not Available

**HEALTH HAZARDS:** Irritant to eyes, skin, and respiratory tract.

**PHYSICAL HAZARDS: HAZARDOUS: IRRITANT!**

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## 4. FIRST AID MEASURES

**EYES:** Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Have eyes examined and tested by medical personnel.

**SKIN:** In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Thoroughly wash or discard clothing and shoes before reuse.

**INGESTION:** If swallowed, induce vomiting immediately as directed by medical personnel. **NEVER** give anything by mouth to an unconscious person. Get medical attention immediately.

**INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

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## 5. FIRE FIGHTING MEASURES

**FLASHPOINT AND METHOD:** Not Available

**FLAMMABLE LIMITS:** Not available. to Not available.

**AUTOIGNITION TEMPERATURE:** Not Available

**EXTINGUISHING MEDIA:** SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

**EXPLOSION HAZARDS:** None

**FIRE FIGHTING PROCEDURES:** As in any fire, wear self-contained breathing apparatus pressure-demand, (MSHA/NIOSH approved or equivalent) and full protective gear.

**AUTOIGNITION TEMPERATURE:** Not Available

**FLASHPOINT:** Not Available

**SENSITIVE TO STATIC DISCHARGE:** No

**SENSITIVITY TO IMPACT:** No

**HAZARDOUS DECOMPOSITION PRODUCTS:** When heated to decomposition it emits very toxic fumes.

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## 6. ACCIDENTAL RELEASE MEASURES

**SMALL SPILL:** Dike area to contain spill. Take precautions as necessary to prevent contamination of ground and surface waters. Recover spilled material on adsorbent, such as sawdust or vermiculite, and sweep into closed containers for disposal. After all visible traces, including ignitable vapors, have been removed thoroughly wet vacuum the area. Do not flush to sewer.

**LARGE SPILL:** Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

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## 7. HANDLING AND STORAGE

**GENERAL PROCEDURES:** Use with adequate ventilation. Avoid contact with eyes, skin, and clothing.

**HANDLING:** Use with sufficient ventilation to keep employee exposure below recommended limits. Provide adequate ventilation for storage, handling and use, especially for enclosed or low spaces. Avoid contact of liquid with eyes and prolonged skin exposure. Do not ingest. Avoid breathing vapors or spray mists.

**STORAGE:** Store at -20C

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## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### EXPOSURE GUIDELINES:

#### OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200)

<u>Chemical Name</u>	<u>EXPOSURE LIMITS</u>						
	<u>OSHA PEL</u>		<u>ACGIH TLV</u>		<u>Supplier OEL</u>		
		<u>ppm</u>	<u>mg/m<sup>3</sup></u>	<u>ppm</u>	<u>mg/m<sup>3</sup></u>	<u>ppm</u>	<u>mg/m<sup>3</sup></u>
Chloroform	TWA	C 50 <sup>[1]</sup>	240	10	49	2	9.78
	STEL	NL		NL		NL	

### OSHA TABLE COMMENTS:

1. C = Ceiling

**ENGINEERING CONTROLS:** Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Ensure that eyewash stations and safety showers are proximal to the work- station location.

### PERSONAL PROTECTIVE EQUIPMENT

**EYES AND FACE:** Use chemical splash goggles and face shield (ANSI Z87.1 or approved equivalent).

**SKIN:** S36/37 - Wear suitable protective clothing and gloves.

**RESPIRATORY:** Wear an appropriate NIOSH/MSHA approved air purifying respirator.

**OTHER USE PRECAUTIONS:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

**PHYSICAL STATE:** Liquid  
**ODOR:** Pleasant. Ethereal.  
**APPEARANCE:** Colorless  
**COLOR:** Colorless  
**pH:** Not Available  
**VAPOR PRESSURE:** 167 mmHg at 20°C  
**VAPOR DENSITY:** 4.1 (Air=1)  
**BOILING POINT:** to 60.55°C (141°F)  
**FREEZING POINT:** to -62.95°C (-81.3°F)  
**MELTING POINT:** \*Not Applicable  
**SOLUBILITY IN WATER:** Partially Soluble  
**MOLECULAR WEIGHT:** 119.37 (for solvent)  
**MOLE. WT. FORMULA:**  $\text{CHCl}_3$  (for solvent)  
**ODOR THRESHOLD:** 205 ppm  
**WEIGHT PER VOLUME:** 100 %

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## 10. STABILITY AND REACTIVITY

**CONDITIONS TO AVOID:** Reactive with oxidizing agents, metals, alkalis.

**STABILITY:** Stable.

**POLYMERIZATION:** Will not occur.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Phosgene Gas, carbon oxides (CO, CO<sub>2</sub>)

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## 11. TOXICOLOGICAL INFORMATION

### ACUTE

**EYES:** Draize Test (Rabbit): 20 mg/ 24h.

**Reaction:** Moderate

**SKIN ABSORPTION:** Draize Test (Rabbit) Skin: 500 mg/ 24h.

**Reaction:** mild

**ORAL LD<sub>50</sub>:** 36 mg/kg (mice)

**INHALATION LC<sub>50</sub>:** 47702 mg/ m<sup>3</sup> 4 hours(s) [Rat]

Hazardous in case of eye contact (irritant). Inflammation of the eye is characterized by redness, watering, and itching. May be hazardous in case of skin contact (irritant). Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering. Hazardous in case of inhalation. Hazardous in case of ingestion.

**SENSITIZATION:** Not Available

**TARGET ORGANS:** KIDNEYS, LUNGS, LIVER, HEART, UPPER RESPIRATORY TRACT, SKIN, EYES, CENTRAL NERVOUS SYSTEM.

### CARCINOGENICITY:

**IARC:** Class 2B carcinogen

**NTP:** Group B carcinogen

**MUTAGENICITY:** Tests on laboratory animals for mutagenic effects are cited in Registry of Toxic Effects of Chemical Substances (RTECS).

**SYNERGISTIC MATERIALS:** Not Available

**TERATOGENIC EFFECTS:** Not Available

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## 12. ECOLOGICAL INFORMATION

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**ENVIRONMENTAL DATA:** Do not flush to sewer.

**ECOTOXICOLOGICAL INFORMATION:** Not Available

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### 13. DISPOSAL CONSIDERATIONS

**DISPOSAL METHOD:** Specified Technology - Incineration or fuels blending to less than the TCLP standard. Contact your local permitted waste disposal site (TSD) for permissible treatment sites. Always contact a permitted waste disposal (TSD) to assure compliance with all current local, state, and Federal Regulations.

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### 14. TRANSPORT INFORMATION

#### DOT (DEPARTMENT OF TRANSPORTATION)

**PROPER SHIPPING NAME:** Chloroform

**TECHNICAL NAME:** Chloroform

**PRIMARY HAZARD CLASS/DIVISION:** 6.1

**UN/NA NUMBER:** 1888

**PACKING GROUP:** III

**PLACARDS:** Toxic

**LABEL:** Toxic

**NAERG:** 151

#### CANADA TRANSPORT OF DANGEROUS GOODS

**PROPER SHIPPING NAME:** Chloroform

**TECHNICAL NAME:** Chloroform

**PRIMARY HAZARD CLASS/DIVISION:** 6.1

**UN/NA NUMBER:** 1888

**PACKING GROUP:** III

#### AIR (ICAO/IATA)

**PROPER SHIPPING NAME:** Chloroform

**TECHNICAL NAME:** Chloroform

**PRIMARY HAZARD CLASS/DIVISION:** 6.1

**PACKING GROUP:** III

#### VESSEL (IMO/IMDG)

**PROPER SHIPPING NAME:** Chloroform

**TECHNICAL NAME:** Chloroform

**PRIMARY HAZARD CLASS/DIVISION:** 6.1

**UN/NA NUMBER:** 1888

**PACKING GROUP:** III

#### EUROPEAN TRANSPORTATION:

**ADR/RID HAZARD CLASSIFICATION:** 3

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### 15. REGULATORY INFORMATION

#### UNITED STATES

##### DOT LABEL SYMBOL AND HAZARD CLASSIFICATION

R38 - Irritating to skin.

R40 - Possible risks of irreversible effects.

R48/20/22 - Harmful : danger of serious damage to health by prolonged exposure through inhalation and if swallowed.

#### SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

**311/312 HAZARD CATEGORIES:** Extremely hazardous substance

**313 REPORTABLE INGREDIENTS:** Chloroform

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**302/304 EMERGENCY PLANNING****EMERGENCY PLAN:** Chloroform**CANADA****WHMIS HAZARD SYMBOL AND CLASSIFICATION**

R38 - Irritating to skin.

R40 - Possible risks of irreversible effects.

R48/20/22 - Harmful : danger of serious damage to health by prolonged exposure through inhalation and if swallowed.

**WHMIS (WORKER HAZARDOUS MATERIALS INFORMATION SYSTEM):** This product has been classified in accordance with the hazard criteria of the Controlled Product Regulations and the MSDS contains all required information.**EUROPEAN COMMUNITY****EEC LABEL SYMBOL AND CLASSIFICATION**

R38 - Irritating to skin.

R40 - Possible risks of irreversible effects.

R48/20/22 - Harmful : danger of serious damage to health by prolonged exposure through inhalation and if swallowed.

**EUROPEAN COMMUNITY REGULATORY:** Class D1A- Very Toxic. Class D2A- Very Toxic. Class D2B - Toxic Materials.**STATE REGULATIONS** PA RTK: Chloroform: (special hazard, environmental hazard, generic environmental hazard) MA RTK: Chloroform  
NJ: Chloroform**CALIFORNIA PROPOSITION 65:** This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Chloroform

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**16. OTHER INFORMATION****REVISION SUMMARY** Revision #: 1 This MSDS replaces the September 16, 2004 MSDS. Any changes in information are as follows: In  
Section 9 Appearance Molecular Weight**MANUFACTURER SUPPLEMENTAL NOTES:** **Not for drug or diagnostic use.****MANUFACTURER DISCLAIMER:** The statements contained herein are based upon technical data that MATREYA LLC believes to be reliable, are offered for information purposes only and as a guide to the appropriate precautionary and emergency handling of the material by a properly trained person having the necessary technical skills. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use, storage and disposal of these materials and the safety and health of employees and customers and the protection of the environment.**MATREYA LLC MAKES NO REPRESENTATION OR WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY OR FITNESS FOR PARTICULAR USE, WITH RESPECT TO THE INFORMATION HEREIN OR THE PRODUCT TO WHICH THE INFORMATION REFERS.**