



SDS-1119

## SAFETY DATA SHEET

### Section 1. Product and Company Identification

**Product Name:** Plant Sterol Mixture  
**Product Number(s):** 1119; 1119-k  
**Source:** Natural, plant  
**Product Use:** This product is to be used for research only. It is not intended for drug or diagnostic use, human consumption or to be used in food or food additives.

Matreya LLC  
2178 High Tech Road, State College, PA 16803  
Tel: 800-342-3595/814-355-1030  
Fax: 814-355-1031  
Email: customerservice@matreya.com  
Web: www.matreya.com

**24 Hour Emergency Number:** Chemtrec  
**800-424-9300** (within United States)

### Section 2. Hazards Identification

**Emergency Overview:**  
**Target Organs:** Cardiovascular system, Central nervous system, Peripheral nervous system, Kidney, Liver, Blood, Nerves, Heart, Eyes or Skin.  
**GHS Classification:** Acute toxicity (oral), Category 4  
Skin corrosion/irritation, Category 2  
Serious eye damage/eye irritation, Category 2A  
Carcinogenicity, Category 2  
Specific target organ toxicity - repeated exposure, Category 2 (Central nervous system, kidney, liver, respiratory)  
Acute toxicity to the aquatic environment, Category 3

**GHS Label Elements:**  
**Pictogram(s):**



**Signal Word:** **Danger**

**Health Code**  
H302 Harmful if swallowed.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H351 Suspected of causing cancer.  
H373 May cause damage to organs through prolonged or repeated exposure.  
H402 Harmful to aquatic life.

**Prevention Code**

P201  
 P202  
 P260  
 P264  
 P270  
 P273  
 P280  
 P281

**Prevention Statement(s):**

Obtain special instructions before use.  
 Do not handle until all safety precautions have been read and understood.  
 Do not breathe dust/fume/gas/mist/vapors/spray.  
 Wash skin thoroughly after handling.  
 Do not eat, drink or smoke when using this product.  
 Avoid release to the environment.  
 Wear eye protection/face protection.  
 Use personal protective equipment as required.

**Response Code**

P301, P312  
  
 P330  
 P302, P352  
 P332, P313  
 P305, P351, P338  
  
 P337, P313  
 P321  
 P308, P313  
 P314  
 P362

**Response Statement(s):**

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.  
 Rinse mouth  
 IF ON SKIN: Wash with plenty of soap and water.  
 If skin irritation occurs: Get medical advice/ attention.  
 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.  
 Specific treatment (see supplemental first aid instructions).  
 IF exposed or concerned: Get medical advice/attention.  
 Get medical advice/attention if you feel unwell.  
 Take off contaminated clothing and wash before reuse.

**Storage Code**

P405

**Storage Statement(s):**

Store locked up.

**Disposal Code**

P501

**Disposal Statement(s):**

Disposal of contents/container in accordance to local/regional/national/international regulations.

**Section 3. Composition/Information on Ingredients**

Product Name	CAS Number	Percent
Chloroform	67-66-3	98.339%
Brassicasterol	474-67-9	0.2324%
Campesterol	474-62-4	0.4648%
Stigmasterol	83-48-7	0.1992%
<i>beta</i> -sitosterol	83-46-5	0.7130%

**Section 4. First Aid Measures****Inhalation:**

Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately. Consult a physician.

**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.

**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.

**Ingestion:**

If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as collar, tie, belt or waistband. Get medical attention immediately.

## Section 5. Fire Fighting Measures

### Suitable extinguishing media:

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

### Specific hazards arising from the chemical:

Slight fire hazard when exposed to high heat; otherwise, practically not flammable.

### Special protective actions for fire fighters:

Evacuate area and fight fire from a safe distance. Do not stay in dangerous zone without suitable chemical protection clothing and self-contained breathing apparatus.

### Special protective equipment for fire fighters:

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

## Section 6. Accidental Release Measures

### Personal precautions:

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate personal protective equipment.

### Environmental precautions:

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewer. Inform the relevant authorities if the product has caused environmental pollution (sewer, waterways, soil or air).

### Methods and Materials for containment and cleaning up:

Stop leak if without risk. Prevent entry into sewers, water sources, basements or confined spaces. Contain and collect spillage with inert absorbent material and place in container for disposal according to local regulations. Call for assistance on disposal.

## Section 7. Handling and Storage

### Precautions for safe handling:

Avoid contact with eyes, skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Store in a tightly closed container. Keep sealed when not in use. Wear appropriate personal protective equipment.

### Conditions for safe storage, including incompatibilities:

Recommended storage temperature: -20°C. Store in a tightly closed container. Separate from oxidizing materials.

## Section 8. Exposure Controls/Personal Protection

Component	CAS Number	Type	Exposure Limits	Source
Chloroform	67-66-3	TWA (8Hr)	10 ppm	USA (ACGIH)
		TWA	50 ppm	USA (OSHA)
		TWA	2 ppm	Australia
		TWA	2 ppm	Belgium
		MAK	2.5 mg/m <sup>3</sup>	Germany
		TWA	10 mg/m <sup>3</sup>	Hungary
		MAC-TGG	5 mg/m <sup>3</sup>	Netherlands
		VME	50 mg/m <sup>3</sup>	France
		MAK	50 mg/m <sup>3</sup>	Poland
		TWA	2 ppm	UK

### Engineering Controls:

Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

### Personal Protective Equipment:

#### Respiratory protection:

Use only in a well ventilated area. Wear an appropriate NIOSH/MSHA approved air-purifying respirator. If warranted, wear a positive pressure air-supplied respirator in situations where there may be potential for

airborne exposure.

**Hand protection:**

Chemical-resistant, impervious gloves should be worn at all times when handling chemical products.

Recommended: Nitrile rubber

**Eye protection:**

Safety eyewear should be worn at all times to avoid exposure to liquid splashes, mists or dusts.

Recommended: Splash goggles

**Skin protection:**

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. Recommended: Lab coat

## Section 9. Physical and Chemical Properties

<b>Appearance:</b>	Liquid
<b>Odor:</b>	Characteristic, ethereal odor
<b>Odor threshold:</b>	85-87 ppm
<b>pH:</b>	No data available
<b>Melting/Freezing point:</b>	-63.5°C (-83°F)
<b>Initial boiling point and boiling range:</b>	62°C (144°F)
<b>Flash point:</b>	No data available
<b>Evaporation rate (Butyl acetate = 1):</b>	11.6
<b>Flammability (solid, gas):</b>	No data available
<b>Upper/Lower flammability or explosive limit:</b>	No data available
<b>Vapor pressure (mm Hg):</b>	160 @ 20°C (68°F)
<b>Vapor density (Air = 1):</b>	4.1
<b>Relative density (water = 1):</b>	1.48
<b>Solubility (ies):</b>	0.8g/100g water @ 20°C (68°F)
<b>Partition coefficient (n-octanol/water) as log Pow:</b>	1.97
<b>Auto-ignition temperature:</b>	No data available
<b>Decomposition temperature:</b>	No data available
<b>Viscosity:</b>	No data available

## Section 10. Stability and Reactivity

**Reactivity:**

Stable under recommended storage conditions.

**Chemical stability:**

Stable under recommended storage conditions.

**Possibility of hazardous reaction:**

Under normal conditions of storage and use, hazardous reaction will not occur.

**Conditions to avoid:**

Light, heat, air and incompatibles.

**Incompatible materials:**

Strong caustics; chemically active metals such as aluminum or magnesium powder, sodium and potassium; strong oxidizers.

**Hazardous decomposition products:**

Toxic gases and vapors such as hydrogen chloride, chlorine, phosgene and carbon monoxide may be released in a fire involving chloroform.

## Section 11. Toxicological Information

**Acute toxicity:**

Chloroform

LC50: Inhalation - Rat – 47,702 mg/m<sup>3</sup> @ 4 hours exposure time

LD50: Oral - Rat – 908 mg/kg

LD50: Skin- Rabbit- >20 gm/kg

**Skin corrosion / irritation:**

Mild irritations. Drying out effect result in rough chapped skin. Danger of skin absorption.

10 mg/24 Hr open

**Serious eye damage / irritation:**

Moderate irritations

Eyes-rabbit- 20 mg/24 Hr

**Respiratory or skin sensitization:**

No data available

**Germ cell mutagenicity:**

No data available

**Carcinogenicity:**

No data available

**Reproductive toxicity:**

No data available

**Specific target organ toxicity - single exposure:**

No data available

**Specific target organ toxicity - repeated exposure:**

Category 2 repeated exposure may cause damage to cardiovascular system, central nervous system, peripheral nervous system, blood, liver, kidney, nerves, heart, eyes or skin through prolonged exposure.

**Aspiration hazard:**

No data available

## Section 12. Ecological Information

**Toxicity:**

**Fish**

LC100	Leuciscus idus melantous (Carp)	176 mg/L	48 Hr
LC50	Danio rerio (Zebra Danio)	121 mg/L	96 Hr
LC50	Ictalurus punctatus (Channel catfish)	126 mg/L	24 Hr

**Persistence and degradability:**

This material is not expected to undergo biodegradation.

**Bioaccumulative potential:**

This material is not expected to significantly bioaccumulate.

**Bioaccumulation:**

Oncorhynchus mykiss (rainbow trout)	8 Hr	30 µCi/L
Oryzias latipes (Medaka, high-eyes)	9 day	107.5 mg/L

**Mobility in soil:**

This material is expected to have a moderate mobility in soil.

**Other adverse effects:**

This material is not expected to be toxic to aquatic life. The LC50/96-Hr value for fish are over 100 mg/L.

## Section 13. Disposal Consideration

**Disposal methods:**

Observe all federal, state, and local environmental regulations.

Contact a licensed professional waste disposal service to dispose of this material.

## Section 14. Transportation Information

**Transportation quantity:** This item shipped as an excepted quantity.

**DOT (US)**

<b>UN Number:</b>	1888
<b>UN Proper shipping name:</b>	Chloroform solution
<b>Transportation hazard class(es):</b>	6.1
<b>Packaging group (if applicable):</b>	III

**Reportable Quantity (RQ):** 10 lbs.  
**Environmental hazards:** No  
**Marine pollutant:** No

**Land Transport ADR/RID**

**UN Number:** 1888  
**UN Proper shipping name:** Chloroform solution  
**Transportation hazard class(es):** 6.1  
**Packaging group (if applicable):** III  
**Environmental hazards:** No  
**Marine pollutant:** No

**Maritime Transport IMDG**

**UN Number:** 1888  
**UN Proper shipping name:** Chloroform solution  
**Transportation hazard class(es):** 6.1  
**Packaging group (if applicable):** III  
**Environmental hazards:** No  
**Marine pollutant:** No

**Air Transport ICAO/IATA**

**UN Number:** 1888  
**UN Proper shipping name:** Chloroform solution  
**Transportation hazard class(es):** 6.1  
**Packaging group (if applicable):** III  
**Environmental hazards:** No  
**Marine pollutant:** No

**Section 15. Regulatory Information**

**DSL/NDSL status:**

This product contains the following components that are on the Canadian DSL.

<b>Component</b>	<b>CAS Number</b>
Chloroform	67-66-3

**TSCA:**

This product contains the following components that are on the TSCA inventory.

<b>Component</b>	<b>CAS Number</b>
Chloroform	67-66-3

**SARA 302 Components:**

<b>Component</b>	<b>CAS Number</b>
Chloroform	67-66-3

**SARA 313 Components:**

The following components are subject to reporting levels established by SARA Title III, Section 313.

<b>Component</b>	<b>CAS Number</b>
Chloroform	67-66-3

**SARA 311/312 Hazards:**

Acute health hazard, chronic health hazard

**California Hazardous Substance List:**

<b>Component</b>	<b>CAS Number</b>
Chloroform	67-66-3

**Delaware Air Quality Management List:**

<b>Component</b>	<b>CAS Number</b>
Chloroform	67-66-3

**Massachusetts Right To Know Components:**

<b>Component</b>	<b>CAS Number</b>
Chloroform	67-66-3

**Minnesota Right To Know Components:**

<b>Component</b>	<b>CAS Number</b>
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Chloroform 67-66-3

**New Jersey Right To Know Components:**

<b>Component</b>	<b>CAS Number</b>
Chloroform	67-66-3

**New York Right To Know Components:**

<b>Component</b>	<b>CAS Number</b>
Chloroform	67-66-3

**Pennsylvania Right To Know Components:**

<b>Component</b>	<b>CAS Number</b>
Chloroform	67-66-3

**California Prop. 65 Components:**

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

<b>Component</b>	<b>CAS Number</b>
Chloroform	67-66-3

**Section 16. Other Information**

**Manufacturer Supplementary Notes:**

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, EXPRESSED OR IMPLIED, INCLUDING MERCHANTABILITY OR FITNESS FOR PARTICULAR USE, WITH RESPECT TO THE INFORMATION HEREIN OR THE PRODUCT TO WHICH THE INFORMATION REFERS. MATREYA LLC ASSUMES NO LIABILITY FOR ANY USE OF THESE CHEMICALS BY THE END USER.

<b>Revision Summary:</b>		
10/23/2012	Version 1	
03/11/2014	Version 2: Revised product use statement.	
03/30/2015	Version 3: Changed company address.	
7/28/2017	Version 4: Removed Chemtrec International number.	
8/17/2018	Version 5: Reviewed, no changes.	
12/11/2018	Version 6: Percentages changed.	

**Reference:**

Centers for Disease Control and Prevention. "Chloroform RTECS." National Institute for Occupational Safety and Health. 2011. July 12, 2011. <<http://www.cdc.gov/niosh-rtecs/MN8D8678.html>>. Kegley, S.E., Hill, B.R., Orme S., Choi A.H., "PAN Pesticide Database." Pesticide Action Network, North America (San Francisco, CA, 2010), <http://www.pesticideinfo.org>.