



## SAFETY DATA SHEET

Creation Date 11-21-17

Revision Date: None

Revision Number: None

### 1. Identification

<b>Product Name</b>	<b>Cottonseed Hulls</b>
SDS Number	CSH05
Synonyms	CSH
Intended Use	Feed and Other
Manufacturer	Planters Cotton Oil Mill, Inc. 2901 Planters Drive Pine Bluff, Arkansas 71601
Emergency Health and Safety Number	870-534-3631
SDS Information	<b>PHONE:</b> 870-534-3631 <b>EMAIL:</b> info@plantersoil.com <b>URL:</b> <a href="http://www.plantersoil.com/SDS">http://www.plantersoil.com/SDS</a> <b>VERSION DATE:</b> 11-21-17

### 2. Hazard(s) Identification

**Classification:**

Combustible dust/respiratory hazard if small particles are generated during further processing, handling or by other means.

**Label Elements:**

Signal words: WARNING

**Hazard Statement(s):**

Class 2B eye irritant. May cause breathing difficulties if inhaled.

If small particles are generated during further processing, handling or by other means, may form combustible dust concentrations in air.

**Precautionary Statements(s):**

Dust from particulates may be a mechanical eye irritant. Rinse eyes with water for several minutes.

Avoid breathing dust. Excessive inhalation may affect nose, throat and lungs. Avoid ignition sources: Cotton dust may burn if suspended in air and may create a flash fire/explosion hazard.

**Emergency Overview:**

Dust from particulates may be mechanical irritant to eyes. Excessive inhalation of cotton dusts

and fibers may affect nose, throat and lungs. May form combustible dust concentration in air; see "explosion hazard" below.

**Explosion Hazard:**

Cotton dust is generally considered non hazardous but dust generated through downstream activities that may reduce its particle size (e.g., shipping, handling, transfer to bins, etc.) may create a hazardous condition.

If exposed to an ignition source, dust may burn. Airborne dust in sufficient concentrations when exposed to an ignition source may flash or, in a confined situation, may fuel an explosion.

**3. Composition/Information on Ingredients**

Component	CAS-No	Concentration
Cottonseed Hulls	N/A	up to 100%
Foreign material (such as organic plant material)	N/A	0-5%
Cotton Dust	N/A	0-5%
Cotton Fibers	N/A	0-5%

**4. First Aid Measures**

- Inhalation:** Remove person from exposure. Seek medical attention for any breathing difficulty.
- Ingestion:** If swallowed, give several glasses of water to dilute. Never give anything by mouth to an unconscious person.
- Skin Contact:** Wash affected skin with soap and water.
- Eye Contact:** Flush eyes with water. Seek medical attention as needed.

**5. Firefighting Measures**

- Flashpoint (Method):** N/A
- Flammable Limits:**

LEL	UEL
Unknown	Unknown
- Autoignition Temperature:** Unknown
- Hazardous Combustion Products:** Oxides of carbon
- Special firefighting procedures:** Extinguish with water fog, dry chemical powders or foam.

Do not use strong streams of water or dry chemical if dust can be dispersed into the air. Dust placed in suspension with an ignition source present may flash or explode.

**Unusual fire and explosion hazards:** Whole grain hulls are not explosive. Fine dust dispersed in air at a sufficient concentration may ignite if exposed to an ignition source.

## 6. Accidental Release Measures

Clean up with a soft bristle broom(s) or a vacuum approved for a class II hazardous location. Dust deposits should be maintained to a minimum on surfaces, as these could form an explosive mixture if they are released into the atmosphere in sufficient concentration. Avoid dispersal of dust in the air (i.e. cleaning dust surfaces with compressed air in the presence of ignition source should not be allowed).

## 7. Handling and Storage

Fine dust dispersed in air at a sufficient concentration may ignite if exposed to an ignition source. Remove grain dust from area/processing equipment prior to using any heat producing equipment such as arc welders, cutting torches and spark/heat producing tools such as portable surface grinders. According to 29 CFR 1910.272(f) a hot work permit is required.

## 8. Exposure Control/Personal Protection

**Respiratory Protection:** Wear an approved NIOSH dust respirator whenever dust concentrations in the work area are above ACGIH TLV/ OSHA PELs.

Grain Dust	OSHA PEL	10 mg/M <sup>3</sup>
	ACGIH TLV	4mg/M <sup>3</sup> *
	ACGIH TLV	5 mg/M <sup>3</sup> (respirable)
Other Grains	OSHA PEL	15mg/M <sup>3</sup> (Total) 10 mg/M <sup>3</sup> *

\* This TLV applies to nuisance particulates. The grain industry believes there is currently inadequate data to support this TLV.

**Ventilation:**

Local Exhaust	Mechanical (General)
If Needed	If Needed

Ensure that dust handling systems (such as exhaust ducts, dust collectors, vessels and processing equipment) are designed in a manner to prevent the escape of dust into the work areas. Use only appropriately classified electrical equipment and powered industrial trucks.

**Protective Gloves:** N/A

**Eye Protection:** Safety glasses/goggles suggested in dusty conditions

**Work/Hygenic Practices:** Good personal hygiene practices should be followed. Avoid excessive dust accumulation and control ignition sources. Where appropriate, employ grounding, venting and explosion relief provisions in accordance with accepted engineering practices in processes capable of generating dust and /or static electricity.

## 9. Physical and Chemical Properties

**Flash Point (Method):** N/A

**Flammable Limits:**

LEL	UEL	Autoignition Temperature
Unknown	Unknown	Unknown

**Appearance:** Natural brown with white or brown fibers attached grain dust-light, greyish or brown powder.

**Upper/Lower Flammability or Explosive Limits:**

When dispersed into the air in sufficient concentrations cotton dust can explode in the presence of an ignition source. Do not allow dust to become dispersed into the air, even by the extinguishing agent. Minimum explosive concentration is 55G/M3. However, moisture content, particle size, caloric properties and specific ingredients also affect the explosiveness of cotton dust.

The flash point and flammable limits are accurate because cotton dust has no flash point, LEL or UEL due to its properties. The firefighting measures listed are in accord with other similar SDS.

For an explosion to occur, four conditions must exist. First, oxygen must be present. Second, there must be an ignition source (e.g. electrical short, sparks, etc.) Third, there must be fuel (e.g. grain dust in suspension). Fourth, there must be containment of suspended grain dust (i.e. silo, vessel, etc.) Although an explosion will not occur if there is no containment, the dust can still ignite, resulting in a fire.

As noted, explosions are dependent upon the concentration of the fuel (e.g. cotton dust suspended

in the air). The minimum explosive concentration (MEC) for cotton dust is around 55g/M3. The MEC varies according to the particle size and caloric properties of the product. In addition, the specific ingredients of the cotton dust will affect the MEC. Therefore, the listed MEC range would be appropriate.

The following insert taken from "Preventing Grain Dust Explosions" explains explosive limits for grain dust:

"A Texas A & M University dust control scientist suggests that the MEC range is about 50-150 grams per cubic meter, depending on the type of dust and the size of the particles (Parnell, 1998). This equates to the same MEC level used by the National Grain and Feed Association (NGFA). NGFA states that the broad, generally accepted MEC for grain dust explosions is about 0.05 ounces per cubic foot of volume. It says that the optimum explosive concentration (DEC) is about 0.5 to 1.0 ounces per cubic foot-about 10 times the MEC (Gillis, 1985, p.43)"

**Odor:** N/A

<b>Vapor-Pressure</b>	<b>Odor Threshold</b>	<b>Vapor Density</b>
N/A	N/A	N/A

<b>PH</b>	<b>Melting Point/ Freezing Point</b>	<b>Solubility (IES)</b>
N/A	N/A	N/A

<b>Initial Boiling Point and Boiling Range</b>	<b>Partition Coefficient N-Octanol/Water</b>	<b>Flash Point</b>
N/A	N/A	N/A

<b>Auto-Ignition Temperature</b>	<b>Evaporative Rate</b>	<b>Decomposition Temperature</b>
N/A	N/A	N/A

## 10. Stability and Reactivity

**Stability:**

<b>Conditions to Avoid</b>	<b>Stable</b>	<b>Incompatibility (Materials to Avoid)</b>
Dispersing dust in air, above MEC, and exposure to potential ignitions sources	X	None Known

**Hazardous Decomposition or Byproducts:** CO2 H2S and oxygen deficient atmosphere under improper storage conditions.

**Hazardous Polymerization:** N/A

**Reactivity:** N/A

## 11. Toxicological Information

Routes of Exposure:

Inhalation	Skin	I	Eyes	Ingestion
X	X	I	X	Unlikely

Carcinogenicity:

NTP	ARC Monographs	OSHA Regulated
No	No	No

**Acute:** May be mechanical irritant to skin and eyes. Excessive inhalation of grain dusts may affect the nose, throat and lungs.

**Chronic:** Repeated and prolonged exposure to grain dusts may affect the respiratory system or cause sensitization. Smokers have an increased risk of respiratory effects.

**Signs and Symptoms of Exposure:** Irritation to the skin, eyes, nose or throat may occur. Some people may occasionally experience coughing.

**Medical Conditions Generally Aggravated by Exposure:** Allergies and respiratory ailments.

## 12. Ecological Information: (Non-Mandatory)

## 13. Disposal Considerations: (Non-Mandatory)

## 14. Transport Information: (Non-Mandatory)

## 15. Regulatory Information: (Non-Mandatory)

All electrical equipment must be suitable for use in hazardous atmospheres involving combustible dust in accordance with 29 CFR 1910.307. The National Electric Code, NFPA 70, contains guidelines for determining the type and design of equipment and installation, which will meet this requirement.

Combustible dust is a "hazard, other than chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

## **16. Other Information**

This safety data sheet covers cottonseed hulls in its natural state and does not include chemicals that may be applied by subsequent handlers and/or distributors of this product. The information in this SDS was obtained from sources that we believe are reliable; however the information is provided without any representation or warranty, expressed or implied, regarding the accuracy or correctness. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of this product.