SECTION 1: Identification

1.1. Identification
Product form : Granular Solid
Substance name : Whole Grains, Grain, Grain Dust

1.2. Relevant identified uses of the substance or mixture and uses advised against
Use of the substance/mixture : Feed Ingredient

1.3. Details of the supplier of the safety data sheet
Smithfield - Hog Production
2822 Hwy 24 W
Warsaw, NC 28398 - United States
T 1-910-293-3434

1.4. Emergency telephone number
Emergency number : 855-737-2329

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture
GHS-US classification : H232 : May form combustible dust concentrations in air
Comb. Dust
Full text of H statements : see section 16
H317+H334+H335: May cause allergic skin reaction, respiratory irritation, allergy or asthma symptoms, or breathing difficulties if inhaled.

2.2. Label elements
GHS-US labeling
Signal word (GHS-US) : Warning
Hazard statements (GHS-US) : May form combustible dust concentrations in air. Avoid ignition sources.
: May cause eye(2B), skin, or respiratory irritation

2.3. Other hazards
Explosion hazard : Dust generated through downstream activity that may reduce its particle size may create a hazardous condition.

2.4. Precautionary Statements
Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use.
Eyes: Contact with eyes may cause mechanical irritation. Rinse eyes with water for several minutes.
Skin : Dust may cause mild mechanical irritation. Repeated/prolonged skin contact may cause allergic reactions with susceptible persons.
Inhalation: Dust may cause irritation of respiratory tract. Susceptible persons may develop bakers Asthma, rhinitis, bronchitis, COPD, or ODTS(organic dust toxic syndrome). Possible sensitization for wheat or other allergen sufferers and asthmatics.
Ingestion: May produce an allergic reaction.

2.5. Unknown acute toxicity (GHS US)
Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substance/Non-Hazardous Components

Name | Product identifier | % | GHS-US classification
--- | --- | --- | ---
Whole Grain Grain Dust | up to 100 | 0-5 | See Section 16
Foreign Material (such as organic plant material) | 0-5 |

Full text of H-phrases: see section 16

3.2. Mixture
Includes a non-hazardous mixture of wheat, feed grains, soybeans, corn or other grain material

SECTION 4: First aid measures / Precautionary Statements

4.1. Description of first aid measures
General Advice : May contain wheat, soybeans, whey, corn, or other allergens that may trigger an allergic reaction.
First-aid measures general : If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Wash skin with plenty of water.
First-aid measures after eye contact : Rinse eyes with water as a precaution.
First-aid measures after ingestion : Call a poison center/doctor/physician if you feel unwell.
4.3. Indication of any immediate medical attention and special treatment needed
Treat Symptomatically

SECTION 5: Firefighting measures

5.1. Extinguishing media

5.2. Special hazards arising from the substance or mixture
Fire hazard: May form combustible dust concentrations in air.
Reactivity: Finely dispersed particles form explosive mixtures in air.

5.3. Advice for firefighters
Protection during firefighting: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
Special Fire Fighting Procedures: Airborne dust in sufficient concentrations when confined and exposed to a sufficient ignition source can fuel an explosion.

6.1. Personal precautions, protective equipment and emergency procedures
6.1.1. For non-emergency personnel
Emergency procedures: Evacuate unnecessary personnel

6.1.2. For emergency responders
Protective equipment: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
Methods for cleaning up: Minimize generation of dust which may be combustible. In case of large spillages: Shovel or sweep up and put in a closed container for disposal.

6.4. Reference to other sections
For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Precautions for safe handling: Ensure good ventilation of the work station. Wear personal protective equipment. Avoid dust formation.
Hygiene measures: Use good housekeeping practices during storage, transfer, handling, to avoid excessive dust accumulation. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities
Storage conditions: Store in a cool, dry, well ventilated area. Avoid dispersion of dust in air and avoid exposure to potential ignition.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th></th>
<th>Wheat, oat, and barley (mg/m³)</th>
<th>Grain Dust (not o/w regulated) (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td>ACGIH TWA</td>
<td>4 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10 mg/m³ (inh); 3 mg/m³ (res)</td>
</tr>
<tr>
<td>OSHA</td>
<td>OSHA PEL (TWA)</td>
<td>10 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15 mg/m³ (tot); 5 mg/m³ (res)</td>
</tr>
</tbody>
</table>

8.2. Exposure controls
Appropriate engineering controls: Minimize generation of dust. Ensure good ventilation of the work station. Ensure adequate ventilation, especially in confined areas. Apply technical measures to comply with the occupational exposure limits. However it is the duty of the user to verify this and follow given exposure limits at the workplace.
Eye protection: If exposed to airborne dust, appropriate safety glasses with side-shields or safety goggles are recommended.
Skin and body protection: Special protective equipment is generally not required. Protective clothing and gloves may be worn to reduce the potential of mechanical irritation.
Respiratory protection: If exposed to airborne dust exceeding OSHA PEL, use appropriate NIOSH approved (or equivalent) respiratory protection.
**SECTION 9: Physical and chemical properties**

### 9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Solid</td>
</tr>
<tr>
<td>Color</td>
<td>tan to brown, gray</td>
</tr>
<tr>
<td>Odor</td>
<td>characteristic</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Freezing point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>0</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosion limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Water solubility</td>
<td>Practically insoluble</td>
</tr>
<tr>
<td>Bulk density</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
</tbody>
</table>

---

**NOTE:**
When grain dust is dispersed into the air in sufficient concentrations, grain dust can explode in the presence of an ignition source. Do not allow grain dust to become dispersed into the air, even by the extinguishing agent. Minimum explosive concentration if 55g/m³. Moisture content, particle size, caloric properties and specific ingredients also affect the explosiveness of grain dust.

For an explosion to occur, four conditions must exist: 1) Oxygen must be present. 2) There must be an ignition source (included but not limited to electrical short, sparks, etc.). 3) There must be fuel (grain dust in suspension). 4) there must be containment of suspended grain dust(silo, vessel, indoors, etc). Although an explosion will not occur if there is no containment, the dust can still ignite, resulting in fire.

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**SECTION 10: Stability and reactivity**

### 10.1. Reactivity

Finely dispersed particles can form explosive mixtures in air when in confined spaces.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

Dispersing dust in air above MEC. Exposure to potential ignition sources.

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. On combustion, forms: carbon oxides (CO and CO2) and H2S.

**SECTION 11: Toxicological information**

### 11.1. Information on toxicological effects

**Routes of entry:** Inhalation, skin, and eyes. Ingestion is not likely

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

**Chronic toxicity:** Repeated and prolonged inhalation of grain dusts may affect the respiratory system. Smokers have an increased risk of respiratory effects.

**Signs and Symptoms or exposure:** Irritation to the skin, eyes, nose or throat may occur. Some individuals may experience coughing.

**Medical Conditions generally aggravated by exposure:** Allergies and respiratory ailments.
Carcinogenicity: No evidence of carcinogenicity.
Reproductive toxicity: Not classified
Specific target organ toxicity (single exposure): Not classified
Specific target organ toxicity (repeated exposure): Not classified
Aspiration hazard: Based on available data, no known aspiration hazard.

SECTION 12: Ecological information

12.1. Toxicity
Ecology - general: Contains no substances known to be hazardous to the environment. Contains no substances known to be not degradable in waste water treatment plants.

12.2. Persistence and degradability
Whole Grain, Grain, Grain Dust
Persistence and degradability: Readily Biodegradable.

12.3. Bioaccumulative potential
Whole Grain, Grain, Grain Dust
Bioaccumulative potential: Not established.

12.4. Mobility in soil
Whole Grain, Grain, Grain Dust
Ecology - soil: Dispersible in water.

12.5. Other adverse effects
Effect on global warming: Not established

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Waste treatment methods: Dispose of contents/container in accordance with licensed collector’s sorting instructions.
Waste disposal recommendations: Dispose in a safe manner in accordance with local/national regulations.
Additional information: Potential dust explosion hazard.

SECTION 14: Transport information

Department of Transportation (DOT)
In accordance with DOT
Not regulated for transport

TDG
No additional information available

Transport by sea
Class (IMDG): Not regulated for transport

Air transport
Class (IATA): Not regulated for transport

SECTION 15: Regulatory information

15.1. US Federal regulations
This product or mixture does not contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.
Whole Grain, Grain, Grain Dust

Safety Data Sheet

15.2. International regulations

National regulations

<table>
<thead>
<tr>
<th>Whole Grain, Grain, Grain Dust</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Class I or Class II material is known to be used in the manufacture of, or contained in, this product</td>
</tr>
</tbody>
</table>

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product is not known to contain any chemicals which are subject to the reporting requirements of the Act or regulations contained in 40 CFR 372.

SARA 302
Section 302 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product is not known to contain any chemicals which are subject to the reporting requirements of the Act or regulations contained in 40 CFR 302.

SARA 311/312 Hazardous Categorization: None known

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 63)
This product is not known to contain any HAPs.

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

15.3. US State regulations

No known components subject to "Right-To-Know" legislation in the following States: Massachusetts. Minnesota. New Jersey. Pennsylvania.
California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

Full text of H-phrases:

<table>
<thead>
<tr>
<th>H232</th>
<th>May form combustible dust concentrations in air</th>
</tr>
</thead>
<tbody>
<tr>
<td>H317</td>
<td>May cause an allergic skin reaction</td>
</tr>
<tr>
<td>H334</td>
<td>May cause allergy, asthma symptoms or breathing difficulties if inhaled</td>
</tr>
<tr>
<td>H335</td>
<td>May cause respiratory irritation</td>
</tr>
</tbody>
</table>

Revision Date: 11/16/2019

**New SDS**

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.