1. Identification

**Product Name:**
SOYBEAN MEAL

**Synonyms:**
AAFCO: Soybean Meal, Solvent Extracted; IFN:5-04-604

**Contact Manufacturer:**
Archer Daniels Midland Company
4666 Faries Parkway
Decatur, IL 62526, USA
Telephone Number: (+1) 217-424-5200

**Emergency response telephone number:**
Chemtrec 1-800-424-9300 (CCN 1635)

2. Hazard(s) identification

**Emergency Overview**
Warning. May form combustible dust concentrations in air (during processing and handling). Product dust may cause mild, mechanical irritation. Contains Soy. May produce an allergic reaction.

<table>
<thead>
<tr>
<th>Appearance</th>
<th>Physical State</th>
<th>Odor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light brown - Tan</td>
<td>Solid / Meal</td>
<td>Cereal</td>
</tr>
</tbody>
</table>

**OSHA Defined Hazard(s):**
Combustible Dust

**Signal Word:**
Warning

**Hazard Statement(s):**
May form combustible dust concentrations in air (during processing and handling)

3. Composition/information on ingredients

**Description**
Soybean meal (Meal resulting from solvent extraction of oil from soybeans)

**Non-hazardous Components**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>North American Substance Hazard Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soybean meal</td>
<td>68308-36-1</td>
<td>99-100</td>
<td>None known</td>
</tr>
</tbody>
</table>
4. First-aid measures

**Description of first aid measures**

**Eye Contact** Rinse thoroughly with plenty of water, also under the eyelids.

**Skin Contact** Wash off with warm water and soap.

**Inhalation** Move to fresh air.

**Ingestion** Clean mouth with water and afterwards drink plenty of water. Immediate medical attention is not required.

**General Advice** Contains Soy. May produce an allergic reaction.

**Most important symptoms and affects, both acute and delayed**

**Eyes** Dust may cause mechanical irritation to eyes resulting in redness or watering.

**Skin** Product dust may cause mild, mechanical irritation.

**Inhalation** Dust may cause irritation of respiratory tract. See section 8 of this sheet for exposure limits pertaining to nuisance dust or "particulates not otherwise regulated".

**Ingestion** Health injuries are not known or expected under normal use.

**Main Symptoms** Repeated or prolonged exposure may cause irritation of eyes and skin. Inhalation of dust may cause breathing difficulties.

**Indication of any immediate medical attention and special treatment needed**

**Notes to Physician** Special forms of treatment and immediate medical attention are not specified. Treat Symptomatically.

5. Fire-fighting measures

**Flammable Properties**

Fine dust dispersed in air may ignite. Risk of ignition followed by flame propagation or secondary explosions should be prevented by avoiding accumulation of dust, e.g. on floors and ledges. As with most organic solids, combustion is possible at elevated temperatures or by contact with an ignition source.

**Extinguishing media**

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water spray. Carbon dioxide (CO₂). Sand. Dry chemical.

**Unsuitable Extinguishing Media** None known.

**Special hazards arising from the substance or mixture**

**Hazardous Combustion Products** Thermal decomposition can lead to release of irritating gases and vapors, Carbon monoxide (CO), Carbon dioxide (CO₂), Nitrogen oxides (NOₓ), Acrolein.

**Specific Hazards Arising from the Chemical**

**Sensitivity to mechanical impact** No information available.

**Sensitivity to static discharge** Yes. (as dust).

**Advice for fire-fighters**

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

**NFPA**

<table>
<thead>
<tr>
<th>Health</th>
<th>Stability and Reactivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Flammability</th>
<th>Physical hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>None known</td>
</tr>
</tbody>
</table>
6. Accidental release measures

Personal Precautions, Protective Equipment, and Emergency Procedures
Use personal protective equipment. Avoid dust formation.

Environmental Precautions
Prevent further leakage or spillage if safe to do so.

Methods and Materials for Containment and Cleaning Up
Sweep up and shovel into suitable containers for disposal. For disposal information see section 13.

7. Handling and storage

Handling

Storage
Keep containers dry and tightly closed to avoid moisture absorption and contamination.

8. Exposure controls/Personal protection

Exposure Limits
Where exposure limits have not been established for specific components of this material, please observe the OSHA and ACGIH established limits for particulates not otherwise classified (PNOC). OSHA PEL: [15 mg/m³ (total dust) 8-hr TWA], [5 mg/m³ (respirable) 8-hr TWA]. ACGIH TLV: [10 mg/m³ (inhalable) 8-hr TWA], [3 mg/m³ ( respirable) 8-hr TWA].

Biological Limit Values
No biological limit values have been listed for the component(s) of this product.

Appropriate Engineering Controls
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.

General Hygiene Considerations
Handle in accordance with good industrial hygiene and safety practice.

Personal Protective Equipment

Eye/face Protection.
If exposed to airborne dust, appropriate safety glasses with side-shields or safety goggles are recommended. If airborne dust concentrations are excessive, wear goggles.

Skin and Body Protection
Protective clothing and gloves may be worn to reduce the potential of mechanical irritation.

Respiratory Protection
If exposed to airborne dust, use appropriate NIOSH approved (or equivalent) respiratory protection.

9. Physical and chemical properties

Appearance
Light brown - Tan

Physical State
Solid / Meal

Odor
Cereal

Odor Threshold
No information available

pH
No information available

Flash Point
Not applicable

Autoignition Temperature
No information available

Boiling point
Not applicable

Melting/Freezing Point
Not applicable

Decomposition temperature
No information available

Oxidizing Properties
No information available

Flammability Limits in Air
Not applicable
991110 - SOYBEAN MEAL

Revision Date: 24-May-2017

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Solubility</td>
<td>Dispersible</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>No information available</td>
</tr>
<tr>
<td>Specific Gravity / Relative Density</td>
<td>No information available</td>
</tr>
<tr>
<td>Partition Coefficient (n-octanol/water)</td>
<td>No information available</td>
</tr>
</tbody>
</table>

10. Stability and reactivity

**Stability** Stable under normal conditions.

**Possibility of Hazardous Reactions** None under normal processing.

**Conditions to Avoid** Avoid conditions that generate dust. Heat, flames and sparks.

**Incompatible Materials** No materials to be especially mentioned.

**Hazardous Decomposition Products** Thermal decomposition can lead to release of irritating gases and vapors. Carbon monoxide (CO). Carbon dioxide (CO₂). Nitrogen oxides (NOx). Acrolein.

11. Toxicological information

**Information on toxicological effects**

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity</td>
<td>Based on available data, no evidence of acute toxicity.</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Based on available data, not, or only slightly irritating.</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Based on available data, the classification criteria are not met.</td>
</tr>
<tr>
<td>Respiratory or skin sensitisation</td>
<td>Based on available data, the classification criteria are not met.</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>Based on available data, the classification criteria are not met.</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Based on available data, the classification criteria are not met.</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>Based on available data, the classification criteria are not met.</td>
</tr>
<tr>
<td>STOT - single exposure</td>
<td>Based on available data, the classification criteria are not met.</td>
</tr>
<tr>
<td>STOT - repeated exposure</td>
<td>Based on available data, the classification criteria are not met.</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>Based on available data, the classification criteria are not met.</td>
</tr>
</tbody>
</table>

**Potential health effects**

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eyes</td>
<td>Dust may cause mechanical irritation to eyes resulting in redness or watering.</td>
</tr>
<tr>
<td>Skin</td>
<td>Product dust may cause mild, mechanical irritation.</td>
</tr>
<tr>
<td>Inhalation</td>
<td>Dust may cause irritation of respiratory tract.</td>
</tr>
<tr>
<td></td>
<td>See section 8 of this sheet for exposure limits pertaining to nuisance dust or “particulates not otherwise regulated”.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Health injuries are not known or expected under normal use.</td>
</tr>
</tbody>
</table>

**Main Symptoms** Repeated or prolonged exposure may cause irritation of eyes and skin. Inhalation of dust may cause breathing difficulties.

12. Ecological information

**Ecotoxicity**
Contains no substances known to be hazardous to the environment. Contains no substances known to be not degradable in waste water treatment plants.

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persistence/Degradability</td>
<td>Biodegradable.</td>
</tr>
<tr>
<td>Mobility</td>
<td>Dispersible in water.</td>
</tr>
<tr>
<td>PBT and vPvB assessment</td>
<td>No information available.</td>
</tr>
<tr>
<td>Other adverse effects</td>
<td>Nothing specific known.</td>
</tr>
</tbody>
</table>
13. Disposal considerations

Whenever possible, as rules and regulations allow, please recycle or manage materials to minimize waste.

Waste Disposal Methods
Dispose of in compliance with the laws and regulations pertaining to this product in your jurisdiction.

Contaminated Packaging
Empty containers should be decontaminated and taken for local recycling, recovery or waste disposal.

14. Transport information

Domestic transport regulations (USA)
DOT Not regulated.

Domestic transport regulations (Canada)
TDG Not regulated.

Domestic transport regulations (Mexico)
MEX Not regulated.

International transport regulations
ICAO Not regulated.
IATA Not regulated.
IMDG/IMO Not regulated.

15. Regulatory information

International Inventories
As animal feed, this product is exempted from the following inventories: U.S.A. (TSCA). When used as “feed” defined in the Canadian Feeds Act 1995 and the Feeds Regulations (SOR/83-592), this product is exempted from the following inventory: Canada (DSL). The components of this product are reported in the following inventories:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
<th>ICL</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>AICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soybean meal</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ENCS</th>
<th>ISHL</th>
<th>CHINA</th>
<th>PICCS</th>
<th>KECL</th>
<th>Taiwan</th>
<th>Turkey</th>
<th>NZIoC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soybean meal</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td></td>
</tr>
</tbody>
</table>

USA

Federal Regulations
Ozone Depleting Substances:
No Class I or Class II material is known to be used in the manufacture of, or contained in, this product.

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.

CERCLA/SARA 103-302
Sections 103-302 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 103-302.

SARA 311/312 Hazardous Categorization
Refer to the OSHA hazard classification(s) provided in section 2 of this SDS.
- Acute Health Hazard: No
- Chronic Health Hazard: No
- Fire Hazard: Yes (when in the form of combustible dust)
Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 63)
This product is not known to contain any HAPS.

State Regulations

California Proposition 65
This product is not known to contain chemicals listed under Proposition 65.

State Right-to-Know
No known components subject to “Right-To-Know” legislation.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Weight %</th>
<th>Massachusetts</th>
<th>Minnesota</th>
<th>New Jersey</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soybean meal</td>
<td>99-100</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Canada

(NPRI) Canadian National Pollutant Release Inventory
No known component is listed on NPRI.

Mexico

Mexico - Grade Slight risk, Grade 1

16. Other information

Prepared By: ADM Oilseed Processing
Original Preparation Date: 16-Nov-2010
Revision Date: 24-May-2017
Revision Number: 1
Reason for revision: New SDS format. This version replaces all previous versions.

Abbreviations and acronyms
A1 - Known Human Carcinogen
A2 - Suspected Human Carcinogen
A3 - Animal Carcinogen
A4 - Not classifiable as a human carcinogen
ACGIH TLV - American Conference of Governmental Industrial Hygienists Threshold Limit Values
CAS - Chemical Abstract Service
Ceiling - Ceiling Limit Value: Concentrations that should never be exceeded at any given time (instantaneous)
CHINA - Chinese Inventory of Existing Chemical Substances (China)
CLP - Classification, Labelling and Packaging, Regulation (EC)1272/2008
CSA - Chemical Safety Assessment
CSR - Chemical Safety Report
Delisted - Substances Delisted from Report on Carcinogens
DNEL - Derived No Effect Level
DOT - U.S. Department of Transportation
DSL - Domestic Substance List (Canada)
EC - European Commission
The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. 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.