



Safety Data Sheet

Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product identifier

Product Name

- Dried distiller's grains, dried distiller's grains with solubles, DDG, DDGS

1.2 Relevant identified uses of the substance or mixture and uses advised against

- Relevant identified use(s)**
- Animal Nutrition

1.3 Details of the supplier of the safety data sheet

Manufacturer

- Homeland Energy Solutions
2779 Hwy 24
Lawler, IA 52154
United States
www.homelandenergysolutions.com

Telephone (General) • (563) 238-5555

Telephone (General) • (563) 238-5557 - Fax

1.4 Emergency telephone number

Manufacturer

- 1-800-424-9300 - CHEMTREC

Section 2: Hazards Identification

UN GHS

According to Third Revised Edition

2.1 Classification of the substance or mixture

- UN GHS**
- Not classified

2.2 Label elements

UN GHS

Hazard statements

- Not required

2.3 Other hazards

UN GHS

- May form combustible dust concentrations in air (during processing).
According to the Globally Harmonized System for Classification and Labeling (GHS) this product is not considered hazardous.

United States (US)

According to OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture

OSHA HCS

- Not classified

2.2 Label elements

OSHA HCS

- Not required

2.3 Other hazards

OSHA HCS

- May form combustible dust concentrations in air (during processing). This product is not considered hazardous under the U.S. OSHA 29 CFR 1910.1200 Hazard Communication Standard.

Canada

According to WHMIS

2.1 Classification of the substance or mixture

WHMIS

- Not classified

2.2 Label elements

WHMIS

- Not required

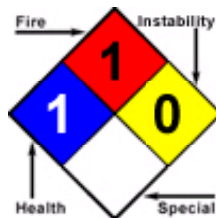
2.3 Other hazards

WHMIS

- May form combustible dust concentrations in air (during processing). In Canada, the product mentioned above is not considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).

2.4 Other information

NFPA



See Section 12 for Ecological Information.

Section 3 - Composition/Information on Ingredients

3.1 Substances

Non-Hazardous Components					
Chemical Name	Identifiers	%(weight)	LD50/LC50	Classifications According to Regulation/Directive	Comments
Dried grain	NDA	100%	NDA	UN GHS: Not Classified	NDA

3.2 Mixtures

- Material does not meet the criteria of a mixture according to United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

See Section 11 for Toxicological Information.

Section 4 - First Aid Measures

4.1 Description of first aid measures

- Inhalation**
- IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Give artificial respiration if victim is not breathing. If signs/symptoms continue, get medical attention.
- Skin**
- In case of contact with substance, immediately flush skin with running water for at least 20 minutes. If irritation develops and persists, get medical attention.
- Eye**
- In case of contact with substance, immediately flush eyes with running water for at least 20 minutes. If eye irritation persists: Get medical advice/attention.
- Ingestion**
- First aid is not expected to be necessary if material is used under ordinary conditions and as recommended.

4.2 Most important symptoms and effects, both acute and delayed

- Refer to Section 11 - Toxicological Information.

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to Physician**
- Immediate medical attention after exposure to this material not expected to be necessary. No special treatment indicated related to exposure to this material.

Section 5 - Firefighting Measures

5.1 Extinguishing media

- Suitable Extinguishing Media**
- LARGE FIRE: Water spray, fog or regular foam.
SMALL FIRES: Dry chemical, CO₂, water spray or regular foam.

- Unsuitable Extinguishing Media**
- None known.

5.2 Special hazards arising from the substance or mixture

- Unusual Fire and Explosion Hazards**
- Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.
- Hazardous Combustion Products**
- Carbon dioxide and possibly carbon monoxide.

5.3 Advice for firefighters

- Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection.

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

- Personal Precautions**
- Use care for slip/fall hazards on spilled grains. Avoid excessive dust inhalation from spilled grains.
- Emergency Procedures**
- Contain spill and monitor for excessive dust accumulation. Avoid unnecessary personnel and equipment traffic in the spill area.

6.2 Environmental precautions

- No special environmental precautions necessary.

6.3 Methods and material for containment and cleaning up

- Containment/Clean-up Measures**
- Avoid generating dust.
Use clean nonsparking tools to collect material.
Dust Deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration.

6.4 Reference to other sections

- Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

Section 7 - Handling and Storage

7.1 Precautions for safe handling

Handling

- Do not use in areas without adequate ventilation. Minimize dust generation and accumulation. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres.

7.2 Conditions for safe storage, including any incompatibilities

Storage

- Keep container closed. Store in a cool, dry, well-ventilated place.

Incompatible Materials or Ignition Sources

- Strong acids, strong bases, and oxidizing agents.

7.3 Specific end use(s)

- Refer to Section 1.2 - Relevant identified uses.

Section 8 - Exposure Controls/Personal Protection

8.1 Control parameters

Exposure Limits/Guidelines						
	Result	ACGIH	Canada Ontario	Canada Quebec	China	NIOSH
Dried distiller's grains, dried distiller's grains with solubles, DDG, DDGS as Grain dust	STELs	Not established	Not established	Not established	8 mg/m ³ STEL (free SiO ₂ <10%, total) <i>as Grain dust</i>	Not established
	TWAs	4 mg/m ³ TWA <i>as Grain dust</i>	4 mg/m ³ TWAEV (including oats, wheat, barley) <i>as Grain dust</i> 4 mg/m ³ TWAEV (total dust) <i>as Grain dust, not otherwise classified</i>	4 mg/m ³ TWAEV (total dust, containing no asbestos and less than 1% crystalline silica) <i>as Grain dust</i>	4 mg/m ³ TWA (free SiO ₂ <10%, total) <i>as Grain dust</i>	4 mg/m ³ TWA <i>as Grain dust</i>
Exposure Limits/Guidelines (Con't.)						
	Result	OSHA				
Dried distiller's grains, dried distiller's grains with solubles, DDG, DDGS	TWAs	10 mg/m ³ TWA <i>as Grain dust</i>				

Exposure Limits Supplemental

ACGIH

•Dried distiller's grains, dried distiller's grains with solubles, DDG, DDGS as Grain dust: **TLV Basis - Critical Effects:** (bronchitis; pulmonary function; upper respiratory tract irritation)

8.2 Exposure controls

Engineering Measures/Controls

- 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 area (i.e., there is not leakage from the equipment). It is recommended

that dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen-deficient environment. Use only appropriately classified electrical equipment.

Personal Protective Equipment

Pictograms



Respiratory

- For limited exposure use an N95 dust mask. For prolonged exposure use an air-purifying respirator with high efficiency particulate air (HEPA) filters. Follow the OSHA respirator regulations found in 29 CFR 1910.134. Use a NIOSH/MSHA approved respirator if exposure limits are exceeded or symptoms are experienced.

Eye/Face

- Wear safety goggles.

Hands

- Wear appropriate gloves.

Skin/Body

- Wear long sleeves and/or protective coveralls.

General Industrial Hygiene Considerations

- Wash hands before eating.

Environmental Exposure Controls

- Follow best practice for site management and disposal of waste.

Key to abbreviations

MSHA = Mine Safety and Health Administration

TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures

STEL = Short Term Exposure Limits are based on 15-minute exposures

ACGIH = American Conference of Governmental Industrial Hygiene

TLV = Threshold Limit Value determined by the American Conference of Governmental Industrial Hygienists (ACGIH)

NIOSH = National Institute of Occupational Safety and Health

TWAEV = Time-Weighted Average Exposure Value

OSHA = Occupational Safety and Health Administration

Section 9 - Physical and Chemical Properties

9.1 Information on Physical and Chemical Properties

Material Description			
Physical Form	Solid	Appearance/Description	Straw-yellow to brown-yellow granular solid, slight grains aroma.
Color	Straw-yellow to brown-yellow.	Odor	Slight grains aroma.
Taste	No data available	Particulate Type	Dust
Particulate Size	No data available	Aerosol Type	No data available
Odor Threshold	No data available	Physical and Chemical Properties	No data available
General Properties			
Boiling Point	No data available	Melting Point	No data available
Decomposition Temperature	No data available	Heat of Decomposition	No data available
pH	No data available	Specific Gravity/Relative Density	No data available
Density	No data available	Bulk Density	No data available
Water Solubility	Negligible	Solvent Solubility	No data available
Viscosity	No data available	Explosive Properties	No data available
Oxidizing Properties:	No data available		
Volatility			

Vapor Pressure	No data available	Vapor Density	No data available
Evaporation Rate	No data available	VOC (Wt.)	No data available
VOC (Vol.)	No data available	Volatiles (Wt.)	No data available
Volatiles (Vol.)	No data available		
Flammability			
Flash Point	No data available	Flash Point Test Type	No data available
UEL	No data available	LEL	No data available
Autoignition	No data available	Self-Accelerating Decomposition Temperature (SADT)	No data available
Heat of Combustion (ΔH_c)	No data available	Burning Time	No data available
Flame Duration	No data available	Flame Height	No data available
Flame Extension	No data available	Ignition Distance	No data available
Flammability (solid, gas)	No data available		
Environmental			
Half-Life	No data available	Octanol/Water Partition coefficient	No data available
Coefficient of water/oil distribution	No data available	Bioaccumulation Factor	No data available
Bioconcentration Factor	No data available	Biochemical Oxygen Demand BOD/BOD5	No data available
Chemical Oxygen Demand	No data available	Persistence	No data available
Degradation	No data available		

9.2 Other Information

- No additional physical and chemical parameters noted.

Section 10: Stability and Reactivity

10.1 Reactivity

- No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

- Stable under normal temperatures and pressures.

10.3 Possibility of hazardous reactions

- Hazardous polymerization not indicated.

10.4 Conditions to avoid

- Heat, sparks, open flame. Incompatible materials.

10.5 Incompatible materials

- Strong acids, strong bases, and oxidizing agents.

10.6 Hazardous decomposition products

- None. However, as with any organic material, combustion will product carbon dioxide and possibly carbon monoxide.

Section 11 - Toxicological Information

11.1 Information on toxicological effects

GHS Properties	Classification
Acute toxicity	UN GHS • Data lacking
Skin corrosion/Irritation	UN GHS • Data lacking
Serious eye damage/Irritation	UN GHS • Data lacking
Skin sensitization	UN GHS • Data lacking
Respiratory sensitization	UN GHS • Data lacking
Aspiration Hazard	UN GHS • Data lacking
Carcinogenicity	UN GHS • Data lacking
Germ Cell Mutagenicity	UN GHS • Data lacking
Toxicity for Reproduction	UN GHS • Data lacking
STOT-SE	UN GHS • Data lacking
STOT-RE	UN GHS • Data lacking

Medical Conditions Aggravated by Exposure Potential Health Effects

Inhalation

Acute (Immediate)

- Disorders of the lungs.

Chronic (Delayed)

- Exposure to dust may cause irritation. Processes such as cutting, grinding, crushing, or impact may result in generation of excessive amounts of airborne dusts in the workplace. Nuisance dust may affect the lungs but reactions are typically reversible.
- Prolonged exposure to the dust may cause wheezing, chest tightness, productive cough nasal irritation and symptoms of chronic respiratory disease. Dust may also induce asthmatic reactions via an allergic mechanism, particularly in individuals who are predisposed to developing allergies.

Skin

Acute (Immediate)

- Exposure to dust may cause mechanical irritation.

Chronic (Delayed)

- No data available.

Eye

Acute (Immediate)

- Exposure to dust may cause mechanical irritation. Excessive concentrations of nuisance dust in the workplace may reduce visibility and may cause unpleasant deposits in eyes.

Chronic (Delayed)

- No data available.

Ingestion

Acute (Immediate)

- Excessive concentrations of nuisance dust in the workplace may cause mechanical irritation to mucous membranes.

Chronic (Delayed)

- No chronic effects expected, material is an animal feed ingredient.

Section 12 - Ecological Information

12.1 Toxicity

- Material data lacking.

12.2 Persistence and degradability

- Material data lacking.

12.3 Bioaccumulative potential

- Material data lacking.

12.4 Mobility in Soil

- Material data lacking.

12.5 Results of PBT and vPvB assessment

- PBT and vPvB assessment has not been carried out.

12.6 Other adverse effects

- Material data lacking.

Section 13 - Disposal Considerations

13.1 Waste treatment methods

Product waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Packaging waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transport Information

	14.1 UN number	14.2 UN proper shipping name	14.3 Transport hazard class(es)	14.4 Packing group	14.5 Environmental hazards
DOT	NDA	Not Regulated	NDA	NDA	NDA
TDG	NDA	Not Regulated	NDA	NDA	NDA
IATA/ICAO	NDA	Not Regulated	NDA	NDA	NDA

14.6 Special precautions for user

- None known.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

- This product is provided only in non-bulk containers.

Section 15 - Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

SARA Hazard Classifications

- No data available

State Right To Know				
Component	CAS	MA	NJ	PA
Dried grain	NDA	No	No	No

Inventory					
Component	CAS	Canada DSL	Canada NDSL	China	TSCA
Dried grain	NDA	No	No	No	No

Canada

Labor

Canada - WHMIS - Classifications of Substances
Not Listed
Canada - WHMIS - Ingredient Disclosure List

Not Listed

Environment

Canada - CEPA - Priority Substances List
Not Listed

Mexico

Other

Mexico - Hazard Classifications
Not Listed
Mexico - Regulated Substances
Not Listed

United States

Labor

U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals
Not Listed
U.S. - OSHA - Specifically Regulated Chemicals
Not Listed

Environment

U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants
Not Listed
U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities
Not Listed
U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities
Not Listed
U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs
Not Listed
U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs
Not Listed
U.S. - CERCLA/SARA - Section 313 - Emission Reporting
Not Listed
U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing
Not Listed

United States - California

Environment

U.S. - California - Proposition 65 - Carcinogens List
Not Listed
U.S. - California - Proposition 65 - Developmental Toxicity
Not Listed
U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)
Not Listed
U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)
Not Listed
U.S. - California - Proposition 65 - Reproductive Toxicity - Female
Not Listed
U.S. - California - Proposition 65 - Reproductive Toxicity - Male
Not Listed

United States - Pennsylvania

Labor

U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
Not Listed
U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances
Not Listed

United States - Rhode Island

Labor

U.S. - Rhode Island - Hazardous Substance List

Not Listed

15.2 Chemical Safety Assessment

- No Chemical Safety Assessment has been carried out.

Section 16 - Other Information

Last Revision Date

- 09/March/2012

Preparation Date

- 09/March/2012

Disclaimer/Statement of Liability

- The information contained herein is believed to be accurate. It is not intended to constitute performance information concerning the product. No Express warranty, or implied warranty of merchantability or fitness for a particular purpose is made with respect to the product or the information contained herein.

Key to abbreviations

NDA = No Data Available
