# SAFETY DATA SHEET

Grain Distiller’s Dried Yeast 43P– Aventine Renewable Energy, Inc.

## Section 1. Identification

<table>
<thead>
<tr>
<th>GHS product identifier</th>
<th>Grain Distiller’s Dried Yeast 43P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical name</td>
<td>Inactive dried yeast,</td>
</tr>
<tr>
<td>Other means of</td>
<td>Saccharomyces cerevisiae</td>
</tr>
<tr>
<td>identification</td>
<td></td>
</tr>
<tr>
<td>Product use</td>
<td>Aventine Renewable Energy, Inc.</td>
</tr>
<tr>
<td>Synonym</td>
<td>1300 South Second Street</td>
</tr>
<tr>
<td></td>
<td>Pekin, IL 61554</td>
</tr>
<tr>
<td></td>
<td>1-309-347-3200</td>
</tr>
<tr>
<td>Supplier’s details</td>
<td>Chemtrec</td>
</tr>
<tr>
<td></td>
<td>1-800-424-9300</td>
</tr>
</tbody>
</table>

## Section 2. Hazards identification

### OSHA/HCS status

This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

### Classification of the substance or mixture

N. A.

### GHS label elements

<table>
<thead>
<tr>
<th>Hazard pictograms</th>
<th>N. A.</th>
</tr>
</thead>
</table>

## Section 2. Hazards identification

### Signal word

Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

### Hazard statements

Keep away from heat, sparks, open flames and hot surfaces.

### Precautionary statements

#### General

N. A.

#### Prevention

N. A.

#### Response

N. A.

#### Storage

Dispose of contents and container in accordance with all local, regional, national and international regulations.

#### Disposal

### Hazards not otherwise classified

None known.
**Section 3. Composition/information on ingredients**

<table>
<thead>
<tr>
<th>Substance/mixture</th>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical name</td>
<td>Grain Distiller's Dried</td>
</tr>
<tr>
<td></td>
<td>Yeast 43P,</td>
</tr>
<tr>
<td></td>
<td>Saccharomyces</td>
</tr>
<tr>
<td></td>
<td>cerevisiae</td>
</tr>
</tbody>
</table>

**CAS number/other identifiers**

| Product code | 95002 |

**Occupational exposure limits, if available, are listed in Section 8.**

**Section 4. First aid measures**

**Description of necessary first aid measures**

**Eye contact**

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

**Inhalation**

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

**Skin contact**

Get medical attention if symptoms occur.

**Ingestion**

Get medical attention if adverse health effects occur. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

**Most important symptoms/effects, acute and delayed**

**Potential acute health effects**

<table>
<thead>
<tr>
<th>Eye contact</th>
<th>No known significant effects or critical hazards.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Frostbite</td>
<td>Try to warm up the frozen tissues and seek medical attention.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

**Over-exposure signs/symptoms**

| Eye contact       | No specific data. |

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Date of issue/Date of revision: 02/03/2015
Section 4. First aid measures

Inhalation: No specific data.
Skin contact: No specific data.
Ingestion: No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician: N. A.
Specific treatments: No specific treatment.
Protection of first-aiders: N. A.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media: Use dry chemical, CO₂, water spray (fog) or foam.
Unsuitable extinguishing media: N. A.

Specific hazards arising from the chemical: N. A.

Hazardous thermal decomposition products: Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

Special protective actions for fire-fighters: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: No action shall be taken involving any personal risk or without suitable training.

Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing dust. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

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

Date of Issue/Date of revision: 02/03/2015
Section 6. Accidental release measures

Methods and materials for containment and cleaning up

Small release  Sweep up dust. Place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large release  Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures  Store and use away from heat, sparks, open flame or any other ignition source.

Advice on general occupational hygiene  Inhalation of high airborne concentrations of this material, in its dry state, can result in congestion of the upper respiratory tract.

Conditions for safe storage, including any incompatibilities  Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Eliminate all ignition sources. Keep container tightly closed and sealed until ready for use. Do not store in unlabeled containers.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grain Distiller’s Dried Yeast 43P</td>
<td>N. A.</td>
</tr>
</tbody>
</table>
Section 8. Exposure controls/personal protection

<table>
<thead>
<tr>
<th>Environmental exposure controls</th>
<th>N. A.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual protection measures</td>
<td></td>
</tr>
<tr>
<td>Hygiene measures</td>
<td>N. A.</td>
</tr>
<tr>
<td>Eye/face protection</td>
<td>Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.</td>
</tr>
<tr>
<td>Skin protection</td>
<td>N. A.</td>
</tr>
<tr>
<td>Hand protection</td>
<td>N. A.</td>
</tr>
<tr>
<td>Body protection</td>
<td>N. A.</td>
</tr>
<tr>
<td>Other skin protection</td>
<td>N. A.</td>
</tr>
<tr>
<td>Respiratory protection</td>
<td>Inhalation of high airborne concentrations of this material, in its dry state, can result in congestion of the upper respiratory tract. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.</td>
</tr>
</tbody>
</table>

Section 9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Appearance</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Solid. [Light Tan Color Yeast-like sweet odor.]</td>
</tr>
<tr>
<td>Color</td>
<td>Light tan</td>
</tr>
<tr>
<td>Molecular weight</td>
<td></td>
</tr>
<tr>
<td>Molecular formula</td>
<td></td>
</tr>
<tr>
<td>Boiling/condensation point</td>
<td></td>
</tr>
</tbody>
</table>
Section 9. Physical and chemical properties

Melting/freezing point
Critical temperature
Odor
Odor threshold
pH
Flash point
Burning time
Burning rate
Evaporation rate

Flammability (solid, gas)
Lower and upper explosive (flammable) limits

Airborne concentrations of dust greater than 20-grams/cubic meter combined with sources of ignition.

Vapor pressure
Vapor density
Solubility in water
Auto-ignition temperature
SADT
Viscosity

Section 10. Stability and reactivity

Reactivity
Chemical stability
Possibility of hazardous reactions
Conditions to avoid
Incompatibility with various substances
Hazardous decomposition products
Hazardous polymerization

No specific test data related to reactivity available for this product or its ingredients.
The product is stable.
Under normal conditions of storage and use, hazardous reactions will not occur.
Avoid possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow dust to accumulate in low or confined areas.
The product is stable.
None.
None.
Section 11. Toxicological information

Information on toxicological effects

Acute toxicity
Not available.

Irritation/Corrosion
Not available.

Sensitization
Not available.

Mutagenicity
Not available.

Carcinogenicity
Not available.

Reproductive toxicity
Not available.

Teratoqenicity
Not available.

Specific target organ toxicity (single exposure)
Not available.

Specific target organ toxicity (repeated exposure)
Not available.

Aspiration hazard
Not available.

Information on the likely routes of exposure
Not available.

Potential acute health effects

Eye contact
No known significant effects or critical hazards.

Inhalation
No known significant effects or critical hazards.

Skin contact
No known significant effects or critical hazards.

Ingestion
No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact
No specific data.

Inhalation
No specific data.

Skin contact
No specific data.

Ingestion
No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure
Potential immediate effects
Not available.

Potential delayed effects
Not available.

Long term exposure
### Section 11. Toxicological information

| Potential immediate effects | Not available. |
| Potential delayed effects | Not available. |
| Potential chronic health effects | Not available. |

- **General Carcinogenicity**: No known significant effects or critical hazards.
- **Mutagenicity**: No known significant effects or critical hazards.
- **Teratogenicity**: No known significant effects or critical hazards.
- **Developmental effects**: No known significant effects or critical hazards.
- **Fertility effects**: No known significant effects or critical hazards.

**Numerical measures of toxicity**

- **Acute toxicity estimates**: Not available.

### Section 12. Ecological information

- **Toxicity**: Not available.

**Persistence and degradability**

- Not available.

**Mobility in soil**

- **Soil/water partition coefficient (Koc)**: Not available.

**Other adverse effects**: No known significant effects or critical hazards.

### Section 13. Disposal considerations

**Disposal methods**

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way.
## Section 14. Transport information

<table>
<thead>
<tr>
<th></th>
<th>DOT</th>
<th>TDG</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>UN number</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>UN proper shipping name</strong></td>
<td>Grain Distiller’s Dried Yeast</td>
<td></td>
</tr>
<tr>
<td><strong>Transport hazard class(es)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Packing group</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Environment</strong></td>
<td>No.</td>
<td>No.</td>
</tr>
<tr>
<td><strong>Additional information</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

"Refer to CFR 49 (or authority having jurisdiction) to determine the information required for shipment of the product."

**Special precautions for user**

Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Transport in bulk according to Annex II of MARPOL 73/78 and the BC Code**

Not available.
Section 15. Regulatory information

U.S. Federal regulations

TSCA 8(a) CDR Exempt/Partial exemption: Not determined
United States inventory (TSCA 8b): Not Determined

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)
Not listed

Clean Air Act Section 602 Class I Substances
Not listed

Clean Air Act Section 602 Class II Substances
Not listed

DEA List I Chemicals (Precursor Chemicals)
Not listed

DEA List II Chemicals (Essential Chemicals)
Not listed

SARA 302/304

Composition/information on ingredients
No products were found.

SARA 304 RQ
Not applicable.

SARA 311/312
Classification: N. A.

Composition/information on ingredients

<table>
<thead>
<tr>
<th>Name</th>
<th>Fire hazard</th>
<th>Sudden release of pressure</th>
<th>Reactive</th>
<th>Immediate (acute) health hazard</th>
<th>Delayed (chronic) health hazard</th>
</tr>
</thead>
</table>

International regulations

International lists

Australia inventory (AICS): Not listed.
China inventory (IECSC): Not listed.
Japan inventory: Not listed.
Korea inventory: Not listed.
Malaysia inventory (EHS Register): Not determined.
New Zealand Inventory of Chemicals (NZIoC): Not listed.
Philippines inventory (PICCS): Not listed.
Taiwan inventory (CSNN): Not determined.
Not listed

Chemical Weapons
Convention List Schedule I
Chemicals
Chemical Weapons
Convention List Schedule II Chemicals

Chemical Weapons: Not listed
Convention List Schedule
III Chemicals Canada WHMIS (Canada) Not listed
Grain Distiller's Dried Yeast 43P

Section 16. Other information

Key to abbreviations

ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
UN = United Nations
ACGIH - American Conference of Governmental Industrial Hygienists
AIHA - American Industrial Hygiene Association
CAS - Chemical Abstract Services
CEPA - Canadian Environmental Protection Act
CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act (EPA)
CFR - United States Code of Federal Regulations
CPR - Controlled Products Regulations
DSL - Domestic Substances List
GWP - Global Warming Potential
IARC - International Agency for Research on Cancer
ICAO - International Civil Aviation Organisation
Inh - Inhalation
LC - Lethal concentration
LD - Lethal dosage
NDSL - Non-Domestic Substances List
NIOSH - National Institute for Occupational Safety and Health
TOG - Canadian Transportation of Dangerous Goods Act and Regulations
TLV - Threshold Limit Value
TSCA - Toxic Substances Control Act
WEEL - Workplace Environmental Exposure Level
WHMIS - Canadian Workplace Hazardous Material Information System