

SAFETY DATA SHEET

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

Section 1. Identification

GHS product identifier Grain Distiller's Dried Yeast 43P

Chemical name

Other means of identification

Product use

Synonym

SOS #

Supplier's details

Inactive dried yeast,
Saccharomyces cerevisiae

Aventine Renewable Energy, Inc.
1300 South Second Street
Pekin, IL 61554
1-309-347-3200

Emergency telephone number (with hours of operation)

Chemtrec
1-800-424-9300

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

Hazard pictograms

N. A.
N.A.

Signal word

Hazard statements

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

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

Precautionary statements

General

Prevention

N.A.

Response

N.A.

Storage

Disposal

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

Hazards not otherwise classified

None known.

Section 3. Composition/information on ingredients

Substance/mixture	Substance
Chemical name	Grain Distiller's Dried
Other means of identification	Yeast 43P, Saccharomyces cerevisiae

CAS number/other

Identifiers

Product code	95002
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Ingredient name	CAS Number
Grain Distiller's Dried Yeast 43P	

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

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.
Frostbite	Try to warm up the frozen tissues and seek medical attention.
Ingestion	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	No specific data.
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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, CO ₂ , water spray (fog) or foam.
Unsuitable extinguishing media	N. A.

Specific hazards arising from the chemical	N. A.
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Hazardous thermal decomposition products	Decomposition products may include the following materials: carbon dioxide carbon monoxide
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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.
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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.
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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).

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

Ingredient name	Exposure limits
Grain Distiller's Dried Yeast 43P	N. A.

Section 8. Exposure controls/personal protection

OSHA PEL (United States, 6/2010).
N. A.

Appropriate engineering controls N. A.

Environmental exposure controls N. A.

Individual protection measures

Hygiene measures N. A.

Eye/face protection 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.

Skin protection N. A.

Hand protection N. A.

Body protection N. A.

Other skin protection N. A.

Respiratory protection 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.

Section 9. Physical and chemical properties

Appearance

Physical state Solid. [Light Tan Color Yeast-like sweet odor.]

Color Light tan

Molecular weight

Molecular formula

Boiling/condensation point

Section 9. Physical and chemical properties

Melting/freezing point

Critical temperature Not available.

Odor Characteristic.

Odor threshold Not available.

pH Not available.

Flash point Not applicable.

Burning time Not applicable.

Burning rate

Evaporation rate

Flammability (solid, gas) Airborne concentrations of dust
Lower and upper explosive (flammable) limits greater than 20-grams/cubic
meter combined with sources of
ignition.

Vapor pressure N. A.

Vapor density N. A.

Solubility in water N. A.

Auto-ignition temperature 450-460°C Minimum ignition temperature (dust cloud)

SADT N. A.

Viscosity N. A.

Section 10. Stability and reactivity

Reactivity No specific test data related to reactivity available for this product or its ingredients.

Chemical stability The product is stable.

Possibility of hazardous reactions Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid 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.

Incompatibility with various substances The product is stable.

Hazardous decomposition products None.

Hazardous polymerization 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.

Teratogenicity

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.

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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 No known significant effects or critical hazards.

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 (K_{oc}) 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

	DOT	TDG
UN number		
UN proper shipping name	Grain Distiller's Dried Yeast	
Transport hazard class(es)		
Packing group		
Environment	No.	No.
Additional information		

"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 IBC 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

Name		Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Grain Distiller's Dried Yeast (inactive)		No.	No.	No.	No.	No.

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
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

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
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
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