

Safety Data Sheet

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product Name: Supreme Extreme

Chemical Name: Enzyme preparation

Declared activity: Glucoamylase (glucan 1,4-alpha-glucosidase)

Recommended Use: Saccharification of dextrin used in production of dextrose, starch based syrups, ethanol fermentation

Company Identification: CTE Global, Inc.
630 Dundee Road, Suite 440
Northbrook, IL 60062

Emergency telephone number: 1-800-424-9300 (Chemtrec) 24 hours every day

SECTION 2: Hazards identification

Classification: Classification of the chemical in accordance with 29CFR §1910.1200

| | |
|---------------------------|------------|
| Respiratory sensitization | Category 1 |
|---------------------------|------------|

Label elements

GHS-US labeling

Hazard pictograms (GHS-US):



GHS08

Signal word (GHS-US): Danger

Hazard statements

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled

Precautionary Statements - Prevention

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray

P285 - In case of inadequate ventilation wear respiratory protection

Precautionary Statements - Response

P304 + P341 - IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing

P342 + P311 - If experiencing respiratory symptoms: Call a POISON CENTRE or doctor/physician

SECTION 3: Composition/information on ingredients

| Chemical Name | CAS-No | IUB No. | Weight % |
|--|-----------|----------|----------|
| Glucan 1,4-alpha-glucosidase) (aep) | 9032-08-0 | 3.2.1.3 | 10-20 |
| Trehalase, alpha,alpha-(aep) | 9025-52-9 | 3.2.1.28 | 0.1-<1 |

aep (active enzyme protein) contributes to the GHS classification.

* The exact percentage (concentration) of composition has been withheld as a trade secret

SECTION 4: First aid measures

In case of unintended overexposure, the following measures apply

Inhalation

Effects May cause allergic respiratory reaction
Symptoms Shortness of breath, wheezing and coughing.
 The effect of inhalation may be delayed
First Aid Remove person to fresh air. If signs/symptoms continue, get medical attention.
 Show this safety data sheet to the doctor in attendance

Skin Contact

Effects May cause slight irritation.
Symptoms Slight irritation.
First Aid Remove and wash contaminated clothing before re-use. Wash off immediately with plenty of water. If symptoms persist, call a doctor. Show this safety data sheet to the doctor in attendance.

Eye Contact

Effects May cause slight irritation.
Symptoms Slight irritation
First Aid Hold eye open and rinse slowly and gently with water for 15-20 min.
 Remove contact lenses, if present, after the first five minutes, then continue rinsing eye. If symptoms persist, call a doctor. Show this safety

data sheet to the doctor in attendance.

Ingestion**Effects**

Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Symptoms

Irritation

First Aid

Rinse mouth with water and drink plenty of water. If symptoms persist, call a doctor. Show this safety data sheet to the doctor in attendance.

SECTION 5: Firefighting measures**Flammable Properties**

Slightly flammable according to HMIS criteria.

Suitable Extinguishing Media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable Extinguishing Media

None

Hazardous Combustion Products

None

Specific Hazards Arising from the Chemical

May cause allergic respiratory reaction.

Protective Equipment and Precautions for Firefighters

Self-contained breathing apparatus and standard turn-out apparel.

SECTION 6: Accidental release measures**Personal Precautions**

For personal protection see section 8.

Environmental Precautions

Collect spillage.

Methods for cleaning up

Avoid formation of dust and aerosols.

Spilled preparation should be removed immediately to avoid formation of dust from dried preparation. Take up by mechanical means preferably by a vacuum cleaner equipped with a HEPA (High Efficiency Particulate Air) filter. Flush remainder carefully with plenty of water. Avoid splashing, high pressure washing or compressed air cleaning to avoid formation of aerosols. Ensure sufficient ventilation. Wash contaminated clothing.

For personal protection see section 8

SECTION 7: Handling and storage

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| Handling | Avoid formation of dust and aerosols. Ensure adequate ventilation Liquid enzyme preparations are dustfree preparations. However, inappropriate handling may cause formation of dust or aerosols. |
| Storage | Keep tightly closed in a dry and cool place. Temperature 0-25°C (32-77°F) |
| Storage Conditions | In unbroken packaging - dry and protect from the sun. The product has been formulated for optimal stability. Extended storage or adverse conditions such as higher temperatures or higher humidity may lead to a higher dosage requirement |

SECTION 8: Exposure controls/personal protection

| Chemical Name | DNEL Dermal Acute Local (Workers) | DMEL Inhalation Long term Local (Workers) |
|------------------------------|-----------------------------------|---|
| Glucoamylase | | DMEL = 60 ng/m ³ |
| Trehalase, alpha,alpha-(aep) | | DMEL = 60 ng/m ³ |

Derived No Effect Level (DNEL)

Derived Minimal Effect Level (DMEL)

Occupational exposure controls

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|-----------------------------|--|
| Engineering Controls | Ensure adequate ventilation, especially in confined areas. Maintain good conditions of industrial hygiene. Some processes may require enclosures, local exhaust ventilation, or other engineering controls to control airborne levels. Additional handling and healthy/safety information is available upon request |
|-----------------------------|--|

Personal Protective Equipment

| | |
|--|--|
| Respiratory Protection | In case of insufficient ventilation wear suitable respiratory equipment that meets HEPA/P100 specifications. |
| Eye Protection | Safety glasses with side-shields |
| Skin and body protection | No special technical protective measures are necessary |
| General Hygiene Considerations | Handle in accordance with good industrial hygiene and safety practices. |
| Environmental exposure controls | Local authorities should be advised if significant spillages cannot be |

contained

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

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|---|--|
| Appearance: | Light to dark brown liquid |
| Odor: | Slight fermentation odor |
| pH: | Adjusted to the range where active enzyme is stable-typically pH4-9 |
| Density: | 1.12 - 1.17 g/mL |
| Solubility: | Active component is readily soluble in application-relevant solutions at all levels of concentration, temperature and pH which may occur in normal usage |
| Boiling Point: | Not determined |
| Flash Point: | Not determined |
| Flammability (solid, gas): | Not determined |
| Autoignition temperature: | Not determined |
| Oxidizing Properties: | Not determined |
| Vapor Pressure: | No data available |
| Partition Coefficient: (n-octanol/water) | No data available |
| Other information: | no information available |

SECTION 10: Stability and reactivity

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|---|---|
| Reactivity | Not relevant |
| Chemical stability | Stable under recommended storage conditions |
| Possibility of hazardous reactions | None under normal processing |
| Conditions to Avoid | None |
| Incompatible materials | None |
| Hazardous Decomposition Products | None |

SECTION 11: Toxicological information

Information on toxicological effects

SECTION 13: Disposal considerations

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|-------------------------------|--|
| Disposal of wastes | Dispose of in accordance with local regulations. |
| Contaminated Packaging | Dispose of wastes in an approved waste disposal facility |

SECTION 14: Transport information**Transport Regulations**

No dangerous goods according to transport regulations

No special precautions required

Transport hazard class(es) not applicable

Packing group not applicable

Environmental hazards not applicable

SECTION 15: Regulatory informationUSA, Federal Regulations

TSCA Inventory The active ingredient and all components of the enzyme preparation are Listed on the TSCA inventory

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and 40 CFR Part 372.

SARA 311/312 Hazardous Categorization

| | |
|-----------------------------------|----|
| Acute Health Hazard | No |
| Chronic Health Hazard | No |
| Fire Hazard | No |
| Sudden Release of Pressure Hazard | No |

Reactive Hazard

No

USA, State Regulations**California Proposition 65**

This product does not contain any Proposition 65 chemicals

Canada**WHMIS Hazard Class**

Controlled product hazard class D2 A (respiratory sensitizer)

WHMIS Statement

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the CPR.

SECTION 16: Other information**Indication of changes:** 7/24/2017**GHS-Classification**

The GHS calculation method has been used for classification of this mixture

Disclaimer

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. Furthermore, as the conditions of use are beyond the control of CTE Global, Inc., it is the responsibility of the customer to determine the conditions of safe use of these products.