



SAFETY DATA SHEET

Revision date: 2024/11/28

Compliant with 29 CFR §1910.1200 HCS 2012

Compliant with HPR WHMIS 2015

Strive X

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name	Strive X
Chemical Name	Enzyme preparation
Declared activity	Glucoamylase (glucan 1,4-alpha-glucosidase)

Use of the substance/preparation	Enzyme preparations are biocatalysts used in a variety of industrial processes and in certain consumer products
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Supplier's details
CTE Global, Inc.
630 Dundee Rd. Ste 440
Northbrook, IL 60062
E-mail: info@cte-usa.com
<https://cte-global.com/>

Information Telephone Number
1-919-494-3000, 8 am - 4:30 pm EST M-F

Emergency Telephone Number
1-800-424-9300 (Chemtrec) 24 hours every day

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2. HAZARD IDENTIFICATION

Classification

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

Respiratory sensitization

Category 1

Label elements

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

P284 - In case of inadequate ventilation wear respiratory protection

Precautionary Statements - Response

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing

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



Hazards not otherwise classified (HNOC)

1	Health
1	Flammability
0	Reactivity
X	Protective Equipment



3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No.	IUB No.	Weight-%
Glucosylase (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.

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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..

5. FIRE-FIGHTING 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

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.

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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.

Other Information For personal protection see section 8.

7. HANDLING AND STORAGE

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.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical name	DNEL Dermal Acute Local (Workers)	DMEL Inhalation Long term Local (Workers)
Glucoamylase (glucan 1,4-alpha-glucosidase) (aep)	-	DMEL = 60 ng/m³
Trehalase, alpha, alpha- (aep)		DMEL = 60 ng/m³

Derived No Effect Level (DNEL)
Derived Minimal Effect Level (DMEL)

Occupational exposure controls 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 Skin and body protection	Wear safety glasses with side shields (or goggles) No special technical protective measures are necessary
General Hygiene Considerations Environmental exposure controls	Handle in accordance with good industrial hygiene and safety practice Local authorities should be advised if significant spillages cannot be contained

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

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Physical State	Liquid
Color	Light to dark brown
Odor	Slight fermentation odor
pH	Adjusted to the range where active enzyme is stable – typically pH 4 – 9
Melting point / freezing point	No data available
Boiling Point/Range	No data available > 100 °C
Evaporation rate	Not available
Flammability (solid, gas)	Not determined
Upper/lower flammability or explosive limits	Not available
Vapor Pressure	No data available
Vapor density	Not available
Density (g/ml)	1.15
Solubility	Readily soluble in application-relevant solutions at all levels of concentration, temperature and pH which may occur in normal usage.
Partition Coefficient (n-octanol/water)	No data available
Autoignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Not available
Other information	No information available

10. STABILITY AND REACTIVITY

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

Information on toxicological effects (product level)

Product Information

Inhalation	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available.
Skin contact	Specific test data for the substance or mixture is not available.
Ingestion	Specific test data for the substance or mixture is not available.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Numerical measures of toxicity

No information available

Acute toxicity

LD50 Oral: No information available
LD50 Dermal: No information available

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LC50 Inhalation: No information available
LC50 Inhalation No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure
Skin corrosion/irritation No information available.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity No information available
Reproductive toxicity No information available

Developmental Effects No information available
Teratogenic Effects No information available

STOT - single exposure No information available

STOT - repeated exposure No information available

Aspiration hazard No information available.

Information on toxicological effects (component level)

Chemical name	Glucoamylase (glucan 1,4-alpha-glucosidase) (aep)
Acute oral toxicity	Data conclusive but not sufficient for classification
Acute inhalation toxicity	Data conclusive but not sufficient for classification
Skin corrosion/irritation	Not irritating (OECD TG 404)
Serious eye damage/eye irritation	Not irritating (OECD TG 405)
Respiratory sensitization	Sensitizer (Human experience)
Skin sensitization	Data conclusive but not sufficient for classification
Genetic toxicity	No indication of mutagenic effects (OECD TG 471, 473, 476)
Carcinogenicity	No data available
Reproductive toxicity	Data conclusive but not sufficient for classification
Specific target organ toxicity (single exposure)	No data available
Specific target organ systemic toxicity (repeated exposure)	Data conclusive but not sufficient for classification
Aspiration hazard	Not applicable
Chemical name	Trehalase, alpha, alpha- (aep)
Acute oral toxicity	LD50: > 2000 mg/kg bw (OECD TG 401, 420)
Acute inhalation toxicity	No data available
Skin corrosion/irritation	Not irritating (OECD TG 404)
Serious eye damage/eye irritation	Not irritating (OECD TG 405)
Respiratory sensitization	Sensitizer (Human experience)
Skin sensitization	No data available
Genetic toxicity	No indication of mutagenic effects (OECD TG 471, 476)
Carcinogenicity	No data available
Reproductive toxicity	No data available
Specific target organ toxicity (single exposure)	No data available
Specific target organ systemic toxicity (repeated exposure)	No data available
Aspiration hazard	No data available

Other information No information available

12. ECOLOGICAL INFORMATION

Toxicity

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Chemical name	Daphnia, acute	Algae, acute	Fish, acute
Glucoamylase (glucan 1,4-alpha-glucosidase) (aep)	EC(50) (48 hours): > 100 mg/l (OECD 202)	ErC50 (72 hours): > 100 mg/l (OECD TG 201)	LC50 (96 hours): > 1000mg test substance/l (OECD TG 203)
Trehalase, alpha, alpha- (aep)	no data available	-	no data available

Persistence/Degradability

Chemical name	Persistence and degradability	Partition coefficient (n-octanol/water)
Glucoamylase (glucan 1,4-alpha-glucosidase) (aep)	Readily biodegradable (OECD TG 301B)	LogPow: <0
Trehalase, alpha, alpha- (aep)	Readily biodegradable (OECD 301E/F)	LogPow: <0

Chemical name	Bioaccumulative Potential
Glucoamylase (glucan 1,4-alpha-glucosidase) (aep)	Does not bioaccumulate
Trehalase, alpha, alpha- (aep)	Does not bioaccumulate

Mobility in soil	Not relevant
Other adverse effects	No information available

13. DISPOSAL CONSIDERATIONS

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

14. TRANSPORT INFORMATION

Transport Regulations	
No dangerous goods according to transport regulations	
No special precautions required	
UN-No	Not applicable
Proper Shipping Name	Not applicable
Packing Group	Not applicable
Reportable Quantity (RQ)	Not applicable
Marine Pollutant	Not applicable
International Regulations	
IATA	Not regulated
IMDG	Not regulated

15. REGULATORY INFORMATION

USA, 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.

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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 intentionally added Proposition 65 chemicals.

Canada

Canada - CEPA 1999

Compliant with the Canadian Environmental Protection Act 1999 (CEPA) and the New Substance Notification Regulations in Canada

WHMIS Statement

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by WHMIS 2015.

16. OTHER INFORMATION

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, it is the responsibility of the customer to determine the conditions of safe use of these products.

End of Safety Data Sheet