

SAFETY DATA SHEET

According to Regulation (EC) No 1907/2006

Revision date: 05/20/2010

Version No:1

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product name	Vinozym® Process
Chemical Name	Enzyme preparation
Declared activity	Polygalacturonase
Use of the substance/preparation	Novozymes' enzyme preparations are biocatalysts used in a variety of industrial processes within food manufacturing
Company/Undertaking Identification	Novozymes A/S Krogshoejvej 36 2880 Bagsvaerd Denmark Tel.: +45 44460000 Fax.: +45 44469999 E-mail: SafetyDataSheet@novozymes.com www.novozymes.com
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2. HAZARDS IDENTIFICATION

Classification and labelling according to Directive 1999/45/EEC

Labelling Xn - Harmful

Classification

Symbol(s) Xn - Harmful
R-phrases(s) R42 - May cause sensitization by inhalation

Physico-chemical properties The data available do not support any physical or chemical hazard

Environmental Effects The data available do not support any environmental hazard.

Human health effects Repeated inhalation of enzyme dust or aerosols resulting from improper handling may induce sensitization and may cause allergic type 1 reactions in sensitized individuals
 Mild skin irritation
 Mild eye irritation

Effects of overexposure See Section 4

See Section 11 for additional Toxicological information

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Components

Chemical Name	CAS-No	EC No.	IUB No.	Weight %	Classification
Polygalacturonase	9032-75-1	EEC No. 232-885-6	3.2.1.15	5 - 10	Xn;R42

Enzymes are defined as enzyme concentrate (dry matter basis)
 For the full text of the R phrases mentioned in this Section, see Section 16

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

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

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

For personal protection see section 8

Environmental precautions

No special environmental precautions required

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 high efficiency filter. Flush remainder carefully with plenty of water. Avoid splashing and high pressure washing (avoid formation of aerosols). Ensure sufficient ventilation. Wash contaminated clothing.

For personal protection see section 8

7. HANDLING AND STORAGE

Handling

Avoid formation of dust and aerosols
 Ensure adequate ventilation

7. HANDLING AND STORAGE

This product is formulated to prevent formation of dust. However, inappropriate handling may release dust.

Storage Keep tightly closed in a dry and cool place. Temperature 0-25°C (32°F-77°F)

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure controls

Ensure adequate ventilation, especially in confined areas

Personal Protective Equipment

Respiratory Protection	In case of insufficient ventilation wear suitable respiratory equipment
Eye protection	Safety glasses with side-shields
Skin Protection	Long sleeved clothing
Hand Protection	Protective gloves

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

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Granulate
Color	off-white
Odor	Slight fermentation odour

10. STABILITY AND REACTIVITY

Chemical stability	Stable under recommended storage conditions
Conditions to Avoid	none
Materials to avoid	none
Hazardous Decomposition Products	none
Possibility of hazardous reactions	none

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral rat LD50>2g/kg

Chronic toxicity

According to experience not expected

12. ECOLOGICAL INFORMATION

Ecotoxicity

LC50(fish) > 100mg/L, EC50(daphnia) > 100mg/L, IC50(algae) > 100mg/L

Environmental Effects	The data available do not support any environmental hazard.
Persistence/Degradability	The organic components of the product are biodegradable
Bioaccumulative potential	According to experience not expected
Other adverse effects	No information available

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method	Dispose of in accordance with local regulations
Contaminated Packaging	Dispose of wastes in an approved waste disposal facility
Other information	Waste codes should be assigned by the user based on the application for which the product was used

14. TRANSPORT INFORMATION

Transport Regulations	No dangerous goods according to transport regulations No special precautions required
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15. REGULATORY INFORMATION

Classification and labelling according to Directive 1999/45/EEC

The product complies with the recommended purity specifications for food-grade enzymes given by the Joint FAO/WHO Expert Committee on Food Additives (JECFA) and the Food Chemical Codex (FCC).

<u>Labelling</u>	Xn - Harmful
<u>Classification</u>	
Symbol(s)	Xn - Harmful
R-phrases(s)	R42 - May cause sensitization by inhalation

S-phrase(s) S22 - Do not breathe dust
 S24 - Avoid contact with skin
 S36/37 - Wear suitable protective clothing and gloves

16. OTHER INFORMATION

Text of R phrases mentioned in Section 2&3

R42 - May cause sensitization by inhalation

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



Training advice Details on the safe handling of this product can be found in the "Handling enzymes" on www.novozymes.com

End of Safety Data Sheet

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