

2221-285
3086-233



Material Safety Data Sheet
acc. to ISO/DIS 11014

Printing date 05/30/2005

Reviewed on 05/25/2005

1 Identification of substance:

· **Product details:**

· **Trade name:** Enzyme Ultrasonic Tablets

· **Application of the substance / the preparation** Cleaning material/ Detergent

Distributed by: Benco Dental
11 Bear Creek Blvd.,
Wilkes-Barre, PA 18702
Emergency Phone: 1-800-535-5053

2 Composition/Data on components:

· **Chemical characterization**

· **Description:** -

· **Dangerous components:**

	Subtilisin	Xn; R 37/38-41-42	10-25%
497-19-8	sodium carbonate	Xi; R 36	10-25%

· **Additional information** For the wording of the listed risk phrases refer to section 16.

3 Hazards identification

· **Hazard description:**



Xn Harmful

· **Information pertaining to particular dangers for man and environment**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

R 37/38 Irritating to respiratory system and skin.

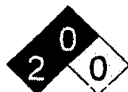
R 41 Risk of serious damage to eyes.

R 42 May cause sensitization by inhalation.

· **Classification system**

The classification was made according to the latest editions of the EU-lists, and expanded upon from company and literature data.

· **NFPA ratings for USA (scale 0-4)**



Health = 2
Fire = 0
Reactivity = 0

· **HMS-Ratings (Scale 0-4)**



Health = *2
Fire = 0
Reactivity = 0

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4 First aid measures

- **After skin contact** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing** Induce vomiting and seek advice of physician.

5 Fire fighting measures

- **Suitable extinguishing agents** void
- **Special hazards caused by the material, its products of combustion or resulting gases:**
Formation of toxic gases is possible during heating or in case of fire.
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Person-related safety precautions:** Not required.
- **Measures for environmental protection:** No special measures required.
- **Measures for cleaning/collecting:** Dispose contaminated material as waste according to item 13.
- **Additional information:** No dangerous substances are released.

7 Handling and storage

- **Handling**
 - **Information for safe handling:**
Keep receptacles tightly sealed.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of dust.
 - **Information about protection against explosions and fires:** No special measures required.
- **Storage**
 - **Requirements to be met by storerooms and receptacles:** No special requirements.
 - **Information about storage in one common storage facility:** Not required.
 - **Further information about storage conditions:** None.

8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

Components with limit values that require monitoring at the workplace:

Subtilisin

TLV (j)	C 0.00006 mg/m ³
	(m)

25322-68-3 Polyethylenglycol 400

TLV (j)	(average molecular weight 200-600)
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- **Additional information:** The lists that were valid during the creation were used as basis.

Personal protective equipment

- **General protective and hygienic measures**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the skin.
Avoid contact with the eyes and skin.
- **Breathing equipment:**
Filter P1.

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Suitable respiratory protective device recommended.

- **Protection of hands:**
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
 - **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
 - **Penetration time of glove material**
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
 - **For the permanent contact in work areas without heightened risk of injury (e.g. Laboratory) gloves made of the following material are suitable:**
Butyl rubber, BR
Fluorocarbon rubber (Viton)
Nitrile rubber, NBR
Natural rubber, NR
Chloroprene rubber, CR
 - **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**
PVC or PE gloves
- **Eye protection:** Protective goggles are recommended.
- **Body protection:** Light weight protective clothing

9 Physical and chemical properties:	
General Information	
· Form:	Solid.
· Color:	Whitish
· Odor:	Nearly odorless
Change in condition	
· Melting point/Melting range:	undetermined
· Boiling point/Boiling range:	undetermined
· Flash point:	Not applicable
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Density:	Not determined
Solubility in / Miscibility with	
· Water:	Soluble

10 Stability and reactivity

- **Dangerous reactions** No dangerous reactions known
- **Dangerous products of decomposition:** none



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<p>11 Toxicological information</p> <ul style="list-style-type: none"> · Acute toxicity: <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">· LD/LC50 values that are relevant for classification:</td> </tr> <tr> <td style="padding: 2px;">Subtilisin</td> </tr> <tr> <td style="padding: 2px;">Oral LD50 2000 mg/kg (rat)</td> </tr> </table> <ul style="list-style-type: none"> · Primary irritant effect: <ul style="list-style-type: none"> · on the skin: Irritant to skin and mucous membranes. · on the eye: Strong irritant with the danger of severe eye injury. · Sensitization: Sensitization possible through inhalation. · Additional toxicological information: <ul style="list-style-type: none"> Harmful Irritant <p>The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:</p>	· LD/LC50 values that are relevant for classification:	Subtilisin	Oral LD50 2000 mg/kg (rat)						
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Subtilisin									
Oral LD50 2000 mg/kg (rat)									
<p>12 Ecological information:</p> <ul style="list-style-type: none"> · General notes: <ul style="list-style-type: none"> Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water. Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system. 									
<p>13 Disposal considerations</p> <ul style="list-style-type: none"> · Product: <ul style="list-style-type: none"> · Recommendation <ul style="list-style-type: none"> Must not be disposed of together with household garbage. Do not allow product to reach sewage system. · Uncleaned packagings: <ul style="list-style-type: none"> · Recommendation: Packaging can be reused or recycled after cleaning. · Recommended cleansing agent: Water, if necessary with cleansing agents. <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">· DOT regulations:</td> </tr> <tr> <td style="padding: 2px;">· Hazard class: -</td> </tr> <tr> <td style="padding: 2px;">· Land transport ADR/RID (cross-border)</td> </tr> <tr> <td style="padding: 2px;">· ADR/RID class: -</td> </tr> <tr> <td style="padding: 2px;">· Maritime transport IMDG:</td> </tr> <tr> <td style="padding: 2px;">· IMDG Class: -</td> </tr> <tr> <td style="padding: 2px;">· Marine pollutant: No</td> </tr> <tr> <td style="padding: 2px;">· Air transport ICAO-TI and IATA-DGR:</td> </tr> <tr> <td style="padding: 2px;">· ICAO/IATA Class: -</td> </tr> </table>	· DOT regulations:	· Hazard class: -	· Land transport ADR/RID (cross-border)	· ADR/RID class: -	· Maritime transport IMDG:	· IMDG Class: -	· Marine pollutant: No	· Air transport ICAO-TI and IATA-DGR:	· ICAO/IATA Class: -
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<p>15 Regulations</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">· SARA Section 355 (extremely hazardous substances)</td> </tr> <tr> <td style="padding: 2px;">None of the ingredients is listed.</td> </tr> <tr> <td style="padding: 2px;">· SARA Section 313 (specific toxic chemical listings)</td> </tr> <tr> <td style="padding: 2px;">None of the ingredients is listed.</td> </tr> <tr> <td style="padding: 2px;">· TSCA (Toxic Substances Control Act)</td> </tr> <tr> <td style="padding: 2px;">144-55-8 sodium hydrogencarbonate</td> </tr> </table>	· SARA Section 355 (extremely hazardous substances)	None of the ingredients is listed.	· SARA Section 313 (specific toxic chemical listings)	None of the ingredients is listed.	· TSCA (Toxic Substances Control Act)	144-55-8 sodium hydrogencarbonate			
· SARA Section 355 (extremely hazardous substances)									
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· TSCA (Toxic Substances Control Act)									
144-55-8 sodium hydrogencarbonate									

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	Subtilisin
497-19-8	sodium carbonate
77-92-9	citric acid
25322-68-3	Polyethylenglycol 400
532-32-1	sodium benzoate
151-21-3	sodium dodecyl sulphate
· Prop 65 - Chemicals known to cause cancer	
None of the ingredients is listed.	
· Prop 65 - Chemicals known to cause reproductive toxicity	
None of the ingredients is listed.	
· Carcinogeny categories	
· EPA (Environmental Protection Agency)	
None of the ingredients is listed.	
· IARC (International Agency for Research on Cancer)	
None of the ingredients is listed.	
· NTP (National Toxicology Program)	
None of the ingredients is listed.	
· TLV (Threshold Limit Value established by ACGIH)	
None of the ingredients is listed.	
· NIOSH-Ca (National Institute for Occupational Safety and Health)	
None of the ingredients is listed.	
· OSHA-Ca (Occupational Safety & Health Administration)	
None of the ingredients is listed.	
· Markings according to EU guidelines:	
The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials	
· Code letter and hazard designation of product:	
Xn Harmful	
· Hazard-determining components of labelling:	
Subtilisin	
· Risk phrases:	
37/38 Irritating to respiratory system and skin.	
41 Risk of serious damage to eyes.	
42 May cause sensitization by inhalation.	
· Safety phrases:	
22 Do not breathe dust.	
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.	
36/37/39 Wear suitable protective clothing, gloves and eye/face protection.	
45 In case of accident or if you feel unwell, seek medical advice immediately.	
· National regulations	
· Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.	



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16 Other information:

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant R-phrases

- 36 Irritating to eyes.
- 37/38 Irritating to respiratory system and skin.
- 41 Risk of serious damage to eyes.
- 42 May cause sensitization by inhalation.

· **Department issuing MSDS:** Safety department

· **Contact:** Dr. Tuchscherer Tel.: +49 6081 959-287

· * **Data compared to the previous version altered.**

USA