Date: 21.09.2017

1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier
Product name: Enzympräparate, flüssig / Enzyme preparations, liquid (Natuzym-AP, -BE, -DP Ultra, -FAA, -MAX, -X1, -3X; Pektinlyase; ULTRA-fruit; Pektinase OM; Amylase-GA300, -GA500; Topizym, Schliessmann-VF, -VF-Kartoffel, -VZ; Ex-Protin; Ex-Tosan)

Article: please see specification of the product
Chemical name: Enzyme preparations, liquid
Registration number: See section 3 for substances contained in the mixture

1.2 Relevant identified uses of the substance or mixture and uses advised against
Processing aid for food manufacturing: Preparation of fruit juices, wines and distilling mashes from fruits, grain, potatoes and jerusalem artichoke

1.3 Details of the supplier of the safety data sheet
Company: C. Schliessmann Kellerei-Chemie GmbH & Co KG
Auwiesenstr. 5, D-74523 Schwäbisch Hall
Tel. 0049-(0)791 / 97191 -0, Fax -25
E-Mail: service@c-schliessmann.de

1.4 Emergency telephone number
Poison centre Freiburg: Tel. 0049-(0)761 / 19240

2. Hazards identification

2.1 Classification of the substance or mixture
Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

2.2 Label elements according to Regulation (EC) No 1272/2008
Hazard pictograms:

Signal word: WARNING

Hazardous component: Enzyme protein

Hazard statements: H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Precautionary statements:
P261 Avoid breathing dust / fume / gas / mist / vapours / spray.
P342|P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor

2.3 Other hazards
No informations available

3. Composition/information on ingredients

3.1 Substance
The product is a mixture.

3.2 Mixtures
Liquid mixtures of water, up to 50% glycerol and/or sodium chloride and enzyme protein
Dangerous component: pectinase, polygalacturonase, α-amylase, glucoamylase, protease, β-glucanase, cellulase, inulinase


CAS: 9033-35-6, 9032-75-1, 9000-90-2, 9032-08-0, 9001-92-7, 62213-14-3, 9012-54-8, 9033-35-6

Reg.nr.: not available

Classification: Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. Additionally for protease: Eye Irrit. 2 H319 Causes serious eye irritation. Skin Irrit. 2 H315 Causes skin irritation.

Content: 1-15%

4. First aid measures

4.1 Description of first aid measures
After inhalation: Remove from exposure into fresh air immediately and rest in a position comfortable for breathing. If irritation of the respiratory system or allergic symptoms occur, consult a doctor.

After skin contact: Wash off with soap and water. Remove dirty clothing. Medical treatment in case of skin irritation.

After eye contact: Rinse opened eye for 10 minutes under running water. Consult a doctor in case of eye irritation.

After swallowing: Rinse out mouth and drink 2 glasses of water. Seek medical advice in case of allergic reaction of the respiratory system.

4.2 Most important symptoms and effects, both acute and delayed
After inhalation: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

After skin contact: No known significant effects or critical hazards.

After eye contact: Slight irritation possible.

After swallowing: No known significant effects or critical hazards.

4.3 Indication of any immediate medical attention and special treatment needed
Contact poison treatment or allergen specialist immediately if large quantities have been inhaled or ingested.

5. Firefighting measures

5.0 Combustibility
The product is not combustible.

5.1 Suitable extinguishing agents
Foam, powder, CO₂ or water spray.

5.2 Special hazards arising from the substance or mixture
Formation of carbon oxides.

5.3 Advice for firefighters
Extinguishing activities according to the environment; wear self-contained respiratory protective device, avoid inhaling dust of the product.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Avoid formation and inhaling of aerosols or dust of dried spilled product.

6.2 Environmental precautions
Disposal after spillage by dilution with water into an approved sewer.

6.3 Methods and material for containment and cleaning up
Mop or sweep up and clean with plenty water.

6.4 Reference to other sections
See Section 13 for disposal information.

7. Handling and storage

7.1 Precautions for safe handling
Avoid formation of aerosols. See notes in Section 2 and 8.

7.2 Conditions for safe storage, including any incompatibilities
Keep closed and at 5-10°C.
7.3 Specific end use(s)  
See section 1.2

8. Exposure controls/personal protection

8.1 Control parameters
The product contains no relevant quantities of substances for WEL.

8.2 Exposure controls
Personal protective equipment:
Respiratory protection: Suitable respiratory equipment when aerosols are generated. Filter-type P3
Eye protection: Safety goggle with side protection.
Skin protection: Impermeable protective gloves.
General hygiene considerations: In accordance with good industrial hygiene and safety practices. Application of skin-protective barrier cream recommended. Wash hands after working with substance.

9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Physical state:</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour:</td>
<td>Slightly brown</td>
</tr>
<tr>
<td>Odour:</td>
<td>Typical for fermentation products.</td>
</tr>
<tr>
<td>pH-value:</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting temperature:</td>
<td>Combustion</td>
</tr>
<tr>
<td>Boiling temperature:</td>
<td>Not available</td>
</tr>
<tr>
<td>Ignition temperature:</td>
<td>Not available</td>
</tr>
<tr>
<td>Flash point:</td>
<td>Not available</td>
</tr>
<tr>
<td>Danger of explosion:</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapour pressure:</td>
<td>Not available</td>
</tr>
<tr>
<td>Relative vapor density:</td>
<td>Not available</td>
</tr>
<tr>
<td>Density:</td>
<td>Not available</td>
</tr>
<tr>
<td>Bulk density:</td>
<td>Not available</td>
</tr>
<tr>
<td>Solubility in water:</td>
<td>Readily soluble in water</td>
</tr>
</tbody>
</table>

10. Stability and reactivity

10.1 Reactivity  
See section 10.3

10.2 Chemical stability  
No decomposition if used and stored according to specifications.

10.3 Possibility of hazardous reactions  
Rist of dust explosion.

10.4 Conditions to avoid  
No information available.

10.5 Incompatible materials  
No information available.

10.6 Hazardous decomposition products  
In case of fire: see section 5.

11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity (enzyme protein): >2g/kg (not toxic)

Subacute/chronic toxicity: Once sensitized, a strong allergic reaction of the respiratory system may occur following a subsequent exposure to very low levels.

CMR effects:  
No classification as mutagenic or teratogenic toxicant.

Mutagenicity:  
No classification as carcinogenic toxicant.

Carcinogenicity:  
No classification as reproductive toxicant.

11.2 Further information  
See section 4 for symptoms after direct contact with the product.
12. Ecological information

12.1 Aquatic toxicity
Not toxic for water organisms, but no exact data available.

12.2 Persistence and degradability
Readily biodegradable.

12.3 Bioaccumulative potential
No data available.

12.4 Mobility in soil
No data available.

12.5 Results of PBT and vPvB assessment
No data available.

12.6 Other adverse effects
No further relevant information available.

13. Disposal considerations
Disposal by flushing with water into an approved sewer or according to official regulations. Little quantities may be rinsed away with plenty of water.

14. Transport information
Not subject to transport regulations. NOT CLASSIFIED AS DANGEROUS GOODS.

15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
Information about limitation of use: /

Waterhazard class: Not hazardous for water.

16. Other information
The informations provided on this SDS are correct to the best of our knowledge and information. These informations are designed as a guide for safe handling. They are no guarantee for specific characteristics of the product.