

# Safety Data Sheet

in accordance with regulation (EC) No 1907/2006 (EC No 453/2010)



## Lava® Zyme AET

000010021579

Version 2.3 / D / EN Revision Date: 18.08.2017

replaces version: 2.2 on 30.01.2015

generated on: 10.10.2008

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### SECTION 1: Identification of the substance/preparation and company

#### 1.1 Product identifier

**Lava® Zyme AET**

#### 1.2 Relevant Identified uses of the substance or mixture and uses advised against

Use pattern :  
Textile auxiliary

#### 1.3 Details of the supplier of the safety data sheet

DyStar Colours Distribution GmbH

Am Prime Park 10-12

D - 65479 Raunheim

Telephone no. +49 6142 4072 3172

Telefax no. +49 6142 4072 3000

MSDS@DyStar.com

#### 1.4 Emergency telephone number

Emergency telephone number: +49 2365 4984140

### SECTION 2: Hazards identification

#### 2.1 Classification of the Substance or Mixture

**According to regulation (EC) 1272/2008 on classification, labelling and packaging of substances and mixtures**

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Classification of the Substance or Mixture

Respiratory or skin sensitisation: Respiratory Sensitisation, Cat. 1B

#### 2.2 Label elements

Pictograms:

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health hazard

Signal word:

Danger

contains:

alpha-Amylase

Hazard Statements:

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

Precautionary Statements (Prevention):

P260 Do not breathe spray.

P285 In case of inadequate ventilation wear respiratory protection.

Precautionary Statements (Response):

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

Precautionary Statements (Storage):

Precautionary Statements (Disposal):

P501 Dispose of contents/container to waste treatment in accordance with national regulations.

### 2.3 Other hazards

If applicable in this section are given hazards which are not part of the overall classification but can contribute to the hazards which may be associated with the substance or mixture.

Not applicable

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## SECTION 3: Composition/information on ingredients

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### 3.1 Substances

Not applicable

### 3.2 Mixtures

#### Chemical characterization

bacterial alpha-amylase, aqueous preparation

#### Hazardous Ingredients (GHS) according Regulation (EC) 1272/2008

alpha-Amylase

Content: 1 - 5 %  
EC Number 232-565-6  
EC index no. : 647-015-00-4  
CAS number : 9000-90-2

Resp. Sens. 1B

H334

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

General information: Take off immediately all contaminated clothing.

After inhalation: Upon inhalation of aerosol/vapour/dust: Take the patient into the fresh air; if there is difficulty in breathing, medical advice is required.

After contact with skin: Cleansing with plenty of water, soap or other non-irritating cleansing agents.

After contact with eyes: Contamination of the eyes must be treated by thorough irrigation with water, with the eyelids held open. Eventually a doctor (or eye specialist) should be consulted.

After ingestion: If the product is swallowed, the patient must at once drink water repeatedly, if possible with the addition of activated carbon. If the patient feels unwell, seek medical advice.

### 4.2 Most important symptoms and effects, both acute and delayed

Please see hazard statements in section 2.2 if given and information in this section if stated.

### 4.3 Indication of any immediate medical attention and special treatment needed

Please see precautionary statements in section 2.2 as well as first aid information in this section if stated.

## SECTION 5: Fire-fighting measures

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### 5.1 Extinguishing media

Suitable extinguishing media: water mist, foam, dry powder, CO<sub>2</sub>

Extinguishing media that must not be used for safety reasons: not determined

### 5.2 Special hazards arising from the substance or mixture

not determined

### 5.3 Advice for firefighters

Special protective equipment for firefighting: Firemen have to wear self-contained breathing apparatus.

Further information: Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

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## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions: Use the necessary personal protection equipment during any work.

### 6.2 Environmental precautions

Environmental precautions: Do not empty into drains or waters.

### 6.3 Methods and material for containment and cleaning up

Methods for cleaning up/taking up: Take up with absorbent material and fill into a closable container.

### 6.4 Reference to other sections

Additional information: For further disposal measures see chapter 13.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Advice on safe handling: Close container immediately after use, avoid excessive heat.  
Avoid formation of aerosols.

Advice on protection against fire and explosion: No special measures against fire or explosion required.

### 7.2 Conditions for safe storage, including any incompatibilities

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Requirements for storage rooms and vessels: Store sealed in original container in a cool place.

Storage class: 12 Non-combustible liquids

Storage stability: not determined

### 7.3 Specific end use(s)

not determined

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Ingredients with occupational exposure limits to be monitored :

Not applicable

### 8.2 Exposure controls

General protective measures: Do not breathe vapour/spray. Avoid contact with eyes and skin. Take off immediately all contaminated clothing.

Hygiene measures: Do not eat, drink or smoke at work.

Wash hands before breaks and at end of work and use skin-protecting ointment.

Keep away from food and drink stuffs.

Respiratory protection : combination filter, e.g. DIN 3181 ABEK, if product forms vapours.

Hand protection : Wear suitable gloves e.g. of PVC or nitrile rubber. In the event of contamination, change protective gloves immediately. Avoid skin contact with the wetted surfaces of the protective gloves.

Eye protection : safety glasses with side protection shield

Body protection : Wear protective clothing.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Form : liquid

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Colour :	brown
Odour :	characteristic smell
Melting point	not determined
Boiling point :	approx. 100 °C
Flash point :	> 100 °C
Ignition temperature :	not determined
flammability :	not determined
Lower explosion limit :	not determined
Upper explosion limit :	not determined
Vapour pressure :	not determined
Density :	approx. 1,12 g/cm <sup>3</sup>
Solubility in water :	miscible
pH value :	5,5 - 6,5
Octanol/water partition coefficient (log Pow) :	not determined
Viscosity (dynamic) :	not determined
Viscosity (kinematic) :	not determined
Viscosity (flow time) :	not determined

### 9.2 Other information

Combustion number :	not determined
Dust explosion class :	not determined
Bulk density :	not determined
Further information (phys.-chem.)	not necessary

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## SECTION 10: Stability and reactivity

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### 10.1 Reactivity

No hazardous reactions when stored and handled according to prescribed instructions.

### 10.2 Chemical stability

Thermal decomposition

No thermal decomposition when stored and handled correctly.

### 10.3 Possibility of hazardous reactions

Hazardous reactions: No hazardous reaction when used as directed.

Hazardous decomposition products: Not applicable

### 10.4 Conditions to avoid

For avoidable conditions: not necessary

### 10.5 Incompatible materials

For avoidable materials: not necessary

### 10.6 Hazardous decomposition products

Not applicable

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Acute oral toxicity : LD50 > 2.000 mg/kg (rat)

Acute inhalation toxicity : not determined

Acute dermal toxicity : not determined

Irritant effect on skin : non-irritant (rabbit)

Irritant effect on eyes : non-irritant (rabbit eye)

Sensitization : May cause sensitization by inhalation and skin contact.

Repeated dose toxicity not determined

Mutagenicity: not determined

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Teratogenicity : not necessary

Carcinogenicity : not necessary

### SECTION 12: Ecological information

#### 12.1 Toxicity

Fish toxicity : LC50 > 1.000 mg/l  
Method : OECD 203

Daphnia toxicity : EC50 > 100 mg/l (48 h, Daphnia magna)  
Method : OECD 202 / ISO 6341 / EEC 84/449/V, C2

Algae toxicity : not determined

Bacteria toxicity : EC50 > 10.000 mg/l (0,5 h, activated sludge)  
Method : OECD 209

Remarks: Product does not add to the AOX-value of the sewage. (DIN EN 1485)  
The product does not contain heavy metals in concentrations of concern for waste water.

#### 12.2 Persistence and degradability

Physico-chemical eliminability : not determined

Biodegradability : 75 % (28 d)  
Method : OECD 301F / ISO 9408  
If regulations are followed when introducing effluent into biological waste water treatment plants, no adverse effect on the degradation activity of activated sludge is to be expected., The product is ready biodegradable.

Biodegradability : 95 % (3 d)  
Method : OECD 302B / ISO 9888 / EEC 88/302 C  
COD decrease

Behaviour in environmental compartments: not determined

Dissolved Organic carbon (DOC) : not determined

#### 12.3 Bioaccumulative potential

not determined

#### 12.4 Mobility in soil



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not determined

### 12.5 Results of PBT and vPvB assessment

not determined

### 12.6 Other adverse effects

not determined

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## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Product: If utilisation or recycling of the product is not possible, it should be disposed of according to the local regulations and laws, e. g. by incineration in a suitable plant.

European Waste Catalogue (EWC) code: 040215 wastes from finishing other than those mentioned in 04 02 14

Uncleaned packaging: Soiled, empty containers are to be treated in the same way as the contents.

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## SECTION 14: Transport information

ADR	Non dangerous goods
ADNR	Non dangerous goods
RID	Non dangerous goods
IMDG	Non dangerous goods
IATA_C	Non dangerous goods
IATA_P	Non dangerous goods

### 14.1 UN number

See above entry at the respective regulation.

### 14.2 UN proper shipping name

See above entry at the respective regulation.

### 14.3 Transport hazard class(es)

See above entry at the respective regulation.

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### 14.4 Packing group

See above entry at the respective regulation.

### 14.5 Environmental hazards

See above entry at the respective regulation.

### 14.6 Special precautions for user

### 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

No transport in bulk according to Annex II of MARPOL 73/78 and the IBC code foreseen for this substance or mixture.:

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Water Hazard Class (Ger.) : WGK 1 - slightly hazardous to water WGK = Classification in accordance with the German Water Resources Act

### 15.2 Chemical safety assessment

not determined

## SECTION 16: Other information

Text of all shortcuts referred to in sections 2 and 3:

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

Resp. Sens. 1B Respiratory or skin sensitisation: Respiratory Sensitisation, Cat. 1B

This information is based on our present state of knowledge. It should not therefore be construed as guaranteeing specific properties of the products described or their suitability for a particular application.