

**SECTION 1: Identification of the substance/mixture and of the company/undertaking**
**1.1. Product identifier**

Product form : Mixture  
 Product name : Smart Enzym  
 Product code : 615  
 Type of product : Detergent  
 Product group : Mixture

**1.2. Relevant identified uses of the substance or mixture and uses advised against**
**1.2.1. Relevant identified uses**

Industrial/Professional use spec : For professional use only  
 Use of the substance/mixture : Enzymatic Booster

**1.2.2. Uses advised against**

No additional information available

**1.3. Details of the supplier of the safety data sheet**
**Manufacturer**

Christeyns NV  
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 9000 GENT - Belgium  
 T +32 9 223 38 71  
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**Distributor**

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 T +44 1925 234696 - F +44 1925234696  
[UK-foodinfo@christeyns.com](mailto:UK-foodinfo@christeyns.com) - [www.christeynsfoodhygiene.co.uk](http://www.christeynsfoodhygiene.co.uk)

**1.4. Emergency telephone number**

Country	Official advisory body	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2566 (Healthcare professionals-24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	
United Kingdom	Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Guy's & St Thomas' Hospital Trust	Avonley Road SE14 5ER London	+44 20 7188 7188	

**SECTION 2: Hazards identification**
**2.1. Classification of the substance or mixture**
**Classification according to Regulation (EC) No. 1272/2008 [CLP]**

Eye Dam. 1 H318

Full text of hazard classes and H-statements : see section 16

**Adverse physicochemical, human health and environmental effects**

No additional information available

**2.2. Label elements**
**Labelling according to Regulation (EC) No. 1272/2008 [CLP]**

Hazard pictograms (CLP) :



GHS05

CLP Signal word : Danger

Hazardous ingredients : Ethoxylated Alcohol

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according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Hazard statements (CLP)	: H318 - Causes serious eye damage.
Precautionary statements (CLP)	: P280 - Wear eye protection. P305+P351+P338+P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.
EUH-statements	: EUH208 - Contains subtilisin. May produce an allergic reaction.

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Monopropyleneglycol; 1,2-propane glycol substance with national workplace exposure limit(s) (GB, IE)	(CAS-no) 57-55-6 (Einecs nr) 200-338-0 (REACH-no) 01-2119456809-23	10 - 30	Not classified
Ethoxylated Alcohol	(CAS-no) 157627-86-6/68439-50-9/68131-39-5/68213-23-0/68551-12-2/160901-19-9 (Einecs nr) 500-337-8/500-213-3/500-195-7/500-201-8/500-221-7/500-457-0 (REACH-no) Exempted (polymer)	10 - 30	Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318 Aquatic Chronic 3, H412
subtilisin	(CAS-no) 9014-01-1 (Einecs nr) 232-752-2 (EG annex nr) 647-012-00-8 (REACH-no) 01-2119480434-38	< 1	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Resp. Sens. 1, H334 STOT SE 3, H335 Aquatic Acute 1, H400 Aquatic Chronic 2, H411

Full text of H-statements: see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

General advice	: In all cases of doubt, or when symptoms persist, seek medical attention.
Inhalation	: Take victim to fresh air, in a quiet place and if necessary take medical advice.
Skin contact	: Wash off with plenty of water. Take off immediately all contaminated clothing. In case of faintness or symptoms of skin irritation appear, take medical advice.
Eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
Ingestion	: Rinse mouth out with water. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor.

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

Acute effects inhalation	: Presents no particular risk when handled in accordance with good occupational hygiene practice.
Acute effects skin	: To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.
Acute effects eyes	: Causes serious eye damage.
Acute effects oral route	: Presents no particular risk when handled in accordance with good occupational hygiene practice.

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

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media	: All extinguishing agents can be used.
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### 5.2. Special hazards arising from the substance or mixture

Explosion hazard	: Not applicable.
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### 5.3. Advice for firefighters

No additional information available

## SECTION 6: Accidental release measures

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

#### 6.1.1. For non-emergency personnel

No additional information available

#### 6.1.2. For emergency responders

No additional information available

### 6.2. Environmental precautions

Avoid release to the environment.

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

Methods for cleaning up : Absorb spilled material with sand or earth. Shovel or sweep up and put in a closed container for disposal.

### 6.4. Reference to other sections

No additional information available

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Handle and open container with care.

Hygiene measures : Do not eat, drink or smoke when using this product.

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

Storage conditions : Keep only in original container.

Material(s) to avoid : Never mix with other materials.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Monopropyleneglycol; 1,2-propane glycol (57-55-6)		
Ireland	Local name	Propane-1,2-diol
Ireland	OEL (8 hours ref) (mg/m³)	470 mg/m³ total (vapour and particulates) 10 mg/m³ particulates
Ireland	OEL (8 hours ref) (ppm)	150 ppm total (vapour and particulates)
Ireland	Regulatory reference	Code of Practice for the Chemical Agents Regulations 2018
United Kingdom	Local name	Propane-1,2-diol
United Kingdom	WEL TWA (mg/m³)	10 mg/m³ particulates 474 mg/m³ total vapour and particulates
United Kingdom	WEL TWA (ppm)	150 ppm total vapour and particulates
United Kingdom	Regulatory reference	EH40/2005 (Third edition, 2018). HSE
subtilisin (9014-01-1)		
Ireland	Local name	Subtilisins (proteolytic enzymes as 100% pure crystalline enzyme)
Ireland	OEL (8 hours ref) (mg/m³)	0,00006 mg/m³
Ireland	OEL (15 min ref) (mg/m³)	0,00006 mg/m³
Ireland	Notes (IE)	Sens.
Ireland	Regulatory reference	Code of Practice for the Chemical Agents Regulations 2018
United Kingdom	Local name	Subtilisins (Bacillus subtilis Carlsberg)
United Kingdom	WEL TWA (mg/m³)	0,00004 mg/m³
United Kingdom	Remark (WEL)	Sen (Capable of causing occupational asthma. See paragraphs 53–56)
United Kingdom	Regulatory reference	EH40/2005 (Third edition, 2018). HSE
Glycerol (56-81-5)		
Ireland	Local name	Glycerol, mist

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Glycerol (56-81-5)		
Ireland	OEL (8 hours ref) (mg/m³)	10 mg/m³
United Kingdom	Local name	Glycerol
United Kingdom	WEL TWA (mg/m³)	10 mg/m³ mist
United Kingdom	Regulatory reference	EH40/2005 (Third edition, 2018). HSE

### 8.2. Exposure controls

#### Hand protection:

Chemical resistant PVC gloves (to European standard EN 374 or equivalent)

#### Eye protection:

Safety glasses with side-shields (EN 166)

#### Protective equipment:

Wear suitable protective clothing (EN 14605)

#### Respiratory protection:

Provide adequate ventilation

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Physical state/form	: Liquid.
Colour	: Brown.
Odour	: slight.
Odour threshold	: No data available
pH	: 6,8
Relative evaporation rate (butylacetate=1)	: No data available
Melting point/range	: < 0 °C
Freezing point	: No data available
Boiling point/Boiling range	: >= 100 °C
Flash point	: > 100 °C
Autoignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 1077 ± 25 kg/m³
Solubility	: No data available
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No additional information available

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### 10.4. Conditions to avoid

humid air.

### 10.5. Incompatible materials

Never mix with other materials.

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified.

Acute toxicity (dermal) : Not classified

Acute toxicity (inhalation) : Not classified

#### Ethoxylated Alcohol (157627-86-6/68439-50-9/68131-39-5/68213-23-0/68551-12-2/160901-19-9)

LD50 oral rat	300 - 2000 mg/kg bodyweight
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LD50 dermal rabbit	> 2000 mg/kg
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#### Monopropyleneglycol; 1,2-propane glycol (57-55-6)

LD50 oral rat	20 g/kg
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LD50 dermal rat	22500 mg/kg
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LD50 dermal rabbit	20800 mg/kg
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#### subtilisin (9014-01-1)

LD50 oral rat	1800 mg/kg
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LD50 dermal rabbit	> 2 ml/kg
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LC50 inhalation rat (Vapours - mg/l/4h)	0,8 mg/l/4h
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Skin corrosion/irritation : Not classified  
pH: 6,8

Serious eye damage/irritation : Causes serious eye damage.  
pH: 6,8

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

## SECTION 12: Ecological information

### 12.1. Toxicity

Acute aquatic toxicity : Not classified

Chronic aquatic toxicity : Not classified

#### Ethoxylated Alcohol (157627-86-6/68439-50-9/68131-39-5/68213-23-0/68551-12-2/160901-19-9)

LC50 fish 1	1 - 10 mg/l
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EC50 Daphnia 1	1 - 10 mg/l
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ErC50 (other aquatic plants)	1 - 10 mg/l
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#### Monopropyleneglycol; 1,2-propane glycol (57-55-6)

LC50 fish 1	51400 mg/l
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LC50 fish 2	51600 mg/l
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EC50 Daphnia 1	34400 mg/l
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#### subtilisin (9014-01-1)

LC50 fish 1	8,2 mg/l
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EC50 Daphnia 1	0,17 mg/l
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NOEC chronic crustacea	0,5 mg/l
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NOEC chronic algae	0,63 mg/l
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### 12.2. Persistence and degradability

Smart Enzym	
Persistence and degradability	The surfactant(s) contained in this preparation complies(comply) with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.
Ethoxylated Alcohol (157627-86-6/68439-50-9/68131-39-5/68213-23-0/68551-12-2/160901-19-9)	
Persistence and degradability	Readily biodegradable, according to appropriate OECD test.
Biodegradation	>= 90 % (mod. OECD 303A)

### 12.3. Bioaccumulative potential

No additional information available

### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste / unused products : Collect all waste in suitable and labelled containers and dispose according to local legislation.  
European List of Waste (LoW) code : 20 01 29\* - detergents containing dangerous substances

## SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA
14.1. UN number		
Not applicable	Not applicable	Not applicable
14.2. UN proper shipping name		
Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)		
Not applicable	Not applicable	Not applicable
Not applicable	Not applicable	Not applicable
14.4. Packing group		
Not applicable	Not applicable	Not applicable
14.5. Environmental hazards		
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No
No supplementary information available		

### 14.6. Special precautions for user

#### - Overland transport

No data available

#### - Transport by sea

No data available

#### - Air transport

No data available

### 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

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Detergent Regulation : Labelling of contents:

Component	%
non-ionic surfactants	15-30%
enzymes	
SODIUM FORMATE	
METHYLCHLOROISOTHIAZOLINONE (AND) METHYLISOTHIAZOLINONE	
BENZISOTHIAZOLINONE	

### 15.1.2. National regulations

No additional information available

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## SECTION 16: Other information

Indication of changes:

Section	Changed item	Change	Comments
1.1		Modified	
1.2	Use of the substance/mixture	Modified	
1.3		Modified	
1.4		Modified	
2.2	Precautionary statements (CLP)	Modified	
3.2		Modified	
15.1		Modified	
16	Other information	Added	

Abbreviations and acronyms:

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC50	Median effective concentration
ErC50 (algae)	ErC50 (algae)
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
SDS	Safety Data Sheet
STP	Sewage treatment plant
vPvB	Very Persistent and Very Bioaccumulative

Other information

: It is recommended to pass the information of this safety data sheet in an appropriate form to the users. Such information is actually the best of our knowledge and believes accurate as reliable. This information relates to the specific material designated and may not be valid in combination with other products.  
This safety data sheet is in compliance with 1907/2006/EEC. It is user's liabilities to take all necessary measures to meet local required laws and regulations. The producer is not responsible for any damage and loss due to the use of information mentioned in this safety data sheet.

Full text of H- and EUH-statements:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2

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Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Resp. Sens. 1	Respiratory sensitisation, Category 1
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH208	Contains subtilisin. May produce an allergic reaction.

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Eye Dam. 1	H318	Calculation method
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SDS Christeyns (EC 2015/830)

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*