



**ENZYMATIC DETERGENT - DD 406**



**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

- 1.1 Product identifier:** ENZYMATIC DETERGENT - DD 406
- 1.2 Relevant identified uses of the substance or mixture and uses advised against:**  
Relevant uses: Cleaner. For professional user/industrial user only.  
Uses advised against: All uses not specified in this section or in section 7.3
- 1.3 Details of the supplier of the safety data sheet:**  
A&B Laboratorios de Biotecnología S.A.U.  
C/ Paduleta (esquina C/ Júndiz)  
01015 Vitoria - Alava - España  
Phone.: +34 945291616 -  
Fax: +34 945292939  
kepa@ab-laboratorios.com  
www.ab-laboratorios.com
- 1.4 Emergency telephone number:** +34 945 29 16 16 (working hours from 8 to 15h)

**SECTION 2: HAZARDS IDENTIFICATION**

- 2.1 Classification of the substance or mixture:**  
**CLP Regulation (EC) n° 1272/2008:**  
Classification of this product has been carried out in accordance with CLP Regulation (EC) n° 1272/2008.  
Acute Tox. 4: Acute toxicity if swallowed, Category 4, H302  
Eye Irrit. 2: Eye irritation, Category 2, H319
- 2.2 Label elements:**  
**CLP Regulation (EC) n° 1272/2008:**  
**Warning**  
  
**Hazard statements:**  
Acute Tox. 4: H302 - Harmful if swallowed  
Eye Irrit. 2: H319 - Causes serious eye irritation  
**Precautionary statements:**  
P264: Wash thoroughly after use  
P270: Do not eat, drink or smoke when using this product  
P280: Wear protective gloves/protective clothing/eye protection/face protection  
P301+P312: IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.  
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P330: Rinse mouth  
P337+P313: If eye irritation persists: Get medical advice/attention  
P501: Dispose of contents and / or containers in accordance with regulations on hazardous waste or packaging and packaging waste respectively  
**Supplementary information:**  
EUH208: Contains Amylase, a-, Citral, Citronellal, Mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1), Subtilisin. May produce an allergic reaction  
**Substances that contribute to the classification**  
Decan-1-ol, ethoxylated (8 EO)
- 2.3 Other hazards:**  
Non-applicable

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

- 3.1 Substance:**  
Non-applicable

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**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS (continued)**

**3.2 Mixture:**

**Chemical description:** Aqueous mixture composed of chemical products for cleaning products

**Components:**

In accordance with Annex II of Regulation (EC) n°1907/2006 (point 3), the product contains:

Identification	Chemical name/Classification	Concentration
CAS: 26183-52-8 EC: 500-046-6 Index: Non-applicable REACH: Non-applicable	<b>Decan-1-ol, ethoxylated (8 EO)</b> Regulation 1272/2008 Acute Tox. 4: H302; Eye Irrit. 2: H319 - Warning	Self-classified  25 - <50 %
CAS: 68891-38-3 EC: 500-234-8 Index: Non-applicable REACH: 01-2119488639-16-XXXX	<b>Alcohols, C12-14(even numbered), ethoxylated &lt; 2.5 EO, sulfates, sodium salts</b> Regulation 1272/2008 Aquatic Chronic 3: H412; Eye Dam. 1: H318; Skin Irrit. 2: H315 - Danger	Self-classified  1 - <2,5 %
CAS: 5392-40-5 EC: 226-394-6 Index: 605-019-00-3 REACH: 01-2119462829-23-XXXX	<b>Citral</b> Regulation 1272/2008 Skin Irrit. 2: H315; Skin Sens. 1: H317 - Warning	ATP CLP00  <1 %
CAS: 9000-90-2 EC: 232-565-6 Index: 647-015-00-4 REACH: 01-2119938627-26-XXXX	<b>Amylase, a-</b> Regulation 1272/2008 Resp. Sens. 1: H334 - Danger	ATP CLP00  <1 %
CAS: 9014-01-1 EC: 232-752-2 Index: 647-012-00-8 REACH: 01-2119480434-38-XXXX	<b>Subtilisin</b> Regulation 1272/2008 Eye Dam. 1: H318; Resp. Sens. 1: H334; Skin Irrit. 2: H315; STOT SE 3: H335 - Danger	ATP CLP00  <1 %
CAS: 106-23-0 EC: 203-376-6 Index: Non-applicable REACH: 01-2119474900-37-XXXX	<b>Citronellal</b> Regulation 1272/2008 Eye Irrit. 2: H319; Skin Irrit. 2: H315; Skin Sens. 1: H317 - Warning	Self-classified  <1 %
CAS: 55965-84-9 EC: Non-applicable Index: 613-167-00-5 REACH: Non-applicable	<b>Mixture of 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H -isothiazol-3-one [EC no. 220-239-6] (3:1)</b> Regulation 1272/2008 Acute Tox. 3: H301+H311+H331; Aquatic Acute 1: H400; Aquatic Chronic 1: H410; Skin Corr. 1B: H314; Skin Sens. 1: H317 - Danger	ATP CLP00  <1 %

To obtain more information on the risk of the substances consult sections 8, 11, 12, 15 and 16.

**SECTION 4: FIRST AID MEASURES**

**4.1 Description of first aid measures:**

The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the SDS of this product.

**By inhalation:**

This product is not classified as hazardous through inhalation, however, it is recommended in case of intoxication symptoms to remove the person affected from the area of exposure, provide clean air and keep at rest. Request medical attention if symptoms persist.

**By skin contact:**

This product is not classified as hazardous when in contact with the skin. However, in case of skin contact it is recommended to remove contaminated clothes and shoes, rinse the skin or shower the person affected if necessary thoroughly with cold water and neutral soap. In case of serious reaction consult a doctor.

**By eye contact:**

Rinse eyes thoroughly with lukewarm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, as this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.

**By ingestion/aspiration:**

Request medical assistance immediately, showing the SDS of this product. Do not induce vomiting, but if it does happen keep the head down to avoid aspiration. In the case of loss of consciousness do not administrate anything orally unless supervised by a doctor. Rinse out the mouth and throat, as they may have been affected during ingestion. Keep the person affected at rest.

**4.2 Most important symptoms and effects, both acute and delayed:**

Acute and delayed effects are indicated in sections 2 and 11.

**4.3 Indication of any immediate medical attention and special treatment needed:**

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**SECTION 4: FIRST AID MEASURES (continued)**

Non-applicable

**SECTION 5: FIREFIGHTING MEASURES**

**5.1 Extinguishing media:**

Product is non-flammable under normal conditions of storage, manipulation and use. In the case of inflammation as a result of improper manipulation, storage or use preferably use polyvalent powder extinguishers (ABC powder), in accordance with the Regulation on fire protection systems. IT IS NOT RECOMMENDED to use tap water as an extinguishing agent.

**5.2 Special hazards arising from the substance or mixture:**

As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

**5.3 Advice for firefighters:**

Depending on the magnitude of the fire it may be necessary to use full protective clothing and individual respiratory equipment. Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...) in accordance with Directive 89/654/EC.

**Additional provisions:**

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Destroy any source of ignition. In case of fire, refrigerate the storage containers and tanks for products susceptible to inflammation, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

**6.1 Personal precautions, protective equipment and emergency procedures:**

Isolate leaks provided that there is no additional risk for the people performing this task. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Evacuate the area and keep out those who do not have protection.

**6.2 Environmental precautions:**

Avoid spillage into an aqueous medium as it contains substances potentially dangerous for this. Contain the product absorbed in hermetically sealed containers. In the case of serious spillage into an aqueous medium notify the relevant authority.

**6.3 Methods and material for containment and cleaning up:**

It is recommended:

Absorb the spillage using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. For any concern related to disposal consult section 13.

**6.4 Reference to other sections:**

See sections 8 and 13.

**SECTION 7: HANDLING AND STORAGE**

**7.1 Precautions for safe handling:**

A.- Precautions for safe manipulation

Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.

B.- Technical recommendations for the prevention of fires and explosions

Product is non-flammable under normal conditions of storage, manipulation and use. It is recommended to transfer at slow speeds to avoid the generation of electrostatic charges that can affect flammable products. Consult section 10 for information on conditions and materials that should be avoided.

C.- Technical recommendations to prevent ergonomic and toxicological risks

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

D.- Technical recommendations to prevent environmental risks

It is recommended to have absorbent material available at close proximity to the product (See subsection 6.3)

**7.2 Conditions for safe storage, including any incompatibilities:**

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**SECTION 7: HANDLING AND STORAGE (continued)**

**A.- Technical measures for storage**

Maximum Temp.: 30 °C

**B.- General conditions for storage**

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

**7.3 Specific end use(s):**

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**8.1 Control parameters:**

Substances whose occupational exposure limits have to be monitored in the work environment

There are no occupational exposure limits for the substances contained in the product

**DNEL (Workers):**

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Alcohols, C12-14(even numbered), ethoxylated < 2.5 EO, sulfates, sodium salts CAS: 68891-38-3 EC: 500-234-8	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	2750 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	175 mg/m <sup>3</sup>	Non-applicable
Citral CAS: 5392-40-5 EC: 226-394-6	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	1.7 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	9 mg/m <sup>3</sup>	Non-applicable
Citronellal CAS: 106-23-0 EC: 203-376-6	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	1.7 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	9 mg/m <sup>3</sup>	Non-applicable

**DNEL (General population):**

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Alcohols, C12-14(even numbered), ethoxylated < 2.5 EO, sulfates, sodium salts CAS: 68891-38-3 EC: 500-234-8	Oral	Non-applicable	Non-applicable	15 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	1650 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	52 mg/m <sup>3</sup>	Non-applicable
Citral CAS: 5392-40-5 EC: 226-394-6	Oral	Non-applicable	Non-applicable	0.6 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	1 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	2.7 mg/m <sup>3</sup>	Non-applicable
Citronellal CAS: 106-23-0 EC: 203-376-6	Oral	Non-applicable	Non-applicable	0.6 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	1 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	2.7 mg/m <sup>3</sup>	Non-applicable

**PNEC:**

Identification				
Alcohols, C12-14(even numbered), ethoxylated < 2.5 EO, sulfates, sodium salts CAS: 68891-38-3 EC: 500-234-8	STP	10000 mg/L	Fresh water	0.24 mg/L
	Soil	0.946 mg/kg	Marine water	0.024 mg/L
	Intermittent	0.071 mg/L	Sediment (Fresh water)	5.45 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0.545 mg/kg
Citral CAS: 5392-40-5 EC: 226-394-6	STP	1.6 mg/L	Fresh water	0.00678 mg/L
	Soil	0.0209 mg/kg	Marine water	0.000678 mg/L
	Intermittent	0.0678 mg/L	Sediment (Fresh water)	0.125 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0.0125 mg/kg

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**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)**

Identification				
Amylase, a- CAS: 9000-90-2 EC: 232-565-6	STP	65 mg/L	Fresh water	0.0052 mg/L
	Soil	Non-applicable	Marine water	0.00052 mg/L
	Intermittent	0.052 mg/L	Sediment (Fresh water)	Non-applicable
	Oral	Non-applicable	Sediment (Marine water)	Non-applicable
Subtilisin CAS: 9014-01-1 EC: 232-752-2	STP	65 mg/L	Fresh water	0.00006 mg/L
	Soil	0.568 mg/kg	Marine water	0.000006 mg/L
	Intermittent	0.0009 mg/L	Sediment (Fresh water)	Non-applicable
	Oral	Non-applicable	Sediment (Marine water)	Non-applicable
Citronellal CAS: 106-23-0 EC: 203-376-6	STP	4 mg/L	Fresh water	0.00868 mg/L
	Soil	0.0267 mg/kg	Marine water	0.00087 mg/L
	Intermittent	0.0868 mg/L	Sediment (Fresh water)	0.159 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0.0159 mg/kg

**8.2 Exposure controls:**

**A.- General security and hygiene measures in the work place**

As a preventative measure it is recommended to use basic Personal Protection Equipment, with the corresponding <<CE marking>> in accordance with Directive 89/686/EC. For more information on Personal Protection Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1.

All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

**B.- Respiratory protection**

The use of protection equipment will be necessary if a mist forms or if the occupational exposure limits are exceeded.

**C.- Specific protection for the hands**

Pictogram	PPE	Labelling	CEN Standard	Remarks
Mandatory hand protection	Protective gloves against minor risks	CE CAT I		Replace gloves in case of any sign of damage. For prolonged periods of exposure to the product for professional users/industrials, we recommend using CE III gloves in line with standards EN 420 and EN 374.

**D.- Ocular and facial protection**

Pictogram	PPE	Labelling	CEN Standard	Remarks
Mandatory face protection	Panoramic glasses against liquid splash	CE CAT II	EN 166:2001 EN ISO 4007:2012	Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing.

**E.- Bodily protection**

Pictogram	PPE	Labelling	CEN Standard	Remarks
	Work clothing	CE CAT I		
	Anti-slip work shoes	CE CAT II	EN ISO 20347:2012	

**F.- Additional emergency measures**

It is not necessary to take additional emergency measures.

Emergency measure	Standards	Emergency measure	Standards
Emergency shower	ANSI Z358-1 ISO 3864-1:2002	Eyewash stations	DIN 12 899 ISO 3864-1:2002

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### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

#### Environmental exposure controls:

In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. For additional information see subsection 7.1.D

#### Volatile organic compounds:

With regard to Directive 2010/75/EU, this product has the following characteristics:

V.O.C. (Supply):	0.58 % weight
V.O.C. density at 20 °C:	6.08 kg/m <sup>3</sup> (6.08 g/L)
Average carbon number:	10
Average molecular weight:	154.06 g/mol

### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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

For complete information see the product datasheet.

##### Appearance:

Physical state at 20 °C:	Liquid
Appearance:	Fluid
Color:	Yellowish
Odor:	Citric

##### Volatility:

Boiling point at atmospheric pressure:	101 °C
Vapour pressure at 20 °C:	2344 Pa
Vapour pressure at 50 °C:	12352 Pa (12 kPa)
Evaporation rate at 20 °C:	Non-applicable *

##### Product description:

Density at 20 °C:	1020 - 1080 kg/m <sup>3</sup>
Relative density at 20 °C:	Non-applicable *
Dynamic viscosity at 20 °C:	Non-applicable *
Kinematic viscosity at 20 °C:	Non-applicable *
Kinematic viscosity at 40 °C:	Non-applicable *
Concentration:	Non-applicable *
pH:	6 - 8
Vapour density at 20 °C:	Non-applicable *
Partition coefficient n-octanol/water 20 °C:	Non-applicable *
Solubility in water at 20 °C:	Non-applicable *
Solubility properties:	Water-soluble
Decomposition temperature:	Non-applicable *
Melting point/freezing point:	Non-applicable *
Explosive properties:	Non-applicable *
Oxidising properties:	Non-applicable *

##### Flammability:

Flash Point:	Non Flammable (>60 °C)
Autoignition temperature:	202 °C
Lower flammability limit:	Non-applicable *
Upper flammability limit:	Non-applicable *

#### 9.2 Other information:

\*Not relevant due to the nature of the product, not providing information property of its hazards.

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**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)**

Surface tension at 20 °C: Non-applicable \*  
Refraction index: Non-applicable \*

\*Not relevant due to the nature of the product, not providing information property of its hazards.

**SECTION 10: STABILITY AND REACTIVITY**

**10.1 Reactivity:**

No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7.

**10.2 Chemical stability:**

Chemically stable under the conditions of storage, handling and use.

**10.3 Possibility of hazardous reactions:**

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

**10.4 Conditions to avoid:**

Applicable for handling and storage at room temperature:

Shock and friction	Contact with air	Increase in temperature	Sunlight	Humidity
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

**10.5 Incompatible materials:**

Acids	Water	Combustive materials	Combustible materials	Others
Avoid strong acids	Not applicable	Avoid direct impact	Not applicable	Avoid alkalis or strong bases

**10.6 Hazardous decomposition products:**

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO<sub>2</sub>), carbon monoxide and other organic compounds.

**SECTION 11: TOXICOLOGICAL INFORMATION**

**11.1 Information on toxicological effects:**

The experimental information related to the toxicological properties of the product itself is not available

**Dangerous health implications:**

In case of exposure that is repetitive, prolonged or at concentrations higher than recommended by the occupational exposure limits, it may result in adverse effects on health depending on the means of exposure:

A- Ingestion (acute effect):

- Acute toxicity : The consumption of a considerable dose can cause irritation in the throat, abdominal pain, nausea and vomiting.
- Corrosivity/Irritability: Based on available data, the classification criteria are not met, however it does contain substances classified as dangerous for this effect. For more information see section 3.

B- Inhalation (acute effect):

- Acute toxicity : Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous for inhalation. For more information see section 3.
- Corrosivity/Irritability: Based on available data, the classification criteria are not met, however it does contain substances classified as dangerous for this effect. For more information see section 3.

C- Contact with the skin and the eyes (acute effect):

- Contact with the skin: Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous for skin contact. For more information see section 3.
- Contact with the eyes: Produces eye damage after contact.

D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):

- Carcinogenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for the effects mentioned. For more information see section 3.
- Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
- Reproductive toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

E- Sensitizing effects:

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**SECTION 11: TOXICOLOGICAL INFORMATION (continued)**

- Respiratory: Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous with sensitising effects. For more information see section 3.
- Cutaneous: Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous with sensitising effects. For more information see section 3.
- F- Specific target organ toxicity (STOT) - single exposure:  
Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous for inhalation. For more information see section 3.
- G- Specific target organ toxicity (STOT)-repeated exposure:
  - Specific target organ toxicity (STOT)-repeated exposure: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
  - Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
- H- Aspiration hazard:  
Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

**Other information:**

Non-applicable

**Specific toxicology information on the substances:**

Identification	Acute toxicity		Genus
Decan-1-ol, ethoxylated (8 EO) CAS: 26183-52-8 EC: 500-046-6	LD50 oral	500 mg/kg (ATEi)	
	LD50 dermal	Non-applicable	
	LC50 inhalation	Non-applicable	
Citral CAS: 5392-40-5 EC: 226-394-6	LD50 oral	4950 mg/kg	Rat
	LD50 dermal	2250 mg/kg	Rabbit
	LC50 inhalation	Non-applicable	
Citronellal CAS: 106-23-0 EC: 203-376-6	LD50 oral	2500 mg/kg	Rat
	LD50 dermal	Non-applicable	
	LC50 inhalation	Non-applicable	
Mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H -isothiazol-3-one [EC no. 220-239-6] (3:1) CAS: 55965-84-9 EC: Non-applicable	LD50 oral	100 mg/kg	Rat
	LD50 dermal	300 mg/kg	Rat
	LC50 inhalation	Non-applicable	

**SECTION 12: ECOLOGICAL INFORMATION**

The experimental information related to the eco-toxicological properties of the product itself is not available

**12.1 Toxicity:**

Identification	Acute toxicity	Species	Genus
Alcohols, C12-14(even numbered), ethoxylated < 2.5 EO, sulfates, sodium salts CAS: 68891-38-3 EC: 500-234-8	LC50	7.1 mg/L (96 h)	Danio rerio
	EC50	7.4 mg/L (48 h)	Daphnia magna
	EC50	27 mg/L (72 h)	Scenedesmus subspicatus
Citral CAS: 5392-40-5 EC: 226-394-6	LC50	6.1 mg/L (24 h)	Oryzias latipes
	EC50	11 mg/L (24 h)	Daphnia magna
	EC50	16 mg/L (72 h)	Scenedesmus subspicatus
Mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H -isothiazol-3-one [EC no. 220-239-6] (3:1) CAS: 55965-84-9 EC: Non-applicable	LC50	0.28 mg/L (96 h)	Lepomis macrochirus
	EC50	0.16 mg/L (48 h)	Daphnia magna
	EC50	0.018 mg/L (72 h)	Selenastrum capricornutum

**12.2 Persistence and degradability:**

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**SECTION 12: ECOLOGICAL INFORMATION (continued)**

Identification	Degradability		Biodegradability	
Alcohols, C12-14(even numbered), ethoxylated < 2.5 EO, sulfates, sodium salts CAS: 68891-38-3 EC: 500-234-8	BOD5	Non-applicable	Concentration	10.5 mg/L
	COD	Non-applicable	Period	28 days
	BOD5/COD	Non-applicable	% Biodegradable	100 %
Citral CAS: 5392-40-5 EC: 226-394-6	BOD5	0.56 g O2/g	Concentration	100 mg/L
	COD	1.99 g O2/g	Period	28 days
	BOD5/COD	0.28	% Biodegradable	92 %

**12.3 Bioaccumulative potential:**

Identification	Bioaccumulation potential	
Citral CAS: 5392-40-5 EC: 226-394-6	BCF	10
	Pow Log	3.45
	Potential	Low
Citronellal CAS: 106-23-0 EC: 203-376-6	BCF	280
	Pow Log	3.53
	Potential	High

**12.4 Mobility in soil:**

Not available

**12.5 Results of PBT and vPvB assessment:**

Non-applicable

**12.6 Other adverse effects:**

Not described

**SECTION 13: DISPOSAL CONSIDERATIONS**

**13.1 Waste treatment methods:**

Code	Description	Waste class (Regulation (EU) No 1357/2014)
20 01 29*	Detergents containing dangerous substances	Dangerous

**Type of waste (Regulation (EU) No 1357/2014):**

HP4 Irritant — skin irritation and eye damage, HP6 Acute Toxicity

**Waste management (disposal and evaluation):**

Consult the authorized waste service manager on the assessment and disposal operations in accordance with Annex 1 and Annex 2 (Directive 2008/98/EC). As under 15 01 (2014/955/EC) of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. We do not recommended disposal down the drain. See paragraph 6.2.

**Regulations related to waste management:**

In accordance with Annex II of Regulation (EC) n°1907/2006 (REACH) the community or state provisions related to waste management are stated

Community legislation: Directive 2008/98/EC, 2014/955/EU, Regulation (EU) No 1357/2014

**SECTION 14: TRANSPORT INFORMATION**

This product is not regulated for transport (ADR/RID,IMDG,IATA)

**SECTION 15: REGULATORY INFORMATION**

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

Regulation (EC) No 528/2012: contains a preservative to protect the initial properties of the treated article. Contains Mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H -isothiazol-3-one [EC no. 220-239-6] (3:1) .

Candidate substances for authorisation under the Regulation (EC) 1907/2006 (REACH): Non-applicable

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**ENZYMATIC DETERGENT - DD 406**



**SECTION 15: REGULATORY INFORMATION (continued)**

Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Non-applicable

Regulation (EC) 1005/2009, about substances that deplete the ozone layer: Non-applicable

Article 95, REGULATION (EU) No 528/2012: Mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H -isothiazol-3-one [EC no. 220-239-6] (3:1) (Product-type 2, 4, 6, 11, 12, 13)

REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Non-applicable

**Regulation (EC) n°648/2004 on detergents:**

In accordance with this regulation the product complies with the following:

The tensoactives contained in this mixture comply with the biodegradability criteria stipulated in Regulation (EC) n°648/2004 on detergents. The information to prove this is available to the relevant authorities of the Member States and will be shown to them by direct request or the request of a detergent manufacturer.

**Contents labelled:**

Component	Concentration interval
Enzymes	
Anionic surfactants	% (w/w) < 5
Non-ionic surfactants	% (w/w) >= 30
Perfum	

Allergenic fragrances: Citral (CITRAL), Coumarin (COUMARIN), d-limonene (D-LIMONENE).

Preservation agents: Mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H -isothiazol-3-one [EC no. 220-239-6] (3:1) (METHYLCHLOROISOTHIAZOLINONE / METHYLISOTHIAZOLINONE).

**Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII REACH, etc ....):**

Non-applicable

**Specific provisions in terms of protecting people or the environment:**

It is recommended to use the information included in this safety data sheet as data used in a risk evaluation of the local circumstances in order to establish the necessary risk prevention measures for the manipulation, use, storage and disposal of this product.

**Other legislation:**

The product could be affected by sectorial legislation

- Regulation (EC) No 1223/2009 of the European Parliament and of the Council of 30 November 2009 on cosmetic products
- Regulation (EC) No 648/2004 of the European Parliament and of the Council of 31 March 2004 on detergents
- Commission Regulation (EC) No 907/2006 of 20 June 2006 amending Regulation (EC) No 648/2004 of the European Parliament and of the Council on detergents, in order to adapt Annexes III and VII
- Commission Regulation (EC) No 551/2009 of 25 June 2009 amending Regulation (EC) No 648/2004 of the European Parliament and of the Council on detergents, in order to adapt Annexes V and VI thereto (surfactant derogation)

**15.2 Chemical safety assessment:**

The supplier has not carried out evaluation of chemical safety.

**SECTION 16: OTHER INFORMATION**

**Legislation related to safety data sheets:**

This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) N° 1907/2006 (Regulation (EU) N° 453/2010, Regulation (EC) N° 2015/830)

**Modifications related to the previous security card which concerns the ways of managing risks. :**

**COMPOSITION/INFORMATION ON INGREDIENTS:**

- Added Content
  - Alcohols, C12-14(even numbered), ethoxylated < 2.5 EO, sulfates, sodium salts (68891-38-3)
  - Subtilisin (9014-01-1)
  - Mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H -isothiazol-3-one [EC no. 220-239-6] (3:1) (55965-84-9)
- Removed Content
  - Alcohols, C12-C14, ethoxylated, sulphate, sodium salt (68891-38-3)
  - Proteinase (9001-92-7)

**CLP Regulation (EC) n° 1272/2008:**

- Precautionary statements

**Texts of the legislative phrases mentioned in section 2:**

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**SECTION 16: OTHER INFORMATION (continued)**

H319: Causes serious eye irritation  
H302: Harmful if swallowed

**Texts of the legislative phrases mentioned in section 3:**

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3

**CLP Regulation (EC) n° 1272/2008:**

Acute Tox. 3: H301+H311+H331 - Toxic if swallowed, in contact with skin or if inhaled  
Acute Tox. 4: H302 - Harmful if swallowed  
Aquatic Acute 1: H400 - Very toxic to aquatic life  
Aquatic Chronic 1: H410 - Very toxic to aquatic life with long lasting effects  
Aquatic Chronic 3: H412 - Harmful to aquatic life with long lasting effects  
Eye Dam. 1: H318 - Causes serious eye damage  
Eye Irrit. 2: H319 - Causes serious eye irritation  
Resp. Sens. 1: H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled  
Skin Corr. 1B: H314 - Causes severe skin burns and eye damage  
Skin Irrit. 2: H315 - Causes skin irritation  
Skin Sens. 1: H317 - May cause an allergic skin reaction  
STOT SE 3: H335 - May cause respiratory irritation

**Classification procedure:**

Eye Irrit. 2: Calculation method  
Acute Tox. 4: Calculation method

**Advice related to training:**

Minimal training is recommended to prevent industrial risks for staff using this product, in order to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

**Principal bibliographical sources:**

<http://esis.jrc.ec.europa.eu>  
<http://echa.europa.eu>  
<http://eur-lex.europa.eu>

**Abbreviations and acronyms:**

ADR: European agreement concerning the international carriage of dangerous goods by road  
IMDG: International maritime dangerous goods code  
IATA: International Air Transport Association  
ICAO: International Civil Aviation Organisation  
COD: Chemical Oxygen Demand  
BOD5: 5-day biochemical oxygen demand  
BCF: Bioconcentration factor  
LD50: Lethal Dose 50  
CL50: Lethal Concentration 50  
EC50: Effective concentration 50  
Log-POW: Octanol–water partition coefficient  
Koc: Partition coefficient of organic carbon

The information contained in this safety data sheet is based on sources, technical knowledge and current legislation at European and state level, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product, it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within our awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.

- END OF SAFETY DATA SHEET -