Safety data sheet This SDS is an English translation of COMMISSION REGULATION (EU) 2020/878, without any country-specific legislation

**NZYtech** 

## CZ0650 - Feruloyl esterase 1A, Bacillus licheniformis

Date of	compilation: 23/06/20	Version: 2 (Replaced 1)
SECT	FION 1: IDENTIFIC	ATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING
1.1	Product identifier	: CZ0650 - Feruloyl esterase 1A, Bacillus licheniformis
		Glycerol
	CAS:	56-81-5
	EC:	200-289-5
	Index:	Non-applicable
	REACH:	01-2119471987-18-XXXX
	Other means of id	lentification:
	Non-applicable	
1.2	Relevant identifie	d uses of the substance or mixture and uses advised against:
	Relevant uses: Labo	pratory. For professional users only.
	Uses advised agains	st: All uses not specified in this section or in section 7.3
1.3	Details of the sup	plier of the safety data sheet:
	NZYTech Estrada do Paco do 1649-038 Lisboa - L info@nzytech.com www.nzytech.com	Lumiar Campus do Lumiar - Edif. E, r/c .isboa - Portugal
1.4	Emergency teleph	none number: Contact Local Poison Information Center or Local Emergency Number
<b>6– –</b>		
SECI	IION 2: HAZARDS	IDENTIFICATION **
2.1	Classification of t	he substance or mixture:
	CLP Regulation (	EC) No 1272/2008:
	Classification of this	s product has been carried out in accordance with CLP Regulation (EC) No 1272/2008.

Classification of this product has been carried out Eye Irrit. 2: Eye irritation, Category 2, H319

Repr. 1B: Reproductive toxicity, Category 1B, H360D Skin Irrit. 2: Skin irritation, Category 2, H315

2.2 Label elements:

### CLP Regulation (EC) No 1272/2008:

Labelling of packages where the contents do not exceed 125 ml:

Danger



### Hazard statements:

Repr. 1B: H360D - May damage the unborn child.

### **Precautionary statements:**

P201: Obtain special instructions before use.

P280: Wear protective gloves/face protection/protective clothing/respiratory protection/protective footwear.

P308+P313: IF exposed or concerned: Get medical advice/attention.

P501: Dispose of contents/container in accordance with regulations on hazardous waste or packaging and packaging waste respectively.

### Substances that contribute to the classification

Imidazole (CAS: 288-32-4)

### Additional Labelling:

Restricted to professional users

### 2.3 Other hazards:

\*\* Changes with regards to the previous version

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## SECTION 2: HAZARDS IDENTIFICATION \*\* (continued)

Product does not meet PBT/vPvB criteria

Endocrine-disrupting properties: The product does not meet the criteria.

Revised: 12/10/2023

\*\* Changes with regards to the previous version

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1 Substance:

### Chemical description: Mixture of substances

### **Components:**

In accordance with Annex II of Regulation (EC) No 1907/2006 (point 3), the product contains:

	Identification		Chemical name/Classification		Concentration
CAS:	288-32-4	Imidazole <sup>(1)</sup>		Self-classified	
EC: Index: REACH	206-019-2 Non-applicable : 01-2119485825-24- XXXX	Regulation 1272/2008	Acute Tox. 4: H302; Eye Dam. 1: H318; Repr. 1B: H360D; Skin Corr. 1C: H314 - Danger	                   	1 - <2,5 %

<sup>(1)</sup> Substances presenting a health or environmental hazard which meet criteria laid down in Regulation (EU) No. 2020/878

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

#### 3.2 Mixture:

### Non-applicable

Acute toxicity estimate for the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or as determined in accordance with Annex I to that Regulation:

Identification	Acu	te toxicity	Genus
Imidazole	LD50 oral	500 mg/kg (ATEi)	
CAS: 288-32-4	LD50 dermal	Non-applicable	
EC: 206-019-2	LC50 inhalation	Non-applicable	

## 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 does not contain substances classified as hazardous for inhalation, however, in case of symptoms of intoxication remove the person affected from the exposure area and provide with fresh air. Seek medical attention if the symptoms get worse or persist.

### By skin contact:

Remove contaminated clothing and footwear, rinse skin or shower the person affected if appropriate with plenty of cold water and neutral soap. In serious cases see a doctor. If the product causes burns or freezing, clothing should not be removed as this could worsen the injury caused if it is stuck to the skin. If blisters form on the skin, these should never be burst as this will increase the risk of infection.

### By eve 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, in which case 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:

Do not induce vomiting, but if it does happen keep the head down to avoid aspiration. Keep the person affected at rest. Rinse out the mouth and throat, as they may have been affected during ingestion.

#### 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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Version: 2 (Replaced 1)

## SECTION 4: FIRST AID MEASURES (continued)

Non-applicable

## SECTION 5: FIREFIGHTING MEASURES

#### 5.1 Extinguishing media:

### Suitable extinguishing media:

Product is non-flammable under normal conditions of storage, handling and use. In the case of combustion as a result of improper handling, storage or use preferably use polyvalent powder extinguishers (ABC powder), in accordance with the Regulation on fire protection systems.

### Unsuitable extinguishing media:

Non-applicable

#### 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 self-contained breathing apparatus (SCBA). 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. Eliminate all sources of ignition. In case of fire, cool the storage containers and tanks for products susceptible to combustion, 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:

### For non-emergency personnel:

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.

### For emergency responders:

Wear protective equipment. Keep unprotected persons away. See section 8.

#### 6.2 **Environmental precautions:**

This product is not classified as hazardous to the environment. Keep product away from drains, surface and ground water.

#### 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.- General precautions for safe use

Comply with the current legislation concerning the prevention of industrial risks with regards manually handling weights. Maintain order, cleanliness and dispose of using safe methods (section 6).

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



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e of	compilation: 23/06/2020 Revise	ed: 12/10/2023 V	ersion: 2 (Replace	ed 1)			
EC	TION 7: HANDLING AND STORAG	E (continued)					
	Product is non-flammable under n to avoid the generation of electro conditions and materials that sho	ostatic charges that can a	ige, handling and affect flammable p	use. It is recomr products. Consu	mended to tra It section 10	ansfer at slow sp for information	peeds on
	C Technical recommendations on g	eneral occupational hygie	ne				
	PREGNANT WOMEN SHOULD NC necessary safety conditions (eme equipment, especially on the han drink during the process, washin D Technical recommendations to pr	ergency showers and eye ds and face (See section 8 g hands afterwards with	wash stations in o 3). Limit manual ti	close proximity), ransfers to small	using perso	nal protection	
	It is recommended to have absor		close proximity to	the product (Se	e subsection	6 3)	
7.2	Conditions for safe storage, inclu				e subsection	0.0)	
. ~	A Technical measures for storage						
	5	dlacation					
	Store in a cool, dry, well-ventilate						
	B General conditions for storage						
	Avoid sources of heat, radiation,	static electricity and conta	ict with food. For a	additional inform	lation see suc	Disection 10.5	
7.3	Specific end use(s):						
	Except for the instructions already sp	ecified it is not necessary	to provide any sp	ecial recommen	dation regarc	ling the uses of	this
	product.						
	TION 8: EXPOSURE CONTROLS/P Control parameters: Substances whose occupational expo			kplace (Europea	n OEL, not co	ountry-specific	
SEC 8.1	TION 8: EXPOSURE CONTROLS/P Control parameters: Substances whose occupational expo legislation): There are no applicable occupational	sure limits have to be mo	nitored in the wor			ountry-specific	
	TION 8: EXPOSURE CONTROLS/P Control parameters: Substances whose occupational expo legislation):	sure limits have to be mo	nitored in the wor bstances containe	ed in the product	:		
	TION 8: EXPOSURE CONTROLS/P Control parameters: Substances whose occupational expo legislation): There are no applicable occupational DNEL (Workers):	sure limits have to be mo	nitored in the wor bstances containe Short	ed in the product	L	ong exposure	1
	TION 8: EXPOSURE CONTROLS/P Control parameters: Substances whose occupational expo legislation): There are no applicable occupational DNEL (Workers): Identification	osure limits have to be mo exposure limits for the su	nitored in the wor bstances containe Short Systemic	ed in the product exposure Local	L Systemi	c Local	
	TION 8: EXPOSURE CONTROLS/P Control parameters: Substances whose occupational expo legislation): There are no applicable occupational DNEL (Workers):	sure limits have to be mo	nitored in the wor bstances containe Short	ed in the product	L	c Local	ble
	TION 8: EXPOSURE CONTROLS/P Control parameters: Substances whose occupational expo legislation): There are no applicable occupational DNEL (Workers): Identification Imidazole	osure limits have to be mo exposure limits for the su Oral	nitored in the wor bstances containe Short Systemic Non-applicable	ed in the product exposure Local Non-applicable	L Systemi Non-applicabl	c Local e Non-applicat	ble ble
	TION 8: EXPOSURE CONTROLS/P Control parameters: Substances whose occupational expo legislation): There are no applicable occupational DNEL (Workers): Identification Imidazole CAS: 288-32-4	osure limits have to be mo exposure limits for the su Oral Dermal	nitored in the wor bstances containe Short Systemic Non-applicable Non-applicable	ed in the product exposure Local Non-applicable Non-applicable	L Systemi Non-applicabl 1,5 mg/kg	c Local e Non-applicat Non-applicat	ble ble
	TION 8: EXPOSURE CONTROLS/P Control parameters: Substances whose occupational expo legislation): There are no applicable occupational DNEL (Workers): Identification Imidazole CAS: 288-32-4 EC: 206-019-2 DNEL (General population):	osure limits have to be mo exposure limits for the su Oral Dermal	nitored in the wor bstances containe Short Systemic Non-applicable Non-applicable	ed in the product exposure Local Non-applicable Non-applicable	L Systemi Non-applicabl 1,5 mg/kg	c Local e Non-applicat Non-applicat	ble ble
	TION 8: EXPOSURE CONTROLS/P Control parameters: Substances whose occupational expo legislation): There are no applicable occupational DNEL (Workers): Identification Imidazole CAS: 288-32-4 EC: 206-019-2 DNEL (General population): Non-applicable	osure limits have to be mo exposure limits for the su Oral Dermal	nitored in the wor bstances containe Short Systemic Non-applicable Non-applicable	ed in the product exposure Local Non-applicable Non-applicable	L Systemi Non-applicabl 1,5 mg/kg	c Local e Non-applicat Non-applicat	ble ble
	TION 8: EXPOSURE CONTROLS/P Control parameters: Substances whose occupational expo legislation): There are no applicable occupational DNEL (Workers): Identification Imidazole CAS: 288-32-4 EC: 206-019-2 DNEL (General population): Non-applicable PNEC:	osure limits have to be mo exposure limits for the su Oral Dermal	nitored in the wor bstances containe Short Systemic Non-applicable Non-applicable	ed in the product exposure Local Non-applicable Non-applicable	L Systemi Non-applicabl 1,5 mg/kg	c Local e Non-applicat Non-applicat	ble ble
	TION 8: EXPOSURE CONTROLS/P Control parameters: Substances whose occupational expo legislation): There are no applicable occupational DNEL (Workers): Identification Imidazole CAS: 288-32-4 EC: 206-019-2 DNEL (General population): Non-applicable PNEC: Identification	osure limits have to be mo exposure limits for the su Oral Dermal Inhalation	nitored in the wor bstances containe Short Non-applicable Non-applicable Non-applicable	ed in the product	L Systemi Non-applicabl 1,5 mg/kg	c Local e Non-applicat Non-applicat	ble ble
	TION 8: EXPOSURE CONTROLS/P Control parameters: Substances whose occupational expo legislation): There are no applicable occupational DNEL (Workers): Identification Imidazole CAS: 288-32-4 EC: 206-019-2 DNEL (General population): Non-applicable PNEC:	osure limits have to be mo exposure limits for the su Oral Dermal	nitored in the wor bstances containe Short Systemic Non-applicable Non-applicable	ed in the product exposure Local Non-applicable Non-applicable	L Systemi Non-applicabl 1,5 mg/kg	c Local e Non-applicat Non-applicat	ble ble
	TION 8: EXPOSURE CONTROLS/P Control parameters: Substances whose occupational expo legislation): There are no applicable occupational DNEL (Workers): Identification Imidazole CAS: 288-32-4 EC: 206-019-2 DNEL (General population): Non-applicable PNEC: Identification Imidazole Inidazole	osure limits have to be mo exposure limits for the su Oral Dermal Inhalation	nitored in the wor bstances containe Short Non-applicable Non-applicable Non-applicable	ed in the product	L Systemi Non-applicabl 1,5 mg/kg 10,6 mg/m <sup>3</sup>	Long exposure       c     Local       e     Non-applicat       Non-applicat       Non-applicat       0,13 mg/L	ble ble
	TION 8: EXPOSURE CONTROLS/P Control parameters: Substances whose occupational expo legislation): There are no applicable occupational DNEL (Workers): Identification Imidazole CAS: 288-32-4 EC: 206-019-2 DNEL (General population): Non-applicable PNEC: Identification Imidazole CAS: 288-32-4	osure limits have to be mo exposure limits for the su Oral Dermal Inhalation STP Soil	nitored in the wor bstances containe Short Non-applicable Non-applicable Non-applicable	ed in the product	L Systemi Non-applicabl 1,5 mg/kg 10,6 mg/m <sup>3</sup>	Local       c     Local       e     Non-applicat       Non-applicat       Non-applicat       0,013 mg/L	ble ble
3.1	TION 8: EXPOSURE CONTROLS/P Control parameters: Substances whose occupational expo legislation): There are no applicable occupational DNEL (Workers): Identification Imidazole CAS: 288-32-4 EC: 206-019-2 DNEL (General population): Non-applicable PNEC: Identification Imidazole CAS: 288-32-4	osure limits have to be mo exposure limits for the su Oral Dermal Inhalation STP Soil Intermittent	nitored in the wor bstances containe Short Non-applicable Non-applicable Non-applicable	ed in the product	L Systemi Non-applicabl 1,5 mg/kg 10,6 mg/m <sup>3</sup>	Long exposure       c     Local       e     Non-applicat       Non-applicat     Non-applicat       0,013 mg/L     0,013 mg/L       0,336 mg/kg	ble ble
	TION 8: EXPOSURE CONTROLS/P Control parameters: Substances whose occupational expo legislation): There are no applicable occupational DNEL (Workers): Identification Imidazole CAS: 288-32-4 EC: 206-019-2 DNEL (General population): Non-applicable PNEC: Identification Imidazole CAS: 288-32-4 EC: 206-019-2	osure limits have to be mo exposure limits for the su Oral Dermal Inhalation STP Soil Intermittent Oral	nitored in the wor bstances containe Short Non-applicable Non-applicable Non-applicable	ed in the product	L Systemi Non-applicabl 1,5 mg/kg 10,6 mg/m <sup>3</sup>	Long exposure       c     Local       e     Non-applicat       Non-applicat     Non-applicat       0,013 mg/L     0,013 mg/L       0,336 mg/kg	ble ble

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legislation CZ0650 - Feruloyl esterase 1A, Bacillus licheniformis

### Date of compilation: 23/06/2020 Revised: 12/10/2023 Version: 2 (Replaced 1) SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued) PPE Labelling CEN Standard Remarks Pictogram Replace when there is a taste or smell of the Filter mask for gases and contaminant inside the face mask. If the EN 405:2002+A1:2010 contaminant comes with warnings it is vapours Mandatory recommended to use isolation equipment. respiratory tract protection C.- Specific protection for the hands Pictogram PPE Labelling **CEN Standard** Remarks Chemical protective gloves (Material: PVC, Breakthrough EN ISO 21420:2020 Replace the gloves at any sign of deterioration. time: > 480 min, Thickness: Mandatory hand 0.7 mm) protection D.- Eye and face protection PPE Labelling CEN Standard Pictogram Remarks EN 166:2002 Clean daily and disinfect periodically according to EN 167:2002 Face shield the manufacturer's instructions. Use if there is a FN 168:2002 risk of splashing. EN ISO 4007:2018 Mandatory face protection E.- Body protection Pictogram PPE Labelling CEN Standard Remarks EN 13034:2005+A1:2009 EN 168:2002 Disposable clothing for EN ISO 13982-For professional use only. Clean periodically 1:2004/A1:2010 protection against chemical according to the manufacturer's instructions. EN ISO 6529:2013 Mandatory complete risks EN ISO 6530:2005 body protection EN 464:1994 Safety footwear for EN ISO 20345:2011 protection against chemical Replace boots at any sign of deterioration. EN 13832-1:2019 risk Mandatory foot CAT III protection F.- Additional emergency measures Emergency measure Standards Emergency measure Standards **0**+ ANSI Z358-1 DIN 12 899 ISO 3864-1:2011, ISO 3864-4:2011 ISO 3864-1:2011, ISO 3864-4:2011 Emergency shower Eyewash stations **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 % weight V.O.C. density at 20 °C: 0 kg/m<sup>3</sup> (0 g/L) Average carbon number: Non-applicable Average molecular weight: Non-applicable

### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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

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



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te of compilation: 23/06/2	2020 Revised: 12/10/2023	Version: 2 (Replaced 1)	
SECTION 9: PHYSICA	L AND CHEMICAL PROPERTIE	S (continued)	
For complete infor	mation see the product datasheet.		
Appearance:			
Physical state at 2	0 °C:	Liquid	
Appearance:		Not available	
Colour:		Colourless	
Odour:		Odourless	
Odour threshold:		Non-applicable *	
Volatility:			
Boiling point at at	mospheric pressure:	Non-applicable *	
Vapour pressure a	t 20 ºC:	Non-applicable *	
Vapour pressure a	t 50 °C:	Non-applicable *	
Evaporation rate a	t 20 ºC:	Non-applicable *	
Product descript	ion:		
Density at 20 °C:		1110,8 kg/m³	
Relative density at	: 20 °C:	1,111	
Dynamic viscosity	at 20 ºC:	Non-applicable *	
Kinematic viscosity	r at 20 °C:	Non-applicable *	
Kinematic viscosity	at 40 °C:	Non-applicable *	
Concentration:		Non-applicable *	
pH:		7,2	
Vapour density at 2	20 °C:	Non-applicable *	
Partition coefficien	t n-octanol/water 20 °C:	Non-applicable *	
Solubility in water	at 20 ºC:	Non-applicable *	
Solubility propertie	s:	Non-applicable *	
Decomposition ten	nperature:	Non-applicable *	
Melting point/freez	ring point:	Non-applicable *	
Flammability:			
Flash Point:		Non Flammable (>60 °C)	
Flammability (solid	l, gas):	Non-applicable *	
Autoignition tempe	erature:	480 °C	
Lower flammability	/ limit:	Non-applicable *	
Upper flammability	/ limit:	Non-applicable *	
Particle characte	eristics:		
Median equivalent	diameter:	Non-applicable	
9.2 Other information	n:		
Information wit	h regard to physical hazard clas	sses:	
Explosive propertie	s:	Non-applicable *	
Oxidising propertie	S:	Non-applicable *	
Corrosive to metal	5:	Non-applicable *	
Heat of combustion	ו:	Non-applicable *	
Aerosols-total pero components: Other safety cha	entage (by mass) of flammable	Non-applicable *	
Surface tension at		Non-applicable *	
	20 °C.		

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SECTION 9: PHYSICAL AND	CHEMICAL PROPERTIE	S (continued)		
Refraction index:		Non-applicable *		
*Not relevant due to the nature	of the product, not providing info	prmation property of its hazards.		
SECTION 10: STABILITY AN	D REACTIVITY			
10.1 Reactivity:				
No hazardous reactions an Safety Data Sheet. <b>10.2 Chemical stability:</b>	e expected because the pro	oduct is stable under recor	nmended storage condit	ions. See section 7 from
Chemically stable under the	ne indicated conditions of st	torage, handling and use.		
10.3 Possibility of hazardous	s reactions:			
Under the specified condit	ions, hazardous reactions t	hat lead to excessive temp	peratures or pressure are	not expected.
10.4 Conditions to avoid:				
Applicable for handling an	d storage at room tempera	ture:		
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	Oxidising materials	Combustible materials	Others
Avoid strong acids	Not applicable	Precaution	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 hazard classes as defined in Regulation (EC) No 1272/2008:

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 the recommended occupational exposure limits, adverse effects on health may result, depending on the means of exposure:

- A- Ingestion (acute effect):
  - Acute toxicity: Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous for consumption. For more information see section 3.
  - Corrosivity/Irritability: The consumption of a considerable dose can cause irritation in the throat, abdominal pain, nausea and vomiting.
- B- Inhalation (acute effect):
  - Acute toxicity : Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous 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 hazardous for this effect. For more information see section 3.
- C- Contact with the skin and the eyes (acute effect):
  - Contact with the skin: Produces skin inflammation.
  - 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 hazardous for the effects mentioned. For more information see section 3.
  - IARC: Non-applicable
  - Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
  - Reproductive toxicity: May damage the unborn child.

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Date of c	ompilation: 23/06/2020	Revised: 12/10/2023	Version: 2 (Re	placed 1)		
SECT	ION 11: TOXICOLOGICAL	. INFORMATION (continue	ed)			
	E- Sensitizing effects:					
	<ul> <li>hazardous with sensitisir</li> <li>Skin: Based on availal hazardous for this effect</li> <li>F- Specific target organ toxi</li> </ul>	available data, the classification of effects. For more information ble data, the classification crites For more information see service icity (STOT) - single exposure: the classification criteria are no compation see section 3	on see section 3 eria are not met, ection 3.	as it does not cor	itain substances classifi	ed as
		city (STOT)-repeated exposure	2:			
	it does not contain subst - Skin: Based on availab	toxicity (STOT)-repeated exposi- cances classified as hazardous ble data, the classification crite For more information see see	for this effect. F ria are not met,	or more informa	tion see section 3.	
	Based on available data, this effect. For more info <b>Other information:</b>	the classification criteria are no prmation see section 3.	ot met, as it doe	s not contain sub	stances classified as ha	zardous for
	Non-applicable					
	Specific toxicology inform	ation on the substances:				
		Identification		Ac	ute toxicity	Genus
	Imidazole			LD50 oral	500 mg/kg (ATEi)	
	CAS: 288-32-4			LD50 dermal	>2000 mg/kg	
	EC: 206-019-2 Information on other haz			LC50 inhalation	>5 mg/L	
	Endocrine disrupting propert Endocrine-disrupting propert Other information Non-applicable	<b>perties</b> ies: The product does not mee	et the criteria.			
SECT	ION 12: ECOLOGICAL IN	FORMATION				
Based For m	xperimental information relate on available data, the classifi	d to the eco-toxicological prop	erties of the pro	duct itself is not a	available	
	ore information see section 3 Toxicity:		it does not conta		ssified as hazardous for	this effect.
	<b>Toxicity:</b> Not available		it does not conta		ssified as hazardous for	this effect.
	Toxicity: Not available Persistence and degradab		it does not conta		ssified as hazardous for	this effect.
12.2	Toxicity: Not available Persistence and degradab Not available	s. bility:	it does not conta		ssified as hazardous for	this effect.
12.2	Toxicity: Not available Persistence and degradab	s. bility:	it does not conta		ssified as hazardous for	this effect.
12.2	Toxicity: Not available Persistence and degradab Not available	s. bility:	it does not conta		ssified as hazardous for	this effect.
12.2 12.3	Toxicity: Not available Persistence and degradab Not available Bioaccumulative potentia	s. bility:	it does not conta		ssified as hazardous for	this effect.
12.2 12.3	Toxicity: Not available Persistence and degradab Not available Bioaccumulative potentia Not available	s. bility:	it does not conta		ssified as hazardous for	this effect.
12.2 12.3 12.4	Toxicity: Not available Persistence and degradab Not available Bioaccumulative potentia Not available Mobility in soil:	sility: I:	it does not conta		ssified as hazardous for	this effect.
12.2 12.3 12.4	Toxicity: Not available Persistence and degradab Not available Bioaccumulative potentia Not available Mobility in soil: Not available	bility: I: assessment:	it does not conta		ssified as hazardous for	this effect.
12.2 12.3 12.4 12.5	Toxicity: Not available Persistence and degradab Not available Bioaccumulative potentia Not available Mobility in soil: Not available Results of PBT and vPvB a	s. pility: I: assessment: vPvB criteria	it does not conta		ssified as hazardous for	this effect.
12.2 12.3 12.4 12.5	Toxicity: Not available Persistence and degradab Not available Bioaccumulative potentia Not available Mobility in soil: Not available Results of PBT and vPvB a Product does not meet PBT/v Endocrine disrupting prop	s. pility: I: assessment: vPvB criteria			ssified as hazardous for	this effect.
12.2 12.3 12.4 12.5 12.6	Toxicity: Not available Persistence and degradab Not available Bioaccumulative potentia Not available Mobility in soil: Not available Results of PBT and vPvB a Product does not meet PBT/v Endocrine disrupting prop	s. <b>bility:</b> I: assessment: vPvB criteria perties:			ssified as hazardous for	this effect.
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Revised: 12/10/2023



This SDS is an English translation of COMMISSION REGULATION (EU) 2020/878, without any country-specific

legislation

## CZ0650 - Feruloyl esterase 1A, Bacillus licheniformis

Date of compilation: 23/06/2020

Revised: 12/10/2023

Version: 2 (Replaced 1)

## 13.1 Waste treatment methods:

SECTION 13: DISPOSAL CONSIDERATIONS

Code	Description	Waste class (Regulation (EU) No 1357/2014)
	It is not possible to assign a specific code, as it depends on the intended use by the user	Dangerous

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

HP10 Toxic for reproduction

### 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. Waste should not be disposed of to drains. See paragraph 6.2.

### Regulations related to waste management:

In accordance with Annex II of Regulation (EC) No 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

### Transport of dangerous goods by land:

With regard to ADR 2023 and RID 2023:

14.2 14.3 14.4 14.5	UN number or ID number: UN proper shipping name: Transport hazard class(es): Labels: Packing group: Environmental hazards: Special precautions for user Special regulations: Tunnel restriction code: Physico-Chemical properties:	Non-applicable Non-applicable Non-applicable Non-applicable No Non-applicable Non-applicable Non-applicable see section 9
	Limited quantities:	Non-applicable
14.7	Maritime transport in bulk according to IMO instruments:	Non-applicable
Transpor	t of dangerous goods by sea:	
With rega	rd to IMDG 40-20:	
14.2	· · · · · · · · · ·	Non-applicable Non-applicable Non-applicable
14.5	Transport hazard class(es):	Non-applicable
14.4	Packing group:	Non-applicable
	Marine pollutant:	No
14.6	Special precautions for user	
	Special regulations:	Non-applicable
	EmS Codes:	
	Physico-Chemical properties:	see section 9
	Limited quantities:	Non-applicable
	Segregation group:	Non-applicable
14.7	Maritime transport in bulk according to IMO instruments:	Non-applicable
Transpo	rt of dangerous goods by air:	

Revised: 12/10/2023

Safety data sheet legislation

This SDS is an English translation of COMMISSION REGULATION (EU) 2020/878, without any country-specific NZYtech

## CZ0650 - Feruloyl esterase 1A, Bacillus licheniformis

Date of compilation:	23/06/2020 Revised: 12/	10/2023	Version: 2 (Replaced 1)
SECTION 14: T	RANSPORT INFORMATION (	continued)	
With rega	ard to IATA/ICAO 2023:		
14.1	UN number or ID number:	Non-applicable	
14.2	UN proper shipping name:	Non-applicable	
14.3	Transport hazard class(es):	Non-applicable	
	Labels:	Non-applicable	
14.4	Packing group:	Non-applicable	
14.5	Environmental hazards:	No	
14.6	Special precautions for user		
	Physico-Chemical properties:	see section 9	
14.7	Maritime transport in bulk according to IMO instruments:	Non-applicable	

### SECTION 15: REGULATORY INFORMATION

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

Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Non-applicable

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

Regulation (EC) No 1005/2009, about substances that deplete the ozone layer: Non-applicable

Article 95, REGULATION (EU) No 528/2012: Non-applicable

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

### Seveso III:

Non-applicable

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

Product classified hazardous under the CMR. Sale and distribution to the general public is prohibited. Due to its CMR category, it is essential to apply the specific measures for workplace hazard prevention covered in articles 4 and 5 of the 2004/37/EC Directive and later modifications.

Shall not be used in:

and ashtravs.

-tricks and jokes,

-games for one or more participants, or any article intended to be used as such, even with ornamental aspects.

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

It is recommended to use the information included in this safety data sheet as a basis for conducting workplace-specific risk assessments in order to establish the necessary risk prevention measures for the handling, use, storage and disposal of this product.

### Other legislation:

The product could be affected by sectorial legislation

### 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:

The SDS shall be supplied in an official language of the country where the product is placed on the market. This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) No 1907/2006 (COMMISSION REGULATION (EU) 2020/878).

Modifications related to the previous Safety Data Sheet which concerns the ways of managing risks.:

\*\* Changes with regards to the previous version

Safety data sheet This SDS is an English translation of COMMISSION REGULATION (EU) 2020/878, without any country-specific legislation

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# CZ0650 - Feruloyl esterase 1A, Bacillus licheniformis

SECTION 16: OTHER INFORMATION ** (continued) COMMISSION REGULATION (EU) 2020/878 CLP Regulation (EC) No 1272/2008 (SECTION 2, SECTION 16): · Hazard statements Texts of the legislative phrases mentioned in section 2: H315: Causes skin irritation. H360D: May damage the unborn child. H319: Causes serious eye irritation. 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) No 1272/2008: Acute Tox. 4: H302 - Harmful if swallowed. Eye Dam. 1: H318 - Causes serious eye damage.
<ul> <li>CLP Regulation (EC) No 1272/2008 (SECTION 2, SECTION 16): <ul> <li>Hazard statements</li> </ul> </li> <li>Texts of the legislative phrases mentioned in section 2:</li> <li>H315: Causes skin irritation.</li> <li>H360D: May damage the unborn child.</li> <li>H319: Causes serious eye irritation.</li> <li>Texts of the legislative phrases mentioned in section 3:</li> <li>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</li> <li>CLP Regulation (EC) No 1272/2008:</li> <li>Acute Tox. 4: H302 - Harmful if swallowed.</li> </ul>
<ul> <li>H315: Causes skin irritation.</li> <li>H360D: May damage the unborn child.</li> <li>H319: Causes serious eye irritation.</li> <li>Texts of the legislative phrases mentioned in section 3:</li> <li>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</li> <li>CLP Regulation (EC) No 1272/2008:</li> <li>Acute Tox. 4: H302 - Harmful if swallowed.</li> </ul>
<ul> <li>H360D: May damage the unborn child.</li> <li>H319: Causes serious eye irritation.</li> <li>Texts of the legislative phrases mentioned in section 3:</li> <li>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</li> <li>CLP Regulation (EC) No 1272/2008:</li> <li>Acute Tox. 4: H302 - Harmful if swallowed.</li> </ul>
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 <b>CLP Regulation (EC) No 1272/2008:</b> Acute Tox. 4: H302 - Harmful if swallowed.
individual components which appear in section 3 <b>CLP Regulation (EC) No 1272/2008:</b> Acute Tox. 4: H302 - Harmful if swallowed.
Acute Tox. 4: H302 - Harmful if swallowed.
Repr. 1B: H360D - May damage the unborn child. Skin Corr. 1C: H314 - Causes severe skin burns and eye damage.
Advice related to training:
Training is recommended in order to prevent industrial risks for staff using this product and to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.
Principal bibliographical sources:
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: 5day biochemical oxygen demand BCF: Bioconcentration factor
LD50: Lethal Dose 50 LC50: Lethal Concentration 50 EC50: Effective concentration 50
LogPOW: Octanolwater partition coefficient Koc: Partition coefficient of organic carbon UFI: unique formula identifier
IARC: International Agency for Research on Cancer

\*\* Changes with regards to the previous version

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.