Safety data sheet legislation

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

## NZYtech

#### CZ0581 - Feruloyl esterase 1A, Clostridium saccharoperbutylacetonicum

)ate of (	compilation: 23/06/202	20 Revised: 12/10/2023 Version: 2 (Replaced 1)
	• • •	ATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING
SLCI		
1.1	Product identifier:	CZ0581 - Feruloyl esterase 1A, Clostridium saccharoperbutylacetonicum
		Glycerol
	CAS:	56-81-5
	EC:	200-289-5
	Index:	Non-applicable
	REACH:	01-2119471987-18-XXXX
	Other means of ide	entification:
	Non-applicable	
1.2	Relevant identified	l uses of the substance or mixture and uses advised against:
	Relevant uses: Labor	atory. For professional users only.
	Uses advised against	: All uses not specified in this section or in section 7.3
1.3	Details of the supp	plier of the safety data sheet:
	NZYTech Estrada do Paco do L 1649-038 Lisboa - Li info@nzytech.com www.nzytech.com	umiar Campus do Lumiar - Edif. E, r/c sboa - Portugal
1.4	Emergency telepho	one number: Contact Local Poison Information Center or Local Emergency Number

#### Classification of the substance or mixture: 2.1

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

Classification of this product has been carried out in accordance with CLP Regulation (EC) No 1272/2008.

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

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

legislation

### **NZYtech**

### CZ0581 - Feruloyl esterase 1A, *Clostridium* saccharoperbutylacetonicum

Date of compilation: 23/06/2020

Version: 2 (Replaced 1)

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) (3)	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 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, 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:

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

legislation

### 

### CZ0581 - Feruloyl esterase 1A, *Clostridium* saccharoperbutylacetonicum

Date of compilation: 23/06/2020

Revised: 12/10/2023 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

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

## CZ0581 - Feruloyl esterase 1A, *Clostridium* saccharoperbutylacetonicum

Date of compilation: 23/06/2020 Revised: 12/10/2023

Version: 2 (Replaced 1)

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

Product is non-flammable under normal conditions of storage, handling 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 on general occupational hygiene

PREGNANT WOMEN SHOULD NOT BE EXPOSED TO THIS PRODUCT. Transfer in designated areas that comply with the necessary safety conditions (emergency showers and eyewash stations in close proximity), using personal protection equipment, especially on the hands and face (See section 8). Limit manual transfers to small amounts only. 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)

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

A.- Technical measures for storage

Store in a cool, dry, well-ventilated location

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):

7.2

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 workplace (European OEL, not country-specific legislation):

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

#### DNEL (Workers):

		Short e	xposure	Long ex	kposure
Identification		Systemic	Local	Systemic	Local
Imidazole	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
CAS: 288-32-4	Dermal	Non-applicable	Non-applicable	1,5 mg/kg	Non-applicable
EC: 206-019-2	Inhalation	Non-applicable	Non-applicable	10,6 mg/m <sup>3</sup>	Non-applicable

#### DNEL (General population):

Non-applicable

#### PNEC:

Identification				
Imidazole	STP	10 mg/L	Fresh water	0,13 mg/L
CAS: 288-32-4	Soil	0,043 mg/kg	Marine water	0,013 mg/L
EC: 206-019-2	Intermittent	1,3 mg/L	Sediment (Fresh water)	0,336 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0,034 mg/kg

#### 8.2 Exposure controls:

A.- Individual protection measures, such as personal protective equipment

As a preventative measure it is recommended to use basic Personal Protective Equipment, with the corresponding <<CE marking>> in accordance with Regulation (EU) 2016/425. For more information on Personal Protective 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

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

**NZYtech** 

## CZ0581 - Feruloyl esterase 1A, *Clostridium* saccharoperbutylacetonicum

	8: EXPOSURE	CONTRO	LS/PERSONA	L PROTECTIC	N (continued)		
	Pictogram		PPE	Labelling	CEN Standard		Remarks
	Mandatory respiratory tract protection		sk for gases and vapours	CAT III	EN 405:2002+A1:2010	с	place when there is a taste or smell of th ontaminant inside the face mask. If the contaminant comes with warnings it is commended to use isolation equipment.
C	Specific protection	n for the h	ands				
	Pictogram		PPE	Labelling	CEN Standard		Remarks
	Mandatory hand protection	(Material: P time: > 480	protective gloves VC, Breakthrough ) min, Thickness: ).7 mm)	CAT III	EN ISO 21420:2020	Rep	lace the gloves at any sign of deterioratic
D	Eye and face prot	ection		L			
	Pictogram		PPE	Labelling	CEN Standard		Remarks
	Mandatory face protection	Fa	ice shield		EN 166:2002 EN 167:2002 EN 168:2002 EN ISO 4007:2018		n daily and disinfect periodically according nanufacturer 's instructions. Use if there risk of splashing.
E	Body protection	•					
	Pictogram		PPE	Labelling	CEN Standard		Remarks
	Mandatory complete body protection		ble clothing for against chemical risks	CAT III	EN 13034:2005+A1:2009 EN 168:2002 EN ISO 13982- 1:2004/A1:2010 EN ISO 6529:2013 EN ISO 6530:2005 EN 464:1994	Fo	r professional use only. Clean periodicall ording to the manufacturer's instructions
	Mandatory foot protection	protection	footwear for against chemical risk	CAT III	EN ISO 20345:2011 EN 13832-1:2019	R	eplace boots at any sign of deterioration.
F	Additional emerge	ency meas	ures				
	Emergency mea	asure	St	andards	Emergency me	asure	Standards
	Emergency sho	ower		5I Z358-1 11, ISO 3864-4:201	1 Eyewash stat	ions	DIN 12 899 ISO 3864-1:2011, ISO 3864-4:2011
In a spil <b>Vol</b> Wit	lage of both the p latile organic co	ne commu product an <b>mpounds</b> ive 2010/7	nity legislation f d its container. : 25/EU, this prod 0 % v	For additional	n of the environment i information see subse owing characteristics:		nmended to avoid environmental .D
	Average carbon r	number:	Non-a	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.



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

### CZ0581 - Feruloyl esterase 1A, *Clostridium* saccharoperbutylacetonicum

Date of	compilation: 23/06/2020 Revised: 12/10/2023	Version: 2 (Replaced 1)
SECT	TION 9: PHYSICAL AND CHEMICAL PROPERTIES	S (continued)
	For complete information see the product datasheet.	
	Appearance:	
	Physical state at 20 °C:	Liquid
	Appearance:	Not available
	Colour:	Colourless
	Odour:	Odourless
	Odour threshold:	Non-applicable *
	Volatility:	
	Boiling point at atmospheric pressure:	Non-applicable *
	Vapour pressure at 20 °C:	Non-applicable *
	Vapour pressure at 50 °C:	Non-applicable *
	Evaporation rate at 20 °C:	Non-applicable *
	Product description:	
	Density at 20 °C:	1110,8 kg/m <sup>3</sup>
	Relative density at 20 °C:	1,111
	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:	7,2
	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:	Non-applicable *
	Decomposition temperature:	Non-applicable *
	Melting point/freezing point:	Non-applicable *
	Flammability:	
	Flash Point:	Non Flammable (>60 °C)
	Flammability (solid, gas):	Non-applicable * 480 °C
	Autoignition temperature: Lower flammability limit:	Non-applicable *
	Upper flammability limit:	Non-applicable *
	Particle characteristics:	попаррісале
	Median equivalent diameter:	Non-applicable
9.2	Other information:	
	Information with regard to physical hazard clas	ses:
	Explosive properties:	Non-applicable *
	Oxidising properties:	Non-applicable *
	Corrosive to metals:	Non-applicable *
	Heat of combustion:	Non-applicable *
	Aerosols-total percentage (by mass) of flammable components: Other safety characteristics:	Non-applicable *
	Surface tension at 20 °C:	Non-applicable *
	*Not relevant due to the nature of the product, not providing infor	
	Not relevant due to the nature of the product, not providing infor	חומנוסה איסאבונא סו וגב המבמועב.

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

## CZ0581 - Feruloyl esterase 1A, *Clostridium* saccharoperbutylacetonicum

Date of compilation: 23/06/2020

Version: 2 (Replaced 1)

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

Refraction index:

Non-applicable \*

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

Revised: 12/10/2023

#### 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 from Safety Data Sheet.

#### 10.2 Chemical stability:

Chemically stable under the indicated 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	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 ( $CO_2$ ), 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.

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

# CZ0581 - Feruloyl esterase 1A, *Clostridium* saccharoperbutylacetonicum

	ompilation: 23/06/2020	Revised: 12/10/2023	Version: 2 (Re	placed 1)		
SECT	ION 11: TOXICOLOGICAL	INFORMATION (continu	ued)			
	E- Sensitizing effects:					
	hazardous with sensitisin - Skin: Based on availab hazardous for this effect. F- Specific target organ toxic	the classification criteria are	ation see section 3 iteria are not met, section 3. 'e:	as it does not co	ntain substances class	ified as
	G- Specific target organ toxic					
	it does not contain subst - Skin: Based on availab	oxicity (STOT)-repeated exp ances classified as hazardo le data, the classification cr . For more information see	us for this effect. I iteria are not met,	or more informa	ation see section 3.	
	Based on available data, this effect. For more info Other information:	the classification criteria are rmation see section 3.	e not met, as it doe	s not contain sub	ostances classified as h	nazardous for
	Non-applicable					
	Specific toxicology inform	ation on the substances:	1			
		Identification		A	cute toxicity	Genus
	Imidazole			LD50 oral	500 mg/kg (ATEi)	
	CAS: 288-32-4			LD50 dermal	>2000 mg/kg	
11 2	EC: 206-019-2 Information on other haz	uarde.		LC50 inhalation	>5 mg/L	
11.2						
	Endocrine disrupting prop	erties				
	Endocrine-disrupting properti	es: The product does not m	eet the criteria.			
	Other information	es: The product does not m	eet the criteria.			
		es: The product does not m	eet the criteria.			
	Other information	es: The product does not m	eet the criteria.			
SECT	Other information		eet the criteria.			
	Other information Non-applicable	ORMATION		duct itself is not	available	
The ex Based For me	Other information Non-applicable ION 12: ECOLOGICAL INF operimental information related on available data, the classific ore information see section 3. Toxicity:	FORMATION d to the eco-toxicological pr cation criteria are not met, a	operties of the pro			or this effect.
The ex Based For me	Other information Non-applicable ION 12: ECOLOGICAL INF operimental information related on available data, the classific ore information see section 3	FORMATION d to the eco-toxicological pr cation criteria are not met, a	operties of the pro			or this effect.
The ex Based For ma <b>12.1</b>	Other information Non-applicable ION 12: ECOLOGICAL INF operimental information related on available data, the classific ore information see section 3. Toxicity:	ORMATION d to the eco-toxicological pr cation criteria are not met, a	operties of the pro			or this effect.
The ex Based For ma <b>12.1</b>	Other information Non-applicable ION 12: ECOLOGICAL INF operimental information related on available data, the classific ore information see section 3. Toxicity: Not available	ORMATION d to the eco-toxicological pr cation criteria are not met, a	operties of the pro			or this effect.
The ex Based For mo <b>12.1</b> <b>12.2</b>	Other information Non-applicable ION 12: ECOLOGICAL INF operimental information related on available data, the classific ore information see section 3. Toxicity: Not available Persistence and degradab	FORMATION d to the eco-toxicological prication criteria are not met, a	operties of the pro			or this effect.
The ex Based For mo <b>12.1</b> <b>12.2</b>	Other information Non-applicable ION 12: ECOLOGICAL INF operimental information related on available data, the classific ore information see section 3. Toxicity: Not available Persistence and degradab Not available	FORMATION d to the eco-toxicological prication criteria are not met, a	operties of the pro			or this effect.
The ex Based For m 12.1 12.2 12.3	Other information Non-applicable ION 12: ECOLOGICAL INF operimental information related on available data, the classific ore information see section 3. Toxicity: Not available Persistence and degradab Not available Bioaccumulative potential	FORMATION d to the eco-toxicological prication criteria are not met, a	operties of the pro			or this effect.
The ex Based For m 12.1 12.2 12.3	Other information Non-applicable ION 12: ECOLOGICAL INF operimental information related on available data, the classific ore information see section 3: Toxicity: Not available Persistence and degradab Not available Bioaccumulative potential Not available	FORMATION d to the eco-toxicological prication criteria are not met, a	operties of the pro			or this effect.
The ex Based For mo 12.1 12.2 12.3 12.3	Other information Non-applicable ION 12: ECOLOGICAL INF operimental information related on available data, the classific ore information see section 3. Toxicity: Not available Persistence and degradab Not available Bioaccumulative potential Not available Mobility in soil:	FORMATION d to the eco-toxicological prication criteria are not met, a ility:	operties of the pro			or this effect.
The ex Based For mo 12.1 12.2 12.3 12.3	Other information Non-applicable ION 12: ECOLOGICAL INF operimental information related on available data, the classific ore information see section 3. Toxicity: Not available Persistence and degradab Not available Bioaccumulative potential Not available Mobility in soil: Not available	FORMATION d to the eco-toxicological prication criteria are not met, a dility:	operties of the pro			or this effect.
The ex Based For ma 12.1 12.2 12.3 12.4 12.5	Other information Non-applicable ION 12: ECOLOGICAL INF Apprimental information related on available data, the classific ore information see section 3. Toxicity: Not available Persistence and degradab Not available Bioaccumulative potential Not available Mobility in soil: Not available Results of PBT and vPvB a	FORMATION d to the eco-toxicological prication criteria are not met, a ility: ility: ressessment: rPvB criteria	operties of the pro			or this effect.
The ex Based For ma 12.1 12.2 12.3 12.4 12.5	Other information Non-applicable ION 12: ECOLOGICAL INF Operimental information related on available data, the classific ore information see section 3. Toxicity: Not available Persistence and degradab Not available Bioaccumulative potential Not available Mobility in soil: Not available Results of PBT and vPvB a Product does not meet PBT/v	•ORMATION d to the eco-toxicological protection criteria are not met, a ility: I: PVB criteria eerties:	operties of the pro as it does not conta			or this effect.
The ex Based For ma 12.1 12.2 12.3 12.4 12.5 12.6	Other information Non-applicable ION 12: ECOLOGICAL INF operimental information related on available data, the classific ore information see section 3. Toxicity: Not available Persistence and degradab Not available Bioaccumulative potential Not available Mobility in soil: Not available Results of PBT and vPvB a Product does not meet PBT/v Endocrine disrupting prop	•ORMATION d to the eco-toxicological protection criteria are not met, a ility: I: PVB criteria eerties:	operties of the pro as it does not conta			or this effect.
The ex Based For ma 12.1 12.2 12.3 12.4 12.5 12.6	Other information Non-applicable ION 12: ECOLOGICAL INF Operimental information related on available data, the classific ore information see section 3. Toxicity: Not available Persistence and degradab Not available Bioaccumulative potential Not available Mobility in soil: Not available Results of PBT and vPvB a Product does not meet PBT/v Endocrine disrupting properti	•ORMATION d to the eco-toxicological protection criteria are not met, a ility: I: PVB criteria eerties:	operties of the pro as it does not conta			or this effect.

- CONTINUED ON NEXT PAGE -

Revised: 12/10/2023



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

#### CZ0581 - Feruloyl esterase 1A, Clostridium saccharoperbutylacetonicum

Date of compilation: 23/06/2020

Revised: 12/10/2023

Version: 2 (Replaced 1)

### SECTION 13: DISPOSAL CONSIDERATIONS

#### 13.1 Waste treatment methods:

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	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 Non-applicable No Non-applicable see section 9
14.7	Limited quantities: Maritime transport in bulk according to IMO instruments:	Non-applicable Non-applicable
Transpor	t of dangerous goods by sea:	
With rega	rd to IMDG 40-20:	
	UN number or ID number: UN proper shipping name:	Non-applicable Non-applicable
14.3		Non-applicable Non-applicable
14.4	Packing group:	Non-applicable
14.5	Marine pollutant:	No
	Planne ponatanti	NO
14.6	-	NO
	•	Non-applicable
	Special precautions for user	
	<b>Special precautions for user</b> Special regulations: EmS Codes: Physico-Chemical properties:	Non-applicable see section 9
	Special regulations: Special regulations: EmS Codes: Physico-Chemical properties: Limited quantities:	Non-applicable see section 9 Non-applicable
	<b>Special precautions for user</b> Special regulations: EmS Codes: Physico-Chemical properties:	Non-applicable see section 9 Non-applicable Non-applicable
	Special regulations: Special regulations: EmS Codes: Physico-Chemical properties: Limited quantities:	Non-applicable see section 9 Non-applicable
14.6 14.7	Special precautions for user Special regulations: EmS Codes: Physico-Chemical properties: Limited quantities: Segregation group: Maritime transport in bulk according to IMO	Non-applicable see section 9 Non-applicable Non-applicable

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



### CZ0581 - Feruloyl esterase 1A, *Clostridium* saccharoperbutylacetonicum

Date of compilation:	23/06/2020 Revised: 12	/10/2023	Version: 2 (Replaced 1)		
SECTION 14: TRANSPORT INFORMATION (continued)					
With regard 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:

--ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,

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

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



#### CZ0581 - Feruloyl esterase 1A, Clostridium saccharoperbutylacetonicum

Date of compilation: 23/06/2020	Revised: 12/10/2023	Version: 2 (Replaced 1)			
SECTION 16: OTHER INFORM	ATION ** (continued)				
COMMISSION REGULATION CLP Regulation (EC) No 127 · Hazard statements	(EU) 2020/878 2/2008 (SECTION 2, SECTION	N 16):			
Texts of the legislative p	hrases mentioned in section	on 2:			
H315: Causes skin irritation. H360D: May damage the un H319: Causes serious eye ii	born child.				
Texts of the legislative p	hrases mentioned in section	on 3:			
The phrases indicated do no individual components whic		hey are present merely for informative purposes and refer to the			
CLP Regulation (EC) No 1 Acute Tox. 4: H302 - Harmf Eye Dam. 1: H318 - Causes Repr. 1B: H360D - May dam Skin Corr. 1C: H314 - Cause	ul if swallowed. serious eye damage.	damage.			
Advice related to training	<b>g:</b>	-			
	order to prevent industrial ris data sheet, as well as the lal	sks for staff using this product and to facilitate their comprehension and bel on the product.			
Principal bibliographical	sources:				
http://echa.europa.eu http://eur-lex.europa.eu					
Abbreviations and acrony	/ms:				
IMDG: International maritin IATA: International Air Trar ICAO: International Civil Avia	ne dangerous goods code Isport Association ation Organisation	arriage of dangerous goods by road			
BOD5: 5day biochemical oxy	COD: Chemical Oxygen Demand BOD5: 5day biochemical oxygen demand BCF: Bioconcentration factor LD50: Lethal Dose 50				
LC50: Lethal Concentration EC50: Effective concentratio LogPOW: Octanolwater part	n 50 tition coefficient				
Koc: Partition coefficient of UFI: unique formula identifi IARC: International Agency	ier				

\*\* 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.