8 NZYtech

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

CZ0672 - Feruloyl esterase 1B, Frankia sp.

Date of	compilation: 23/06/20	020 Revised: 12/10/2023 Version: 2 (Replaced 1)	
SEC	TION 1: IDENTIFIC	CATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING	
1.1	Product identifier	r: CZ0672 - Feruloyl esterase 1B, <i>Frankia sp.</i>	
		Glycerol	
	CAS:	56-81-5	
	EC:	200-289-5	
	Index:	Non-applicable	
	REACH:	01-2119471987-18-XXXX	
	Other means of id	dentification:	
	Non-applicable		
1.2	Relevant identifie	ed uses of the substance or mixture and uses advised against:	
	Relevant uses: Labo	oratory. 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	pplier of the safety data sheet:	
	NZYTech Estrada do Paco do I 1649-038 Lisboa - L info@nzytech.com www.nzytech.com) Lumiar Campus do Lumiar - Edif. E, r/c Lisboa - Portugal	
1.4	Emergency teleph	hone number: Contact Local Poison Information Center or Local Emergency Number	
L			
SEC	TION 2: HAZARDS	IDENTIFICATION **	
2.1	Classification of t	the substance or mixture:	

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

NZYtech

CZ0672 - Feruloyl esterase 1B, Frankia sp.

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			
CAS:	288-32-4	Imidazole ⁽¹⁾		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	(I) (I) (I) (I) (I) (I) (I) (I) (I) (I)	1 - <2,5 %	

⁽¹⁾ 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

CZ0672 - Feruloyl esterase 1B, Frankia sp.

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

CZ0672 - Feruloyl esterase 1B, Frankia sp.

	FION 7: HANDLING AND STORAGE (continued)							
	Product is non-flammable under norr	mal conditions of stora	ge handling and	use. It is recomm	nended to trans	fer at slow speed			
	to avoid the generation of electrosta								
	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.								
			suitable cleaning	products.					
	D Technical recommendations to preven								
	It is recommended to have absorben			the product (Se	e subsection 6.3	3)			
7.2	Conditions for safe storage, includin	ig any incompatibilit	ies:						
	A Technical measures for storage								
	Store in a cool, dry, well-ventilated lo	ocation							
	B General conditions for storage								
	Avoid sources of heat, radiation, stat	ic electricity and conta	ct with food. For a	additional inform	ation see subse	ection 10.5			
7.3	Specific end use(s):								
	Except for the instructions already specif	fied it is not necessary	to provide any sp	ecial recommen	dation regarding	g the uses of this			
	product.								
	TION 8: EXPOSURE CONTROLS/PERS Control parameters: Substances whose occupational exposur legislation): There are no applicable occupational exp	e limits have to be mo	nitored in the wor			ntry-specific			
	Control parameters: Substances whose occupational exposur legislation):	e limits have to be mo	nitored in the wor bstances containe	ed in the product	:				
	Control parameters: Substances whose occupational exposur legislation): There are no applicable occupational exp DNEL (Workers):	e limits have to be mo	nitored in the wor bstances containe Short	ed in the product	Lon	g exposure			
	Control parameters: Substances whose occupational exposur legislation): There are no applicable occupational exp DNEL (Workers): Identification	e limits have to be mor posure limits for the su	nitored in the wor bstances containe Short	ed in the product exposure Local	Long	g exposure			
_	Control parameters: Substances whose occupational exposur legislation): There are no applicable occupational exp DNEL (Workers): Identification Imidazole	e limits have to be mor posure limits for the su Oral	nitored in the wor bstances containe Short Systemic Non-applicable	ed in the product exposure Local Non-applicable	Long Systemic Non-applicable	g exposure Local Non-applicable			
_	Control parameters: Substances whose occupational exposur legislation): There are no applicable occupational exp DNEL (Workers): Identification	e limits have to be mor posure limits for the su	nitored in the wor bstances containe Short	ed in the product exposure Local	Long	g exposure Local Non-applicable Non-applicable			
_	Control parameters: Substances whose occupational exposur legislation): There are no applicable occupational exp DNEL (Workers): Identification Imidazole CAS: 288-32-4 EC: 206-019-2	e limits have to be mo posure 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	Long Systemic Non-applicable 1,5 mg/kg	g exposure Local Non-applicable			
	Control parameters: Substances whose occupational exposur legislation): There are no applicable occupational exp DNEL (Workers): Identification Imidazole CAS: 288-32-4 EC: 206-019-2 DNEL (General population):	e limits have to be mo posure 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	Long Systemic Non-applicable 1,5 mg/kg	g exposure Local Non-applicable Non-applicable			
	Control parameters: Substances whose occupational exposur legislation): There are no applicable occupational exp DNEL (Workers): Identification Imidazole CAS: 288-32-4 EC: 206-019-2	e limits have to be mo posure 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	Long Systemic Non-applicable 1,5 mg/kg	g exposure Local Non-applicable Non-applicable			
	Control parameters: Substances whose occupational exposur legislation): There are no applicable occupational exp DNEL (Workers): Identification Imidazole CAS: 288-32-4 EC: 206-019-2 DNEL (General population): Non-applicable	e limits have to be mo posure 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	Long Systemic Non-applicable 1,5 mg/kg	g exposure Local Non-applicable Non-applicable			
	Control parameters: Substances whose occupational exposur legislation): There are no applicable occupational exp DNEL (Workers): Identification Imidazole CAS: 288-32-4 EC: 206-019-2 DNEL (General population): Non-applicable PNEC:	e limits have to be mo posure 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	Long Systemic Non-applicable 1,5 mg/kg 10,6 mg/m ³	g exposure Local Non-applicable Non-applicable			
	Control parameters: Substances whose occupational exposur legislation): There are no applicable occupational exp DNEL (Workers): Identification Imidazole CAS: 288-32-4 EC: 206-019-2 DNEL (General population): Non-applicable PNEC: Identification	e limits have to be mon posure limits for the su Oral Dermal Inhalation	nitored in the wor bstances containe Short Systemic Non-applicable Non-applicable	ed in the product exposure Local Non-applicable Non-applicable	Long Systemic Non-applicable 1,5 mg/kg 10,6 mg/m ³	g exposure Local Non-applicable Non-applicable Non-applicable			
	Control parameters: Substances whose occupational exposur legislation): There are no applicable occupational exp DNEL (Workers): Identification Imidazole CAS: 288-32-4 EC: 206-019-2 DNEL (General population): Non-applicable PNEC: Identification Imidazole	e limits have to be mon posure limits for the su Oral Dermal Inhalation STP Soil Intermittent	nitored in the wor bstances containe Short Systemic Non-applicable Non-applicable Non-applicable	ed in the product exposure Local Non-applicable Non-applicable Fresh water	Long Systemic Non-applicable 1,5 mg/kg 10,6 mg/m ³	g exposure Local Non-applicable Non-applicable Non-applicable			
3.1	Control parameters: Substances whose occupational exposur legislation): There are no applicable occupational exp 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	e limits have to be mon posure limits for the su Oral Dermal Inhalation STP Soil	hitored in the wor bstances containe Short Non-applicable Non-applicable Non-applicable	ed in the product exposure Local Non-applicable Non-applicable Non-applicable	Long Systemic Non-applicable 1,5 mg/kg 10,6 mg/m ³	g exposure Local Non-applicable Non-applicable Non-applicable			
3.1	Control parameters: Substances whose occupational exposur legislation): There are no applicable occupational exp 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 Exposure controls:	e limits have to be mon posure limits for the su Oral Dermal Inhalation STP Soil Intermittent Oral	nitored in the wor bstances containe Short Non-applicable Non-applicable Non-applicable 10 mg/L 0,043 mg/kg 1,3 mg/L Non-applicable	ed in the product exposure Local Non-applicable Non-applicable Non-applicable Fresh water Marine water Sediment (Fresh	Long Systemic Non-applicable 1,5 mg/kg 10,6 mg/m ³	g exposure Local Non-applicable Non-applicable Non-applicable			
3.1	Control parameters: Substances whose occupational exposur legislation): There are no applicable occupational exp 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 Exposure controls: A Individual protection measures, such	e limits have to be mon posure limits for the su Oral Dermal Inhalation STP Soil Intermittent Oral as personal protective	nitored in the wor bstances containe Short Non-applicable Non-applicable Non-applicable 10 mg/L 0,043 mg/kg 1,3 mg/L Non-applicable	ed in the product exposure Local Non-applicable Non-applicable Non-applicable Fresh water Fresh water Sediment (Fresl Sediment (Marin	Long Systemic Non-applicable 1,5 mg/kg 10,6 mg/m ³	g exposure Local Non-applicable Non-applicable Non-applicable 0,13 mg/L 0,013 mg/L 0,034 mg/kg			
3.1	Control parameters: Substances whose occupational exposur legislation): There are no applicable occupational exp 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 Exposure controls: A Individual protection measures, such As a preventative measure it is recom-	e limits have to be mon posure limits for the su Oral Dermal Inhalation STP Soil Intermittent Oral as personal protective mmended to use basic	hitored in the wor bstances containe Systemic Non-applicable Non-applicable Non-applicable 10 mg/L 0,043 mg/kg 1,3 mg/L Non-applicable e equipment c Personal Protect	ed in the product exposure Local Non-applicable Non-applicable Non-applicable Fresh water Marine water Sediment (Fresh Sediment (Marin ive Equipment, Marin	Long Systemic Non-applicable 1,5 mg/kg 10,6 mg/m ³	g exposure Local Non-applicable Non-applicable Non-applicable 0,13 mg/L 0,13 mg/L 0,034 mg/kg 0,034 mg/kg			
3.1	Control parameters: Substances whose occupational exposur legislation): There are no applicable occupational exp 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 Exposure controls: A Individual protection measures, such As a preventative measure it is recommarking>> in accordance with Regul	e limits have to be mon posure limits for the su Oral Dermal Inhalation STP Soil Intermittent Oral as personal protective mmended to use basic lation (EU) 2016/425.	hitored in the wor bstances containe Systemic Non-applicable Non-applicable Non-applicable 10 mg/L 0,043 mg/kg 1,3 mg/L Non-applicable e equipment c Personal Protect For more information	ed in the product exposure Local Non-applicable Non-applicable Non-applicable Non-applicable Fresh water Marine water Sediment (Fresh Sediment (Marin ive Equipment, Marina ition on Personal	Long Systemic Non-applicable 1,5 mg/kg 10,6 mg/m ³	g exposure Local Non-applicable Non-applicable Non-applicable Non-applicable 0,13 mg/L 0,034 mg/kg 0,034 mg/kg Donding < <ce pment (storage,</ce 			
3.1	Control parameters: Substances whose occupational exposur legislation): There are no applicable occupational exp 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 Exposure controls: A Individual protection measures, such As a preventative measure it is recom-	e limits have to be mon posure limits for the su Oral Dermal Inhalation STP Soil Intermittent Oral as personal protective mmended to use basic lation (EU) 2016/425.	nitored in the wor bstances containe Systemic Non-applicable Non-applicable Non-applicable 10 mg/L 0,043 mg/kg 1,3 mg/L Non-applicable e equipment Personal Protect For more information I perein is a recomr	ed in the product exposure Local Non-applicable Non-applicable Non-applicable Non-applicable Fresh water Marine water Sediment (Fresl Sediment (Marin ive Equipment, not tion on Personal eaflet provided nendation which	Long Systemic Non-applicable 1,5 mg/kg 10,6 mg/m ³ 10,6 mg/m ³	g exposure Local Non-applicable Non-applicable Non-applicable Non-applicable Non-applicable 0,13 mg/L 0,013 mg/L 0,034 mg/kg 0,034 mg/kg Donding < <ce pment (storage, turer. For more pecification from</ce 			

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

CZ0672 - Feruloyl esterase 1B, Frankia sp.

TION		CONTROLS/PERSON/				
	Pictogram	PPE	Labelling	CEN Standard		Remarks
	Mandatory respiratory tract protection	Filter mask for gases and vapours		EN 405:2002+A1:2010	C	place when there is a taste or smell of the ontaminant inside the face mask. If the contaminant comes with warnings it is commended to use isolation equipment.
C	Specific protection	n for the hands				
	Pictogram	PPE	Labelling	CEN Standard		Remarks
	Mandatory hand protection	Chemical protective gloves (Material: PVC, Breakthrough time: > 480 min, Thickness: 0.7 mm)		EN ISO 21420:2020	Repl	lace the gloves at any sign of deterioration
D	Eye and face prot	ection				
	Pictogram	PPE	Labelling	CEN Standard		Remarks
	Mandatory face protection	Face shield	CAT II	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 is risk of splashing.
E	Body protection					
	Pictogram	PPE	Labelling	CEN Standard		Remarks
	Mandatory complete body protection	Disposable clothing for protection against chemical risks		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		r professional use only. Clean periodically ording to the manufacturer's instructions.
	Mandatory foot protection	Safety footwear for protection against chemical risk		EN ISO 20345:2011 EN 13832-1:2019	Re	eplace boots at any sign of deterioration.
F	Additional emerge	ency measures				
	Emergency mea	asure S	Standards	Emergency meas	ure	Standards
	Emergency sho	ISO 3864-1:2	NSI Z358-1 011, ISO 3864-4:201	1 Eyewash station	าร	DIN 12 899 ISO 3864-1:2011, ISO 3864-4:2011
Env	vironmental exp	osure controls:				
spil	lage of both the p	roduct and its container		n of the environment it i information see subsect		nmended to avoid environmental .D
	atile organic co	-				
	-	ive 2010/75/EU, this pro		owing characteristics:		
	V.O.C. (Supply):		weight			
	V.O.C. density at	-	/m³ (0 g/L)			
	Average carbon r	number: 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.

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

NZYtech

CZ0672 - Feruloyl esterase 1B, Frankia sp.

ate of compilation: 23/06/2020 Revi	d: 12/10/2023 Version: 2 (Replaced 1)
SECTION 9: PHYSICAL AND CHEMIC	L PROPERTIES (continued)
For complete information see the p	duct datasheet.
Appearance:	
Physical state at 20 °C:	Liquid
Appearance:	Not available
Colour:	Colourless
Odour:	Odourless
Odour threshold:	Non-applicable *
Volatility:	
Boiling point at atmospheric pressur	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 ³
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) °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 *
Autoignition temperature:	480 °C
Lower flammability limit:	Non-applicable *
Upper flammability limit:	Non-applicable *
Particle characteristics:	
Median equivalent diameter:	Non-applicable
9.2 Other information:	
Information with regard to phy	cal hazard classes:
Explosive properties:	Non-applicable *
Oxidising properties:	Non-applicable *
Corrosive to metals:	Non-applicable *
Heat of combustion:	Non-applicable *
Aerosols-total percentage (by mass) components: Other safety characteristics:	f flammable Non-applicable *
Surface tension at 20 °C:	Non-applicable *
	, not providing information property of its hazards.

Safety data sheet legislation

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

CZ0672 - Feruloyl esterase 1B, Frankia sp.

ate of c	ate of compilation: 23/06/2020 Revised: 12/10/2023 Version: 2 (Replaced 1)							
SECT	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.							
CECT	SECTION 10: STABILITY AND REACTIVITY							
SECT	ION IU: STADILITY AND	REACTIVITY						
10.1	Reactivity:							
10.2	No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7 from Safety Data Sheet.							
10.2	,-	indicated conditions of at	evere handling and use					
	Chemically stable under the		orage, nandling 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	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 (CO₂), 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

CZ0672 - Feruloyl esterase 1B, Frankia sp.

			Version: 2 (Re			
ECT.	ION 11: TOXICOLOGICA	L INFORMATION (conti	nued)			
	E- Sensitizing effects:					
	hazardous with sensitis - Skin: Based on availa	n available data, the classifi ing effects. For more inforr able data, the classification t. For more information se kicity (STOT) - single expose	mation see section 3 criteria are not met, e section 3.	3.		
		, the classification criteria a formation see section 3. dicity (STOT)-repeated expo		s not contain sul	bstances classified as h	azardous for
	it does not contain subs - Skin: Based on availa	toxicity (STOT)-repeated e stances classified as hazard able data, the classification t. For more information sec	lous for this effect. I criteria are not met,	For more inform	ation see section 3.	
	Based on available data this effect. For more inf Other information:	, the classification criteria a formation see section 3.	re not met, as it doe	s not contain sul	bstances classified as h	azardous for
	Non-applicable					
	Specific toxicology inform	nation on the substance	s:			
		Identification		A	Acute toxicity	Genus
	Imidazole			LD50 oral	500 mg/kg (ATEi)	
	CAS: 288-32-4					
1.2	EC: 206-019-2 Information on other ha Endocrine disrupting pro Endocrine-disrupting proper	perties	meet the criteria.	LD50 dermal	>2000 mg/kg >5 mg/L	
1.2	Information on other ha Endocrine disrupting pro Endocrine-disrupting proper Other information	perties	meet the criteria.			
	Information on other ha Endocrine disrupting proper Endocrine-disrupting proper Other information Non-applicable	perties ties: The product does not	meet the criteria.			
ECT	Information on other has Endocrine disrupting proper Endocrine-disrupting proper Other information Non-applicable	perties ties: The product does not IFORMATION		LC50 inhalation	>5 mg/L	
ECT. he ex ased	Information on other has Endocrine disrupting pro- Endocrine-disrupting proper Other information Non-applicable ION 12: ECOLOGICAL IN xperimental information relat	perties ties: The product does not IFORMATION ed to the eco-toxicological p fication criteria are not met,	properties of the pro	LC50 inhalation	>5 mg/L available	or this effect.
ECT! he ex ased or mo	Information on other has Endocrine disrupting pro- Endocrine-disrupting proper Other information Non-applicable ION 12: ECOLOGICAL IN xperimental information relat	perties ties: The product does not IFORMATION ed to the eco-toxicological p fication criteria are not met,	properties of the pro	LC50 inhalation	>5 mg/L available	or this effect.
ECT! he ex ased or mo	Information on other has Endocrine disrupting proper Endocrine-disrupting proper Other information Non-applicable ION 12: ECOLOGICAL IN experimental information relat on available data, the classif ore information see section	perties ties: The product does not IFORMATION ed to the eco-toxicological p fication criteria are not met,	properties of the pro	LC50 inhalation	>5 mg/L available	or this effect.
ECTI he ex ased or mo 2.1	Information on other has Endocrine disrupting proper Other information Non-applicable ION 12: ECOLOGICAL IN experimental information relat on available data, the classif ore information see section Toxicity:	perties ties: The product does not IFORMATION ed to the eco-toxicological p fication criteria are not met, 3.	properties of the pro	LC50 inhalation	>5 mg/L available	or this effect.
ECTI he ex ased or mo 2.1	Information on other has Endocrine disrupting proper Endocrine-disrupting proper Other information Non-applicable ION 12: ECOLOGICAL IN experimental information related on available data, the classifiore information see section Toxicity: Not available	perties ties: The product does not IFORMATION ed to the eco-toxicological p fication criteria are not met, 3.	properties of the pro	LC50 inhalation	>5 mg/L available	or this effect.
ECTI he ex ased or mo 2.1 2.2	Information on other has Endocrine disrupting proper Other information Non-applicable ION 12: ECOLOGICAL IN experimental information related on available data, the classifi ore information see section Toxicity: Not available Persistence and degrada	perties ties: The product does not IFORMATION ed to the eco-toxicological p fication criteria are not met, 3. bility:	properties of the pro	LC50 inhalation	>5 mg/L available	or this effect.
ECTI he ex ased or mo 2.1 2.2	Information on other has Endocrine disrupting proper Other information Non-applicable ION 12: ECOLOGICAL IN experimental information relat on available data, the classif ore information see section Toxicity: Not available Persistence and degrada Not available	perties ties: The product does not IFORMATION ed to the eco-toxicological p fication criteria are not met, 3. bility:	properties of the pro	LC50 inhalation	>5 mg/L available	or this effect.
ECTI he ex ased or mo 2.1 2.2 2.3	Information on other has Endocrine disrupting proper Other information Non-applicable ION 12: ECOLOGICAL IN experimental information relat on available data, the classif ore information see section Toxicity: Not available Persistence and degrada Not available Bioaccumulative potentia	perties ties: The product does not IFORMATION ed to the eco-toxicological p fication criteria are not met, 3. bility:	properties of the pro	LC50 inhalation	>5 mg/L available	or this effect.
ECTI he ex ased or mo 2.1 2.2 2.3	Information on other has Endocrine disrupting proper Other information Non-applicable ION 12: ECOLOGICAL IN experimental information related on available data, the classif ore information see section Toxicity: Not available Persistence and degrada Not available Bioaccumulative potentia Not available	perties ties: The product does not IFORMATION ed to the eco-toxicological p fication criteria are not met, 3. bility:	properties of the pro	LC50 inhalation	>5 mg/L available	or this effect.
ECTI he exased or mo 2.1 2.2 2.3 2.4	Information on other has Endocrine disrupting proper Other information Non-applicable ION 12: ECOLOGICAL IN experimental information related on available data, the classif ore information see section Toxicity: Not available Persistence and degrada Not available Bioaccumulative potentia Not available Mobility in soil:	perties ties: The product does not IFORMATION ed to the eco-toxicological p fication criteria are not met, 3. bility: al:	properties of the pro	LC50 inhalation	>5 mg/L available	or this effect.
ECTI he exased or mo 2.1 2.2 2.3 2.4	Information on other has Endocrine disrupting proper Other information Non-applicable ION 12: ECOLOGICAL IN experimental information related on available data, the classific ore information see section Toxicity: Not available Persistence and degrada Not available Bioaccumulative potentia Not available Mobility in soil: Not available	perties ties: The product does not IFORMATION ed to the eco-toxicological p fication criteria are not met, 3. bility: al: assessment:	properties of the pro	LC50 inhalation	>5 mg/L available	or this effect.
ECTI he ex ased or mo 2.1 2.2 2.3 2.4 2.5	Information on other has Endocrine disrupting proper Other information Non-applicable ION 12: ECOLOGICAL IN Experimental information related on available data, the classif ore information see section Toxicity: Not available Persistence and degrada Not available Bioaccumulative potentia Not available Mobility in soil: Not available Results of PBT and vPvB	perties ties: The product does not IFORMATION ed to the eco-toxicological p fication criteria are not met, 3. bility: al: vassessment: /vPvB criteria	properties of the pro	LC50 inhalation	>5 mg/L available	or this effect.
ECTI The ex Based 22.1 2.2.2 2.2.3 2.2.4 2.2.5	Information on other has Endocrine disrupting proper Other information Non-applicable ION 12: ECOLOGICAL IN Experimental information related on available data, the classif ore information see section Toxicity: Not available Persistence and degrada Not available Bioaccumulative potentia Not available Mobility in soil: Not available Results of PBT and vPvB Product does not meet PBT,	perties ties: The product does not IFORMATION ed to the eco-toxicological p fication criteria are not met, 3. bility: al: vPvB criteria perties:	properties of the pro , as it does not conta	LC50 inhalation	>5 mg/L available	or this effect.
5ECTI The ex Based Cor mode 2.1 12.2 12.3 12.4 12.5 12.5	Information on other has Endocrine disrupting proper Other information Non-applicable ION 12: ECOLOGICAL IN experimental information related on available data, the classif ore information see section Toxicity: Not available Persistence and degrada Not available Bioaccumulative potentia Not available Mobility in soil: Not available Results of PBT and vPvB Product does not meet PBT, Endocrine disrupting pro-	perties ties: The product does not IFORMATION ed to the eco-toxicological p fication criteria are not met, 3. bility: al: vPvB criteria perties:	properties of the pro , as it does not conta	LC50 inhalation	>5 mg/L available	or this effect.

Revised: 12/10/2023



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

legislation

CZ0672 - Feruloyl esterase 1B, Frankia sp.

Date of compilation: 23/06/2020

Revised: 12/10/2023

Version: 2 (Replaced 1)

SECTION 13: DISPOSAL CONSIDERATIONS 13.1 Waste treatment methods: Waste class (Regulation (EU) No Code Description 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:

14.1	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	
	Special regulations:	Non-applicable
	Tunnel restriction code:	Non-applicable
	Physico-Chemical properties:	see section 9
	Limited quantities:	Non-applicable
14.7	Maritime transport in bulk	Non-applicable
	according to IMO instruments:	
_		
•	t of dangerous goods by sea:	
With rega	rd to IMDG 40-20:	
14.1	UN number or ID number:	Non-applicable
14.2	UN proper shipping name:	Non-applicable Non-applicable
14.2		••
14.2 14.3	UN proper shipping name: Transport hazard class(es): Labels:	Non-applicable Non-applicable Non-applicable
14.2 14.3	UN proper shipping name: Transport hazard class(es):	Non-applicable Non-applicable
14.2 14.3 14.4	UN proper shipping name: Transport hazard class(es): Labels:	Non-applicable Non-applicable Non-applicable
14.2 14.3 14.4	UN proper shipping name: Transport hazard class(es): Labels: Packing group: Marine pollutant:	Non-applicable Non-applicable Non-applicable Non-applicable
14.2 14.3 14.4 14.5	UN proper shipping name: Transport hazard class(es): Labels: Packing group: Marine pollutant:	Non-applicable Non-applicable Non-applicable Non-applicable
14.2 14.3 14.4 14.5	UN proper shipping name: Transport hazard class(es): Labels: Packing group: Marine pollutant: Special precautions for user	Non-applicable Non-applicable Non-applicable Non-applicable No
14.2 14.3 14.4 14.5	UN proper shipping name: Transport hazard class(es): Labels: Packing group: Marine pollutant: Special precautions for user Special regulations:	Non-applicable Non-applicable Non-applicable Non-applicable No
14.2 14.3 14.4 14.5	UN proper shipping name: Transport hazard class(es): Labels: Packing group: Marine pollutant: Special precautions for user Special regulations: EmS Codes:	Non-applicable Non-applicable Non-applicable Non-applicable No
14.2 14.3 14.4 14.5	UN proper shipping name: Transport hazard class(es): Labels: Packing group: Marine pollutant: Special precautions for user Special regulations: EmS Codes: Physico-Chemical properties:	Non-applicable Non-applicable Non-applicable Non-applicable No Non-applicable see section 9
14.2 14.3 14.4 14.5	UN proper shipping name: Transport hazard class(es): Labels: Packing group: Marine pollutant: Special precautions for user Special regulations: EmS Codes: Physico-Chemical properties: Limited quantities: Segregation group: Maritime transport in bulk according to IMO	Non-applicable Non-applicable Non-applicable Non-applicable No Non-applicable see section 9 Non-applicable
14.2 14.3 14.4 14.5 14.6 14.7	UN proper shipping name: Transport hazard class(es): Labels: Packing group: Marine pollutant: Special precautions for user Special regulations: EmS Codes: Physico-Chemical properties: Limited quantities: Segregation group: Maritime transport in bulk according to IMO instruments:	Non-applicable Non-applicable Non-applicable No Non-applicable See section 9 Non-applicable Non-applicable
14.2 14.3 14.4 14.5 14.6 14.7	UN proper shipping name: Transport hazard class(es): Labels: Packing group: Marine pollutant: Special precautions for user Special regulations: EmS Codes: Physico-Chemical properties: Limited quantities: Segregation group: Maritime transport in bulk according to IMO	Non-applicable Non-applicable Non-applicable No 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



CZ0672 - Feruloyl esterase 1B, Frankia sp.

23/06/2020 Revised: 12/	10/2023	Version: 2 (Replaced 1)
RANSPORT INFORMATION (continued)	
ard to IATA/ICAO 2023:		
UN number or ID number:	Non-applicable	
UN proper shipping name:	Non-applicable	
Transport hazard class(es):	Non-applicable	
Labels:	Non-applicable	
Packing group:	Non-applicable	
Environmental hazards:	No	
Special precautions for user		
Physico-Chemical properties:	see section 9	
Maritime transport in bulk according to IMO instruments:	Non-applicable	
	RANSPORT INFORMATION (ard to IATA/ICAO 2023: UN number or ID number: UN proper shipping name: Transport hazard class(es): Labels: Packing group: Environmental hazards: Special precautions for user Physico-Chemical properties: Maritime transport in bulk according to IMO	RANSPORT INFORMATION (continued)ard to IATA/ICAO 2023:Non-applicableUN number or ID number: UN proper shipping name: Transport hazard class(es): Labels:Non-applicableTransport hazard class(es): Labels:Non-applicablePacking group: Environmental hazards: Special precautions for userNon-applicablePhysico-Chemical properties: Maritime transport in bulk according to IMONon-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

CZ0672 - Feruloyl esterase 1B, Frankia sp.

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		ON 16):
Texts of the legislative p H315: Causes skin irritation. H360D: May damage the un H319: Causes serious eye ir	born child.	tion 2:
Texts of the legislative p	hrases mentioned in sec	tion 3:
The phrases indicated do no individual components whic		; they 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. age the unborn child.	e damage.
Advice related to training		
•	order to prevent industrial	risks for staff using this product and to facilitate their comprehension and label on the product.
Principal bibliographical		•
http://echa.europa.eu http://eur-lex.europa.eu		
Abbreviations and acrony	/ms:	
ADR: European agreement of IMDG: International maritin IATA: International Air Trar ICAO: International Civil Avia	ne dangerous goods code asport Association	l carriage of dangerous goods by road
COD: Chemical Oxygen Der BOD5: 5day biochemical oxy BCF: Bioconcentration factor LD50: Lethal Dose 50	gen demand	
LC50: Lethal Dose 50 LC50: Lethal Concentration EC50: Effective concentratio LogPOW: Octanolwater part	n 50	
Koc: Partition coefficient of UFI: unique formula identifi IARC: International Agency	organic carbon er	

** 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.