Safety data sheet legislation

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

## CZ0040 - Rhamnogalacturonan Lyase 11A, Clostridium thermocellum

ate of	compilation: 23/06/20	020 Revised: 12/10/2023 Version: 2 (Replaced 1)			
SECT	FION 1: IDENTIFIC	CATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING			
1.1	Product identifie	r: CZ0040 - Rhamnogalacturonan Lyase 11A, Clostridium thermocellum			
		Glycerol			
	CAS:	56-81-5			
	EC:	200-289-5			
	Index:	Non-applicable			
	REACH:	01-2119471987-18-XXXX			
	Other means of ic	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 Lumiar Campus do Lumiar - Edif. E, r/c 1649-038 Lisboa - Lisboa - Portugal info@nzytech.com www.nzytech.com				
1.4	Emergency telep	hone number: Contact Local Poison Information Center or Local Emergency Number			

#### 2.1 Classification of 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

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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			
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	(I) (I) (I) (I) (I) (I) (I) (I) (I) (I)	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	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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#### 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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te of	compilation: 23/06/2020	Revised: 12/10/2023	Ver	sion: 2 (Replace	d 1)		
SECT	TION 7: HANDLING AND ST	ORAGE (continued)					
	Product is non-flammable to avoid the generation of conditions and materials t C Technical recommendation	electrostatic charges the should be avoided.	hat can aff	ect flammable p			
	PREGNANT WOMEN SHOU necessary safety condition equipment, especially on t drink during the process, w D Technical recommendations	s (emergency showers ne hands and face (See washing hands afterwa	and eyew section 8) rds with su	ash stations in o . Limit manual ti	close proximity), ransfers to small	using persona	al protection
	It is recommended to have	absorbent material ava	ailable at cl	ose proximity to	the product (Se	e subsection 6	.3)
7.2	Conditions for safe storage	, including any incom	npatibilitie	s:			
	A Technical measures for sto		•				
	Store in a cool, dry, well-ve	-					
	B General conditions for stor						
	Avoid sources of heat, radi	-	and contact	with food For	additional inform	ation can cube	action 10 E
<b>-</b> -	,	anon, state electricity a				auon see subs	ECHOIT 10.3
7.3	Specific end use(s):						
	Except for the instructions alre product.	ady specified it is not n	ecessary to	o provide any sp	ecial recomment	lation regardir	ng the uses of this
SECT 8.1	TION 8: EXPOSURE CONTRO Control parameters: Substances whose occupation			tored in the wor	kplace (Europea	n OEL, not cou	ntry-specific
		al exposure limits have	to be moni				ntry-specific
	<b>Control parameters:</b> Substances whose occupation legislation):	al exposure limits have	to be moni	stances containe	ed in the product		
	Control parameters: Substances whose occupation legislation): There are no applicable occupa DNEL (Workers):	al exposure limits have ational exposure limits f	to be moni	stances containe	ed in the product	Loi	ng exposure
	Control parameters: Substances whose occupation legislation): There are no applicable occupa DNEL (Workers): Identification	al exposure limits have ational exposure limits f	to be moni	stances containe Short Systemic	ed in the product exposure Local	Lor Systemic	ng exposure
_	Control parameters: Substances whose occupation legislation): There are no applicable occupa DNEL (Workers): Identification Imidazole	al exposure limits have ational exposure limits f	to be moni for the subs	stances containe Short Systemic Non-applicable	ed in the product exposure Local Non-applicable	Systemic Non-applicable	ng exposure Local Non-applicable
	Control parameters: Substances whose occupation legislation): There are no applicable occupation DNEL (Workers): Identification Imidazole CAS: 288-32-4	al exposure limits have ational exposure limits f oral Oral	to be moni for the subs	Short Systemic Non-applicable Non-applicable	ed in the product exposure Local Non-applicable Non-applicable	Systemic Non-applicable 1,5 mg/kg	ng exposure Local Non-applicable Non-applicable
	Control parameters: Substances whose occupation legislation): There are no applicable occupation DNEL (Workers): Identification Imidazole CAS: 288-32-4 EC: 206-019-2	al exposure limits have ational exposure limits f Oral Der Inha	to be moni for the subs	stances containe Short Systemic Non-applicable	ed in the product exposure Local Non-applicable	Systemic Non-applicable	ng exposure Local Non-applicable
	Control parameters: Substances whose occupation legislation): There are no applicable occupation DNEL (Workers): Identification Imidazole CAS: 288-32-4 EC: 206-019-2 DNEL (General population):	al exposure limits have ational exposure limits f Oral Der Inha	to be moni for the subs	Short Systemic Non-applicable Non-applicable	ed in the product exposure Local Non-applicable Non-applicable	Systemic Non-applicable 1,5 mg/kg	ng exposure Local Non-applicable Non-applicable
	Control parameters: Substances whose occupation legislation): There are no applicable occupation DNEL (Workers): Identification Imidazole CAS: 288-32-4 EC: 206-019-2 DNEL (General population): Non-applicable	al exposure limits have ational exposure limits f Oral Der Inha	to be moni for the subs	Short Systemic Non-applicable Non-applicable	ed in the product exposure Local Non-applicable Non-applicable	Systemic Non-applicable 1,5 mg/kg	ng exposure Local Non-applicable Non-applicable
	Control parameters: Substances whose occupation legislation): There are no applicable occupation DNEL (Workers): Identification Imidazole CAS: 288-32-4 EC: 206-019-2 DNEL (General population): Non-applicable PNEC:	al exposure limits have ational exposure limits f Oral Der Inha	to be moni for the subs	Short Systemic Non-applicable Non-applicable	ed in the product exposure Local Non-applicable Non-applicable	Systemic Non-applicable 1,5 mg/kg	ng exposure Local Non-applicable Non-applicable
	Control parameters: Substances whose occupation legislation): There are no applicable occupation DNEL (Workers): Identification Imidazole CAS: 288-32-4 EC: 206-019-2 DNEL (General population): Non-applicable PNEC: Identification	al exposure limits have ational exposure limits f Oral Den Inha	to be moni for the subs l mal alation	Stances containe Short Non-applicable Non-applicable Non-applicable	ed in the product exposure Local Non-applicable Non-applicable	Systemic Non-applicable 1,5 mg/kg	ng exposure Local Non-applicable Non-applicable
	Control parameters: Substances whose occupation legislation): There are no applicable occupation DNEL (Workers): Identification Imidazole CAS: 288-32-4 EC: 206-019-2 DNEL (General population): Non-applicable PNEC: Identification Imidazole	al exposure limits have a ational exposure limits f	to be moni for the subs il mal alation	Stances container Short Non-applicable Non-applicable Non-applicable	ed in the product  exposure  Local  Non-applicable  Non-applicable  Fresh water	Loi Systemic Non-applicable 1,5 mg/kg 10,6 mg/m <sup>3</sup>	ng exposure Local Non-applicable Non-applicable Non-applicable
	Control parameters: Substances whose occupation legislation): There are no applicable occupation DNEL (Workers): Identification Imidazole CAS: 288-32-4 EC: 206-019-2 DNEL (General population): Non-applicable PNEC: Identification	al exposure limits have a ational exposure limits f Oral Der Inha STP Soil	to be moni for the subs il mal alation	Stances container Short Non-applicable Non-applicable Non-applicable	ed in the product exposure Local Non-applicable Non-applicable Fresh water Marine water	Loi Systemic Non-applicable 1,5 mg/kg 10,6 mg/m <sup>3</sup>	Local       Non-applicable       Non-applicable       Non-applicable       0,13 mg/L
	Control parameters: Substances whose occupation legislation): There are no applicable occupation DNEL (Workers): Identification Imidazole CAS: 288-32-4 EC: 206-019-2 DNEL (General population): Non-applicable PNEC: Identification Imidazole CAS: 288-32-4	al exposure limits have a ational exposure limits f Oral Der Inha STP Soil	to be moni for the subs l mal alation	Stances container Short Systemic Non-applicable Non-applicable Non-applicable	ed in the product  exposure  Local  Non-applicable  Non-applicable  Fresh water	Loi Systemic Non-applicable 1,5 mg/kg 10,6 mg/m <sup>3</sup>	ng exposure Local Non-applicable Non-applicable Non-applicable
8.1	Control parameters: Substances whose occupation legislation): There are no applicable occupation DNEL (Workers): Identification Imidazole CAS: 288-32-4 EC: 206-019-2 DNEL (General population): Non-applicable PNEC: Identification Imidazole CAS: 288-32-4	al exposure limits have s ational exposure limits f Ora Der Inha STP Soil Inte	to be moni for the subs l mal alation	Stances container Short Non-applicable Non-applicable Non-applicable	ed in the product exposure Local Non-applicable Non-applicable Non-applicable Fresh water Arine water Sediment (Fresh	Loi Systemic Non-applicable 1,5 mg/kg 10,6 mg/m <sup>3</sup>	Local       Non-applicable       Non-applicable       Non-applicable       0,13 mg/L
	Control parameters: Substances whose occupation legislation): There are no applicable occupation 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	al exposure limits have a ational exposure limits f Oral Den Inha STP Soil Inte Oral	to be moni for the subs l mal alation ermittent l	Stances container Short Non-applicable Non-applicable Non-applicable	ed in the product exposure Local Non-applicable Non-applicable Non-applicable Fresh water Arine water Sediment (Fresh	Loi Systemic Non-applicable 1,5 mg/kg 10,6 mg/m <sup>3</sup>	ng exposure Local Non-applicable Non-applicable Non-applicable
8.1	Control parameters: Substances whose occupation legislation): There are no applicable occupation 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 Identification Imidazole CAS: 288-32-4 EC: 206-019-2 Identification	al exposure limits have a ational exposure limits f Oral Deri Inha STP Soil Inte Ures, such as personal p e it is recommended to with Regulation (EU) 20 e, class of protection, 7.1. All information co	to be moni for the subs for the subs mal alation ermittent l protective e use basic F 016/425. Fo .) consult t	Stances container Short Systemic Non-applicable Non-applicable Non-applicable Non-applicable 10 mg/L 0,043 mg/kg 1,3 mg/L Non-applicable equipment Personal Protect or more information lerein is a recommender Personal Protect	ed in the product  a exposure  Local  Non-applicable  Non-applicable  Non-applicable  Fresh water  Arrine water  Sediment (Fresh Sediment (Marin  ive Equipment, w tion on Personal eaflet provided b nendation which	Loi Systemic Non-applicable 1,5 mg/kg 10,6 mg/m <sup>3</sup> 10,6 mg/m <sup>3</sup>	Ing exposure Local Non-applicable Non-applicable Non-applicable 0,13 mg/L 0,013 mg/L 0,034 mg/kg 0,034 mg/kg sponding < <ce tipment (storage, cturer. For more pecification from</ce 

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FION	8: EXPOSURE	CONTROLS/PERSONA	L PROTECTION	ON (continued)		
	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 th contaminant inside the face mask. If the contaminant comes with warnings it is commended to use isolation equipment.
C	Specific protectio	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	Rep	lace the gloves at any sign of deterioratic
D	Eye and face prot	ection				
	Pictogram	PPE	Labelling	CEN Standard		Remarks
	Mandatory face protection	Face shield	CATI	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	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		or professional use only. Clean periodicall cording to the manufacturer's instructions
	Mandatory foot protection	Safety footwear for protection against chemical risk		EN ISO 20345:2011 EN 13832-1:2019	R	eplace boots at any sign of deterioration.
F	Additional emerge	ency measures				
	Emergency me	asure St	andards	Emergency meas	ure	Standards
	Emergency she	ISO 3864-1:20	SI Z358-1 111, ISO 3864-4:20	11 Eyewash station	าร	DIN 12 899 ISO 3864-1:2011, ISO 3864-4:2011
En	vironmental exp	osure controls:				
						nmended to avoid environmental
•	lage of both the p latile organic co	product and its container. mpounds:	. FOI auditional	mormation see subsect	1011 7.1	υ.
	•	ive 2010/75/EU, this proc	luct has the foll	owing characteristics:		
	V.O.C. (Supply):	· · · ·	weight	<b>J</b>		
	V.O.C. density at		m <sup>3</sup> (0 g/L)			
	Average carbon r	-	applicable			
	-		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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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/m³							
	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 *							
	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 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 info								

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Date of compilation: 23/06/2020 Revised: 12/10/2023 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. 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<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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Legislation CZ0040 - Rhamnogalacturonan Lyase 11A, *Clostridium* 

thermocellum

## Date of compilation: 23/06/2020 Revised: 12/10/2023 Version: 2 (Replaced 1) SECTION 11: TOXICOLOGICAL INFORMATION (continued) E- Sensitizing effects: - Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous with sensitising effects. For more information see section 3. Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3. F- Specific target organ toxicity (STOT) - single exposure: 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. G- Specific target organ toxicity (STOT)-repeated exposure: - Specific target organ toxicity (STOT)-repeated exposure: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3. Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3. H- Aspiration hazard: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3. Other information: Non-applicable Specific toxicology information on the substances: Identification Acute toxicity Genus Imidazole LD50 oral 500 mg/kg (ATEi) CAS: 288-32-4 LD50 dermal >2000 mg/kg EC: 206-019-2 LC50 inhalation >5 mg/L 11.2 Information on other hazards: **Endocrine disrupting properties** Endocrine-disrupting properties: The product does not meet the criteria. Other information Non-applicable SECTION 12: ECOLOGICAL INFORMATION The experimental information related to the eco-toxicological properties of the product itself is not available 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. 12.1 Toxicity: Not available 12.2 Persistence and degradability: Not available 12.3 Bioaccumulative potential: Not available 12.4 Mobility in soil: Not available 12.5 Results of PBT and vPvB assessment: Product does not meet PBT/vPvB criteria 12.6 Endocrine disrupting properties: Endocrine-disrupting properties: The product does not meet the criteria. 12.7 Other adverse effects: Not described

- CONTINUED ON NEXT PAGE -

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## 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:

14.1	•••••••••••••••	Non-applicable
14.2	UN proper shipping name:	Non-applicable
14.3	· · · · · · · · · · · · · · · · · · ·	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:	
<b>T</b>		
•	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
14.3	Transport hazard class(es):	Non-applicable
	Labels:	Non-applicable
	Packing group:	Non-applicable
14.5	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	· · · · · · · · · · · · · · · · · · ·	Non-applicable
	according to IMO instruments:	
Trancas		
rranspo	rt of dangerous goods by air:	

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ANSPORT INFORMATION (	continued)	
d 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 ( d 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)d to IATA/ICAO 2023:UN number or ID number:UN proper shipping name:UN proper shipping name:Transport hazard class(es):Labels:Packing group:Environmental hazards:Special precautions for userPhysico-Chemical properties:Maritime transport in bulk according to IMO

## 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

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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	phrases mentioned in section	on 2:
H315: Causes skin irritation.		
H360D: May damage the un		
H319: Causes serious eye i		
Texts of the legislative p	phrases mentioned in section	on 3:
	ot refer to the product itself; th	hey are present merely for informative purposes and refer to the
CLP Regulation (EC) No	1272/2008:	
Acute Tox. 4: H302 - Harmf	ful if swallowed.	
Eye Dam. 1: H318 - Causes	s serious eye damage.	
Repr. 1B: H360D - May dam	hage the unborn child.	
Skin Corr. 1C: H314 - Cause	es severe skin burns and eye d	lamage.
Advice related to training	g:	
	n order to prevent industrial ris v data sheet, as well as the lat	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	yms:	
ADR: European agreement	concerning the international c	arriage of dangerous goods by road
IMDG: International maritir	ne dangerous goods code	
IATA: International Air Trai	nsport Association	
ICAO: International Civil Avi	5	
COD: Chemical Oxygen Der		
BOD5: 5day biochemical oxy		
BCF: Bioconcentration facto	)r	
LD50: Lethal Dose 50	50	
LC50: Lethal Concentration		
EC50: Effective concentration		
LogPOW: Octanolwater par Koc: Partition coefficient of		
UFI: unique formula identif		
IARC: International Agency		

\*\* 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.