

**Product name: NZY Plant/Fungi RNA Isolation kit**

**Catalogue reference(s): MB45601, 50 columns**

<b>Components</b>	<b>MB45601</b>	<b>Safety Information</b>	<b>Unique Formula Identifier (UFI)</b>
Buffer NPFL	30 mL	See specific SDS	NU70-D0KW-100X-16CM
Buffer NPFR	5 mL	Not Hazardous *	
Buffer NPFB	45 mL	See specific SDS	UR70-V0WG-R00E-CUSJ
Buffer NPFW1	30 mL	Not Hazardous *	
Buffer NPFW2 (concentrate)	25 mL	Not Hazardous *	
RNase-free Water	13 mL	Not Hazardous *	
NZYSpin RNA Plant/Fungi Columns	50 un	Not Hazardous *	
NZYSpin RNA Plant/Fungi Filter Columns	50 un	Not Hazardous *	
Collection Tubes (2 mL)	150 un	Not Hazardous *	
Collection Tubes (1.5 mL)	50 un	Not Hazardous *	

\*The component mentioned above is not classified as hazardous according to CLP regulation (EC) No 1272/2008. Consequently, does not require a Safety Data Sheet (SDS), according to Regulation (EC) No 1907/2006, emended by Regulation (EU) No 2020/878.

**MB456 - Buffer NPFL**

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

- 1.1 Product identifier:** MB456 - Buffer NPFL  
**Other means of identification:**  
Not relevant
- 1.2 Relevant identified uses of the substance or mixture and uses advised against:**  
Relevant uses: Laboratory. For professional users only.  
Uses advised against: All uses not specified in this section or in section 7.3
- 1.3 Details of the supplier of the safety data sheet:**  
NZYtech, Lda  
Estrada do Paco do Lumiar Campus do Lumiar - Edif. E, r/c  
1649-038 Lisboa - Lisboa - Portugal  
Phone: +351 213643514  
info@nzytech.com  
www.nzytech.com
- 1.4 Emergency telephone number:** National Poison Center (Portugal) CIAV: +351 800 250 250; Outside Portugal: Call your regional Poisons Information Service or call local Life Saving Service.

**SECTION 2: HAZARDS IDENTIFICATION**

- 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.  
Acute Tox. 4: Acute toxicity if swallowed, Category 4, H302  
Eye Irrit. 2: Eye irritation, Category 2, H319  
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:  
**Warning**  
  
**Hazard statements:**  
Not relevant  
**Precautionary statements:**  
Not relevant  
**Substances that contribute to the classification**  
guanidinium chloride  
**UFI:** NU70-D0KW-100X-16CM
- 2.3 Other hazards:**  
Product does not meet PBT/vPvB criteria  
Endocrine-disrupting properties: The product does not meet the criteria.

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

- 3.1 Substance:**  
Non-applicable
- 3.2 Mixture:**  
**Chemical description:** Mixture of substances  
**Components:**  
In accordance with Annex II of Regulation (EC) No 1907/2006 (point 3), the product contains:

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

Identification	Chemical name/Classification	Concentration
CAS: 50-01-1 EC: 200-002-3 Index: 607-148-00-0 REACH: 01-2119977063-35-XXXX	<b>guanidinium chloride<sup>(1)</sup></b> <span style="float: right;">Self-classified</span>	<b>36 - &lt;50 %</b>  
	Regulation 1272/2008    Acute Tox. 4: H302; Eye Irrit. 2: H319; Skin Irrit. 2: H315 - Warning	
CAS: 60-00-4 EC: 200-449-4 Index: 607-429-00-8 REACH: 01-2119486399-18-XXXX	<b>edetic acid<sup>(1)</sup></b> <span style="float: right;">ATP ATP01</span>	<b>1 - &lt;10 %</b>  
	Regulation 1272/2008    Eye Irrit. 2: H319 - Warning	

<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.

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	Acute toxicity		Genus
guanidinium chloride	LD50 oral	907 mg/kg	Rat
CAS: 50-01-1	LD50 dermal	Not relevant	
EC: 200-002-3	LC50 inhalation	Not relevant	

#### 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:

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

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

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

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

Not relevant

#### 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.

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**SECTION 5: FIREFIGHTING MEASURES (continued)****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 spilled 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**

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**

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

**D.- Technical recommendations to prevent environmental risks**

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

**7.2 Conditions for safe storage, including any incompatibilities:****A.- Technical measures for storage**

Store in a cool, dry, well-ventilated location

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

**B.- General conditions for storage**

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

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

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

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

**8.1 Control parameters:**

Substances whose occupational exposure limits have to be monitored in the workplace (European OEL, not country-specific legislation):

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

**DNEL (Workers):**

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
guanidinium chloride CAS: 50-01-1 EC: 200-002-3	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	1 mg/kg	Not relevant
	Inhalation	10,5 mg/m <sup>3</sup>	Not relevant	3,5 mg/m <sup>3</sup>	Not relevant
edetic acid CAS: 60-00-4 EC: 200-449-4	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	Not relevant	Not relevant
	Inhalation	Not relevant	3 mg/m <sup>3</sup>	Not relevant	1,5 mg/m <sup>3</sup>

**DNEL (General population):**

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
guanidinium chloride CAS: 50-01-1 EC: 200-002-3	Oral	Not relevant	Not relevant	0,5 mg/kg	Not relevant
	Dermal	Not relevant	Not relevant	0,5 mg/kg	Not relevant
	Inhalation	Not relevant	Not relevant	0,87 mg/m <sup>3</sup>	Not relevant
edetic acid CAS: 60-00-4 EC: 200-449-4	Oral	Not relevant	Not relevant	25 mg/kg	Not relevant
	Dermal	Not relevant	Not relevant	Not relevant	Not relevant
	Inhalation	Not relevant	1,2 mg/m <sup>3</sup>	Not relevant	0,6 mg/m <sup>3</sup>

**PNEC:**

Identification					
edetic acid CAS: 60-00-4 EC: 200-449-4	STP	43 mg/L	Fresh water	2,2 mg/L	
	Soil	0,72 mg/kg	Marine water	0,22 mg/L	
	Intermittent	1,2 mg/L	Sediment (Fresh water)	Not relevant	
	Oral	Not relevant	Sediment (Marine water)	Not relevant	

**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**

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



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

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



Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory hand protection	Protective gloves against minor risks			Replace gloves in case of any sign of damage. For prolonged periods of exposure to the product for professional users/industrials, we recommend using CE III gloves in line with standards EN ISO 21420:2020 and EN ISO 374-1:2016+A1:2018

As the product is a mixture of several substances, the resistance of the glove material can not be calculated in advance with total reliability and has therefore to be checked prior to the application.



**D.- Eye and face protection**

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory face protection	Panoramic glasses against splash/projections.		EN 166:2002 EN ISO 4007:2018	Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing.

**E.- Body protection**

Pictogram	PPE	Labelling	CEN Standard	Remarks
	Work clothing			Replace before any evidence of deterioration. For periods of prolonged exposure to the product for professional/industrial users CE III is recommended, in accordance with the regulations in EN ISO 6529:2013, EN ISO 6530:2005, EN ISO 13688:2013, EN 464:1994.
	Anti-slip work shoes		EN ISO 20347:2012	Replace before any evidence of deterioration. For periods of prolonged exposure to the product for professional/industrial users CE III is recommended, in accordance with the regulations in EN ISO 20345:2012 y EN 13832-1:2007

**F.- Additional emergency measures**

Emergency measure	Standards	Emergency measure	Standards
 Emergency shower	ANSI Z358-1 ISO 3864-1:2011, ISO 3864-4:2011	 Eyewash stations	DIN 12 899 ISO 3864-1:2011, ISO 3864-4:2011

**Environmental exposure controls:**

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

**Volatile organic compounds:**

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

V.O.C. (Supply):	0 % weight
V.O.C. density at 20 °C:	0 kg/m <sup>3</sup> (0 g/L)
Average carbon number:	Not relevant
Average molecular weight:	Not relevant

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

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

For complete information see the product datasheet.

**Appearance:**

Physical state at 20 °C:	Liquid
Appearance:	Not available
Colour:	Colourless
Odour:	Not available

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

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

Odour threshold:	Not relevant *
<b>Volatility:</b>	
Boiling point at atmospheric pressure:	100 °C
Vapour pressure at 20 °C:	2350 Pa
Vapour pressure at 50 °C:	12381,01 Pa (12,38 kPa)
Evaporation rate at 20 °C:	Not relevant *
<b>Product description:</b>	
Density at 20 °C:	1145 kg/m <sup>3</sup>
Relative density at 20 °C:	1,145
Dynamic viscosity at 20 °C:	Not relevant *
Kinematic viscosity at 20 °C:	Not relevant *
Kinematic viscosity at 40 °C:	Not relevant *
Concentration:	Not relevant *
pH:	6 - 8
Vapour density at 20 °C:	Not relevant *
Partition coefficient n-octanol/water 20 °C:	Not relevant *
Solubility in water at 20 °C:	Not relevant *
Solubility properties:	Not relevant *
Decomposition temperature:	Not relevant *
Melting point/freezing point:	Not relevant *
<b>Flammability:</b>	
Flash Point:	Non Flammable (>60 °C)
Flammability (solid, gas):	Not relevant *
Autoignition temperature:	Not relevant *
Lower flammability limit:	Not relevant *
Upper flammability limit:	Not relevant *
<b>Particle characteristics:</b>	
Median equivalent diameter:	Non-applicable

#### 9.2 Other information:

##### Information with regard to physical hazard classes:

Explosive properties:	Not relevant *
Oxidising properties:	Not relevant *
Corrosive to metals:	Not relevant *
Heat of combustion:	Not relevant *
Aerosols-total percentage (by mass) of flammable components:	Not relevant *

##### Other safety characteristics:

Surface tension at 20 °C:	Not relevant *
Refraction index:	Not relevant *

\*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.

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### SECTION 10: STABILITY AND REACTIVITY (continued)

#### 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	Not applicable	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: The consumption of a considerable dose can cause irritation in the throat, abdominal pain, nausea and vomiting.
- 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, as it does not 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: Not relevant
- 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: 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.

##### 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.

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

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:**

Not relevant

**Specific toxicology information on the substances:**

Identification	Acute toxicity		Genus
edetic acid CAS: 60-00-4 EC: 200-449-4	LD50 oral	2581 mg/kg	Rat
	LD50 dermal	>2000 mg/kg	
	LC50 inhalation	>5 mg/L	
guanidinium chloride CAS: 50-01-1 EC: 200-002-3	LD50 oral	907 mg/kg (ATEi)	Rat
	LD50 dermal	>2000 mg/kg	
	LC50 inhalation	>5 mg/L	

**Acute Toxicity Estimate (ATE mix):**

ATE mix		Ingredient(s) of unknown toxicity
Oral	1851,02 mg/kg (Calculation method)	0 %
Dermal	>2000 mg/kg (Calculation method)	Non-applicable
Inhalation	>20 mg/L (4 h) (Calculation method)	Non-applicable

**11.2 Information on other hazards:**

**Endocrine disrupting properties**

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

**Other information**

Not relevant

#### 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:**

**Acute toxicity:**

Identification	Concentration		Species	Genus
edetic acid CAS: 60-00-4 EC: 200-449-4	LC50	41 mg/L (96 h)	Lepomis macrochirus	Fish
	EC50	610 mg/L (24 h)	Daphnia magna	Crustacean
	EC50	1,01 mg/L (72 h)	Scenedesmus subspicatus	Algae

**Chronic toxicity:**

Identification	Concentration		Species	Genus
guanidinium chloride CAS: 50-01-1 EC: 200-002-3	NOEC	181 mg/L	Pimephales promelas	Fish
	NOEC	2,9 mg/L	Daphnia magna	Crustacean
edetic acid CAS: 60-00-4 EC: 200-449-4	NOEC	25,7 mg/L	Danio rerio	Fish
	NOEC	25 mg/L	Daphnia magna	Crustacean

**12.2 Persistence and degradability:**

**Substance-specific information:**

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

Identification	Degradability		Biodegradability	
	guanidinium chloride CAS: 50-01-1 EC: 200-002-3	BOD5	Not relevant	Concentration
	COD	Not relevant	Period	22 days
	BOD5/COD	Not relevant	% Biodegradable	100 %

#### 12.3 Bioaccumulative potential:

##### Substance-specific information:

Identification	Bioaccumulation potential	
	guanidinium chloride CAS: 50-01-1 EC: 200-002-3	BCF
	Pow Log	-1.63
	Potential	Low
edetic acid CAS: 60-00-4 EC: 200-449-4	BCF	13
	Pow Log	-3.34
	Potential	Low

#### 12.4 Mobility in soil:

Identification	Absorption/desorption		Volatility	
	edetic acid CAS: 60-00-4 EC: 200-449-4	Koc	1046	Henry
	Conclusion	Low	Dry soil	No
	Surface tension	Not relevant	Moist soil	No

#### 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

#### 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	Hazardous

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

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

##### 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-hazardous 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:

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### SECTION 14: TRANSPORT INFORMATION (continued)

<b>14.1 UN number or ID number:</b>	Not relevant
<b>14.2 UN proper shipping name:</b>	Not relevant
<b>14.3 Transport hazard class(es):</b>	Not relevant
Labels:	Not relevant
<b>14.4 Packing group:</b>	Not relevant
<b>14.5 Environmental hazards:</b>	No
<b>14.6 Special precautions for user</b>	
Special regulations:	Not relevant
Tunnel restriction code:	Not relevant
Physico-Chemical properties:	see section 9
Limited quantities:	Not relevant
<b>14.7 Maritime transport in bulk according to IMO instruments:</b>	Not relevant

**Transport of dangerous goods by sea:**

With regard to IMDG 41-22:

<b>14.1 UN number or ID number:</b>	Not relevant
<b>14.2 UN proper shipping name:</b>	Not relevant
<b>14.3 Transport hazard class(es):</b>	Not relevant
Labels:	Not relevant
<b>14.4 Packing group:</b>	Not relevant
<b>14.5 Marine pollutant:</b>	No
<b>14.6 Special precautions for user</b>	
Special regulations:	Not relevant
EmS Codes:	
Physico-Chemical properties:	see section 9
Limited quantities:	Not relevant
Segregation group:	Not relevant
<b>14.7 Maritime transport in bulk according to IMO instruments:</b>	Not relevant

**Transport of dangerous goods by air:**

With regard to IATA/ICAO 2024:

<b>14.1 UN number or ID number:</b>	Not relevant
<b>14.2 UN proper shipping name:</b>	Not relevant
<b>14.3 Transport hazard class(es):</b>	Not relevant
Labels:	Not relevant
<b>14.4 Packing group:</b>	Not relevant
<b>14.5 Environmental hazards:</b>	No
<b>14.6 Special precautions for user</b>	
Physico-Chemical properties:	see section 9
<b>14.7 Maritime transport in bulk according to IMO instruments:</b>	Not relevant

### SECTION 15: REGULATORY INFORMATION

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

- Article 95, REGULATION (EU) No 528/2012: Not relevant
- Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Not relevant
- Regulation (EC) No 1005/2009, about substances that deplete the ozone layer: Not relevant
- REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Not relevant
- Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Not relevant

**Seveso III:**

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

Not relevant

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

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.:**

Not relevant

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

- H319: Causes serious eye irritation.
- H315: Causes skin irritation.
- H302: Harmful if swallowed.

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

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

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

- Acute Tox. 4: H302 - Harmful if swallowed.
- Eye Irrit. 2: H319 - Causes serious eye irritation.
- Skin Irrit. 2: H315 - Causes skin irritation.

**Classification procedure:**

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

**Advice related to training:**

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

**Principal bibliographical sources:**

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

**Abbreviations and acronyms:**

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

ADR: European agreement concerning the international carriage of dangerous goods by road  
IMDG: International maritime dangerous goods code  
IATA: International Air Transport Association  
ICAO: International Civil Aviation Organisation  
COD: Chemical Oxygen Demand  
BOD5: 5day biochemical oxygen demand  
BCF: Bioconcentration factor  
LD50: Lethal Dose 50  
LC50: Lethal Concentration 50  
EC50: Effective concentration 50  
LogPOW: Octanolwater partition coefficient  
Koc: Partition coefficient of organic carbon  
UFI: unique formula identifier  
IARC: International Agency for Research on Cancer

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

- END OF SAFETY DATA SHEET -

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

- 1.1 Product identifier:** MB456 - Buffer NPFB  
**Other means of identification:**  
Not relevant
- 1.2 Relevant identified uses of the substance or mixture and uses advised against:**  
Relevant uses: Laboratory. For professional users only.  
Uses advised against: All uses not specified in this section or in section 7.3
- 1.3 Details of the supplier of the safety data sheet:**  
NZYtech, Lda  
Estrada do Paco do Lumiar Campus do Lumiar - Edif. E, r/c  
1649-038 Lisboa - Lisboa - Portugal  
Phone: +351 213643514  
info@nzytech.com  
www.nzytech.com
- 1.4 Emergency telephone number:** National Poison Center (Portugal) CIAV: +351 800 250 250; Outside Portugal: Call your regional Poisons Information Service or call local Life Saving Service.

**SECTION 2: HAZARDS IDENTIFICATION**

- 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.  
Acute Tox. 4: Acute toxicity if swallowed, Category 4, H302  
Eye Irrit. 2: Eye irritation, Category 2, H319  
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:  
**Warning**  
  
**Hazard statements:**  
Not relevant  
**Precautionary statements:**  
Not relevant  
**Substances that contribute to the classification**  
Lithium Chloride  
**UFI:** UR70-VOWG-R00E-CUSJ
- 2.3 Other hazards:**  
Product does not meet PBT/vPvB criteria  
Endocrine-disrupting properties: The product does not meet the criteria.

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

- 3.1 Substance:**  
Non-applicable
- 3.2 Mixture:**  
**Chemical description:** Mixture of substances  
**Components:**  
In accordance with Annex II of Regulation (EC) No 1907/2006 (point 3), the product contains:

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

Identification	Chemical name/Classification	Concentration
CAS: 7447-41-8 EC: 231-212-3 Index: Non-applicable REACH: 01-2119560574-35-XXXX	<b>Lithium Chloride<sup>(*)</sup></b> <span style="float: right;">Self-classified</span>	<b>40 - &lt;70 %</b>  
	Regulation 1272/2008     Acute Tox. 4: H302; Eye Irrit. 2: H319; Skin Irrit. 2: H315 - Warning	

<sup>(\*)</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.

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	Acute toxicity	Genus
Lithium Chloride	LD50 oral     526 mg/kg	Rat
CAS: 7447-41-8	LD50 dermal     Not relevant	
EC: 231-212-3	LC50 inhalation     Not relevant	

### 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:

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

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

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

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

Not relevant

### 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:

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### SECTION 5: FIREFIGHTING MEASURES (continued)

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 spilled 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

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

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

D.- Technical recommendations to prevent environmental risks

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

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

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):

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

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):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Lithium Chloride CAS: 7447-41-8 EC: 231-212-3	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	73,2 mg/kg	Not relevant
	Inhalation	30 mg/m <sup>3</sup>	Not relevant	10 mg/m <sup>3</sup>	Not relevant

##### DNEL (General population):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Lithium Chloride CAS: 7447-41-8 EC: 231-212-3	Oral	21,96 mg/kg	Not relevant	7,32 mg/kg	Not relevant
	Dermal	50 mg/kg	Not relevant	73,2 mg/kg	Not relevant
	Inhalation	30 mg/m <sup>3</sup>	Not relevant	10 mg/m <sup>3</sup>	Not relevant

##### PNEC:

Identification					
Lithium Chloride CAS: 7447-41-8 EC: 231-212-3	STP	140,2 mg/L	Fresh water	10,4 mg/L	
	Soil	4,13 mg/kg	Marine water	1,04 mg/L	
	Intermittent	10,4 mg/L	Sediment (Fresh water)	49,9 mg/kg	
	Oral	Not relevant	Sediment (Marine water)	4,99 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



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

C.- Specific protection for the hands

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory hand protection	Chemical protective gloves (Material: Nitrile, Breakthrough time: > 480 min, Thickness: 0.11 mm)		EN ISO 21420:2020	Replace the gloves at any sign of deterioration.

As the product is a mixture of several substances, the resistance of the glove material can not be calculated in advance with total reliability and has therefore to be checked prior to the application.

D.- Eye and face protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory face protection	Panoramic glasses against splash/projections.		EN 166:2002 EN ISO 4007:2018	Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing.

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

##### E.- Body protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
	Work clothing			Replace before any evidence of deterioration. For periods of prolonged exposure to the product for professional/industrial users CE III is recommended, in accordance with the regulations in EN ISO 6529:2013, EN ISO 6530:2005, EN ISO 13688:2013, EN 464:1994.
	Anti-slip work shoes		EN ISO 20347:2012	Replace before any evidence of deterioration. For periods of prolonged exposure to the product for professional/industrial users CE III is recommended, in accordance with the regulations in EN ISO 20345:2012 y EN 13832-1:2007

##### F.- Additional emergency measures

Emergency measure	Standards	Emergency measure	Standards
 Emergency shower	ANSI Z358-1 ISO 3864-1:2011, ISO 3864-4:2011	 Eyewash stations	DIN 12 899 ISO 3864-1:2011, ISO 3864-4:2011

##### Environmental exposure controls:

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

##### Volatile organic compounds:

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

V.O.C. (Supply):	0 % weight
V.O.C. density at 20 °C:	0 kg/m <sup>3</sup> (0 g/L)
Average carbon number:	Not relevant
Average molecular weight:	Not relevant

#### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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

For complete information see the product datasheet.

##### Appearance:

Physical state at 20 °C:	Liquid
Appearance:	Not available
Colour:	Colourless
Odour:	Odourless
Odour threshold:	Not relevant *

##### Volatility:

Boiling point at atmospheric pressure:	100 °C
Vapour pressure at 20 °C:	2350 Pa
Vapour pressure at 50 °C:	12381,01 Pa (12,38 kPa)
Evaporation rate at 20 °C:	Not relevant *

##### Product description:

Density at 20 °C:	1589,9 kg/m <sup>3</sup>
Relative density at 20 °C:	1,59
Dynamic viscosity at 20 °C:	2,79 cP
Kinematic viscosity at 20 °C:	1,76 mm <sup>2</sup> /s
Kinematic viscosity at 40 °C:	Not relevant *

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

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

Concentration:	Not relevant *
pH:	4 - 6
Vapour density at 20 °C:	Not relevant *
Partition coefficient n-octanol/water 20 °C:	Not relevant *
Solubility in water at 20 °C:	Not relevant *
Solubility properties:	Not relevant *
Decomposition temperature:	Not relevant *
Melting point/freezing point:	Not relevant *

**Flammability:**

Flash Point:	Non Flammable (>60 °C)
Flammability (solid, gas):	Not relevant *
Autoignition temperature:	Not relevant *
Lower flammability limit:	Not relevant *
Upper flammability limit:	Not relevant *

**Particle characteristics:**

Median equivalent diameter:	Non-applicable
-----------------------------	----------------

**9.2 Other information:**

**Information with regard to physical hazard classes:**

Explosive properties:	Not relevant *
Oxidising properties:	Not relevant *
Corrosive to metals:	Not relevant *
Heat of combustion:	Not relevant *
Aerosols-total percentage (by mass) of flammable components:	Not relevant *

**Other safety characteristics:**

Surface tension at 20 °C:	Not relevant *
Refraction index:	Not relevant *

\*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	Not applicable	Not applicable	Avoid alkalis or strong bases

**10.6 Hazardous decomposition products:**

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## SECTION 10: STABILITY AND REACTIVITY (continued)

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: The consumption of a considerable dose can cause irritation in the throat, abdominal pain, nausea and vomiting.
- 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, as it does not 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: Not relevant
- 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: 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.

#### 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:

Not relevant

#### Specific toxicology information on the substances:

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

Identification	Acute toxicity		Genus
	LD50 oral	LD50 dermal	
Lithium Chloride	526 mg/kg (ATEi)	>2000 mg/kg	Rat
CAS: 7447-41-8		>5 mg/L	
EC: 231-212-3			

**Acute Toxicity Estimate (ATE mix):**

ATE mix		Ingredient(s) of unknown toxicity
Oral	762,32 mg/kg (Calculation method)	0 %
Dermal	>2000 mg/kg (Calculation method)	Non-applicable
Inhalation	>20 mg/L (4 h) (Calculation method)	Non-applicable

**11.2 Information on other hazards:**

**Endocrine disrupting properties**

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

**Other information**

Not relevant

#### 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:**

**Chronic toxicity:**

Identification	Concentration		Species	Genus
	NOEC	Concentration		
Lithium Chloride	NOEC	17,35 mg/L	Danio rerio	Fish
CAS: 7447-41-8 EC: 231-212-3	NOEC	1,7 mg/L	Daphnia magna	Crustacean

**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

#### 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	Hazardous

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

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

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

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**SECTION 13: DISPOSAL CONSIDERATIONS (continued)**

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-hazardous 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:** Not relevant
- 14.2 UN proper shipping name:** Not relevant
- 14.3 Transport hazard class(es):** Not relevant
- Labels: Not relevant
- 14.4 Packing group:** Not relevant
- 14.5 Environmental hazards:** No
- 14.6 Special precautions for user**
- Special regulations: Not relevant
- Tunnel restriction code: Not relevant
- Physico-Chemical properties: see section 9
- Limited quantities: Not relevant
- 14.7 Maritime transport in bulk according to IMO instruments:** Not relevant

**Transport of dangerous goods by sea:**

With regard to IMDG 41-22:

- 14.1 UN number or ID number:** Not relevant
- 14.2 UN proper shipping name:** Not relevant
- 14.3 Transport hazard class(es):** Not relevant
- Labels: Not relevant
- 14.4 Packing group:** Not relevant
- 14.5 Marine pollutant:** No
- 14.6 Special precautions for user**
- Special regulations: Not relevant
- EmS Codes:
- Physico-Chemical properties: see section 9
- Limited quantities: Not relevant
- Segregation group: Not relevant
- 14.7 Maritime transport in bulk according to IMO instruments:** Not relevant

**Transport of dangerous goods by air:**

With regard to IATA/ICAO 2024:

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**SECTION 14: TRANSPORT INFORMATION (continued)**

<b>14.1 UN number or ID number:</b>	Not relevant
<b>14.2 UN proper shipping name:</b>	Not relevant
<b>14.3 Transport hazard class(es):</b>	Not relevant
Labels:	Not relevant
<b>14.4 Packing group:</b>	Not relevant
<b>14.5 Environmental hazards:</b>	No
<b>14.6 Special precautions for user</b>	
Physico-Chemical properties:	see section 9
<b>14.7 Maritime transport in bulk according to IMO instruments:</b>	Not relevant

**SECTION 15: REGULATORY INFORMATION****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:**

- Article 95, REGULATION (EU) No 528/2012: Not relevant
- Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Not relevant
- Regulation (EC) No 1005/2009, about substances that deplete the ozone layer: Not relevant
- REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Not relevant
- Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Not relevant

**Seveso III:**

Not relevant

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

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.:**

Not relevant

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

H315: Causes skin irritation.

H302: Harmful if swallowed.

H319: Causes serious eye irritation.

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

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

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

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**MB456 - Buffer NPFB**

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

Acute Tox. 4: H302 - Harmful if swallowed.  
Eye Irrit. 2: H319 - Causes serious eye irritation.  
Skin Irrit. 2: H315 - Causes skin irritation.

**Classification procedure:**

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

**Advice related to training:**

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

**Principal bibliographical sources:**

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

**Abbreviations and acronyms:**

ADR: European agreement concerning the international carriage of dangerous goods by road  
IMDG: International maritime dangerous goods code  
IATA: International Air Transport Association  
ICAO: International Civil Aviation Organisation  
COD: Chemical Oxygen Demand  
BOD5: 5day biochemical oxygen demand  
BCF: Bioconcentration factor  
LD50: Lethal Dose 50  
LC50: Lethal Concentration 50  
EC50: Effective concentration 50  
LogPOW: Octanolwater partition coefficient  
Koc: Partition coefficient of organic carbon  
UFI: unique formula identifier  
IARC: International Agency for Research on Cancer

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

- END OF SAFETY DATA SHEET -