

**MB161 - Glycerol**

Date of compilation: 06/01/2020

Version: 1

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

**1.1 Product identifier:** MB161 - Glycerol

Glycerol

CAS: 56-81-5

EC: 200-289-5

Index: Non-applicable

REACH: 01-2119471987-18-XXXX

**1.2 Relevant identified uses of the substance or mixture and uses advised against:**

Relevant uses: Laboratory. For professional user 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

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 telephone number:** +351 213 643 514

Local time: Monday to Friday 9.00 am to 18.00

National Poison Information Centre (Europe UK): +44 0845 4647 (this service is only available to health professionals)

**SECTION 2: HAZARDS IDENTIFICATION**

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

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

The product is not classified as hazardous according to CLP Regulation (EC) No 1272/2008.

**2.2 Label elements:**

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

None

**2.3 Other hazards:**

Product fails to meet PBT/vPvB criteria

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

**3.1 Substance:**

**Chemical description:** Organic substance

**Components:**

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

Identification	Chemical name/Classification	Concentration
CAS: 56-81-5 EC: 200-289-5 Index: Non-applicable REACH: 01-2119471987-18-XXXX	<b>Glycerol</b> Regulation 1272/2008	Not classified <b>100 %</b>

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

**3.2 Mixture:**

Non-applicable

**SECTION 4: FIRST AID MEASURES**

**4.1 Description of first aid measures:**

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**SECTION 4: FIRST AID MEASURES (continued)**

Consult a doctor in case of discomfort showing the SDS for the product.

**By inhalation:**

In case of symptoms, move the person affected into fresh air.

**By skin contact:**

In case of contact it is recommended to clean the affected area thoroughly with water and neutral soap. In case of changes to the skin (stinging, redness, rashes, blisters,...), seek medical advice with this Safety data Sheet

**By eye contact:**

Rinse with water until the product has been eliminated. In case of problems, consult a doctor showing the SDS for the product.

**By ingestion/aspiration:**

In case of consumption in large quantities, it is recommended to seek medical assistance.

**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:**

Non-applicable

**SECTION 5: FIREFIGHTING MEASURES****5.1 Extinguishing media:**

Product is non-flammable, with a low risk of fire due to the flammability characteristics of the product in normal conditions of storage, handling and use. In the case of the existence of sustained combustion as a result of improper handling, storage or use any type of extinguishing agent can be used (ABC Powder, water,...)

**5.2 Special hazards arising from the substance or mixture:**

Due to its non-flammable nature, the product does not present a fire risk under normal conditions of storage, handling and use.

**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:**

Isolate leaks provided that there is no additional risk for the people performing this task.

**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:**

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

**A.- Precautions for safe manipulation**

Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.

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

It is recommended to transfer at a slow speed to avoid the creation of electrostatic charges that could affect flammable products. Consult section 10 for conditions and materials that should be avoided.

**C.- Technical recommendations to prevent ergonomic and toxicological risks**

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

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

It is not necessary to take special measures to prevent environmental risks. For more information see subsection 6.2

**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):**

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

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

**DNEL (Workers):**

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Glycerol	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
CAS: 56-81-5	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
EC: 200-289-5	Inhalation	Non-applicable	Non-applicable	Non-applicable	56 mg/m <sup>3</sup>

**DNEL (General population):**

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Glycerol	Oral	Non-applicable	Non-applicable	229 mg/kg	Non-applicable
CAS: 56-81-5	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
EC: 200-289-5	Inhalation	Non-applicable	Non-applicable	Non-applicable	33 mg/m <sup>3</sup>

**PNEC:**

Identification					
Glycerol	STP	1000 mg/L	Fresh water	0,885 mg/L	
CAS: 56-81-5	Soil	0,141 mg/kg	Marine water	0,0885 mg/L	
EC: 200-289-5	Intermittent	8,85 mg/L	Sediment (Fresh water)	3,3 mg/kg	
	Oral	Non-applicable	Sediment (Marine water)	0,33 mg/kg	

**8.2 Exposure controls:**

A.- General security and hygiene measures in the work place

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



As a preventative measure it is recommended to use basic Personal Protective Equipment, with the corresponding <<CE marking>> in accordance with Directive 89/686/EC. 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	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 420:2003+A1:2009 and EN ISO 374-1:2016

**D.- Ocular and facial protection**

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory face protection	Panoramic glasses against splash/projections.		EN 166:2001 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**

It is not necessary to take additional emergency measures.

**Environmental exposure controls:**

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

**Volatile organic compounds:**

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

V.O.C. (Supply):	0 % weight
V.O.C. density at 20 °C:	0 kg/m <sup>3</sup> (0 g/L)
Average carbon number:	Non-applicable
Average molecular weight:	Non-applicable

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

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

For complete information see the product datasheet.

**Appearance:**

Physical state at 20 °C: Liquid

\*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)**

Appearance:	Not available
Colour:	Colourless
Odour:	Odourless
Odour threshold:	Non-applicable *

**Volatility:**

Boiling point at atmospheric pressure:	182 °C
Vapour pressure at 20 °C:	Non-applicable *
Vapour pressure at 50 °C:	0,44 Pa (0 kPa)
Evaporation rate at 20 °C:	Non-applicable *

**Product description:**

Density at 20 °C:	1261 kg/m <sup>3</sup>
Relative density at 20 °C:	1,261
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:	5,5 - 8
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:	Water-soluble
Decomposition temperature:	Non-applicable *
Melting point/freezing point:	18 - 20 °C
Explosive properties:	Non-applicable *
Oxidising properties:	Non-applicable *

**Flammability:**

Flash Point:	160 °C
Flammability (solid, gas):	Non-applicable *
Autoignition temperature:	400 °C
Lower flammability limit:	2,7 % Volume
Upper flammability limit:	19 % Volume

**Explosive:**

Lower explosive limit:	2,7 g/m <sup>3</sup>
Upper explosive limit:	19 g/m <sup>3</sup>

**9.2 Other information:**

Surface tension at 20 °C:	Non-applicable *
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.

**10.2 Chemical stability:**

Chemically stable under the conditions of storage, handling and use.

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

**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 toxicological effects:**

**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
- Corrosivity/Irritability: Based on available data, the classification criteria are not met

B- Inhalation (acute effect):

- Acute toxicity : Based on available data, the classification criteria are not met
- Corrosivity/Irritability: Based on available data, the classification criteria are not met

C- Contact with the skin and the eyes (acute effect):

- Contact with the skin: Based on available data, the classification criteria are not met
- Contact with the eyes: Based on available data, the classification criteria are not met

D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):

- Carcinogenicity: Based on available data, the classification criteria are not met  
IARC: Non-applicable
- Mutagenicity: Based on available data, the classification criteria are not met
- Reproductive toxicity: Based on available data, the classification criteria are not met

E- Sensitizing effects:

- Respiratory: Based on available data, the classification criteria are not met
- Cutaneous: Based on available data, the classification criteria are not met

F- Specific target organ toxicity (STOT) - single exposure:

Based on available data, the classification criteria are not met

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
- Skin: Based on available data, the classification criteria are not met

H- Aspiration hazard:

Based on available data, the classification criteria are not met

**Other information:**

Non-applicable

**Product-specific toxicological information:**

Acute toxicity		Genus
LD50 oral	12600 mg/kg	Rat
LD50 dermal	10000 mg/kg	Rabbit

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### SECTION 11: TOXICOLOGICAL INFORMATION (continued)

#### Specific toxicology information on the substances:

Identification	Acute toxicity		Genus
	LD50 oral	LD50 dermal	
Glycerol	12600 mg/kg	>2000 mg/kg	Rat
CAS: 56-81-5		>20 mg/L	
EC: 200-289-5			

### SECTION 12: ECOLOGICAL INFORMATION

#### 12.1 Toxicity:

Not available

#### 12.2 Persistence and degradability:

Identification	Degradability		Biodegradability	
	BOD5	COD	Concentration	Period
Glycerol	Non-applicable	Non-applicable	100 mg/L	14 days
CAS: 56-81-5				
EC: 200-289-5			% Biodegradable	63 %

#### 12.3 Bioaccumulative potential:

Identification	Bioaccumulation potential	
	BCF	Pow Log
Glycerol	3	-1.76
CAS: 56-81-5		
EC: 200-289-5		Low

#### 12.4 Mobility in soil:

Identification	Absorption/desorption		Volatility	
	Koc	Conclusion	Henry	Dry soil
Glycerol	Non-applicable	Non-applicable	Non-applicable	Non-applicable
CAS: 56-81-5				
EC: 200-289-5		6,516E-2 N/m (25 °C)	Moist soil	Non-applicable

#### 12.5 Results of PBT and vPvB assessment:

Product fails to meet PBT/vPvB criteria

#### 12.6 Other adverse effects:

Not described

### SECTION 13: DISPOSAL CONSIDERATIONS

#### 13.1 Waste treatment methods:

Code	Description	Waste class (Regulation (EU) No 1357/2014)
16 03 06	organic wastes other than those mentioned in 16 03 05	Non dangerous

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

Non-applicable

#### 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. We do not recommend disposal down the drain. 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

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

**Transport of dangerous goods by land:**

With regard to ADR 2019 and RID 2019:

- 14.1 UN number:** Non-applicable
- 14.2 UN proper shipping name:** Non-applicable
- 14.3 Transport hazard class(es):** Non-applicable
- Labels: Non-applicable
- 14.4 Packing group:** Non-applicable
- 14.5 Environmental hazards:** No
- 14.6 Special precautions for user**
- Special regulations: Non-applicable
- Tunnel restriction code: Non-applicable
- Physico-Chemical properties: see section 9
- Limited quantities: Non-applicable
- 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:** Non-applicable

**Transport of dangerous goods by sea:**

With regard to IMDG 38-16:

- 14.1 UN number:** Non-applicable
- 14.2 UN proper shipping name:** Non-applicable
- 14.3 Transport hazard class(es):** Non-applicable
- Labels: Non-applicable
- 14.4 Packing group:** Non-applicable
- 14.5 Environmental hazards:** No
- 14.6 Special precautions for user**
- Special regulations: Non-applicable
- EmS Codes:
- Physico-Chemical properties: see section 9
- Limited quantities: Non-applicable
- Segregation group: Non-applicable
- 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:** Non-applicable

**Transport of dangerous goods by air:**

With regard to IATA/ICAO 2019:

- 14.1 UN number:** Non-applicable
- 14.2 UN proper shipping name:** Non-applicable
- 14.3 Transport hazard class(es):** Non-applicable
- Labels: Non-applicable
- 14.4 Packing group:** Non-applicable
- 14.5 Environmental hazards:** No
- 14.6 Special precautions for user**
- Physico-Chemical properties: see section 9
- 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:** Non-applicable

**SECTION 15: REGULATORY INFORMATION**

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

Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Non-applicable  
 Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Non-applicable  
 Regulation (EC) No 1005/2009, about substances that deplete the ozone layer: Non-applicable

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

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 ...):**

Non-applicable

**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:**

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 (Regulation (EC) No 2015/830)

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

Non-applicable

**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:**

Non-applicable

**Advice related to training:**

Minimal 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: 5-day biochemical oxygen demand

BCF: Bioconcentration factor

LD50: Lethal Dose 50

LC50: Lethal Concentration 50

EC50: Effective concentration 50

Log-POW: Octanol-water partition coefficient

Koc: Partition coefficient of organic carbon

Product safety information sheet prepared in accordance with Article 32 of Regulation (EC) 1907/2006 (REACH); this document does not constitute a Safety Data Sheet under Article 31 of Regulation (EC) No. 1907/2006, as a Safety Data Sheet is not mandatory for this product

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 -