

Product name: NZYMaxiprep

Catalogue reference(s): MB05101, 5 columns

MB05102, 2 x 5 columns

MB05103, 5 x 5 columns

| Components | MB05101 | MB05102 | MB05103 | Safety Information | Unique Formula Identifier (UFI) |
|------------------------------------|--------------|------------------|------------------|--------------------|---------------------------------|
| Buffer M1 | 1 x 75 mL | 2 x 75 mL | 5 x 75 mL | Not Hazardous * | |
| Buffer M2 | 1 x 75 mL | 2 x 75 mL | 5 x 75 mL | See specific SDS | DV00-D0PR-700U-FJ5D |
| Buffer M3 | 1 x 75 mL | 2 x 75 mL | 5 x 75 mL | See specific SDS | 1S00-W00A-X00C-S6KA |
| Buffer MEQ | 1 x 35 mL | 2 x 35 mL | 5 x 35 mL | See specific SDS | 6Y00-W0D4-J00A-3VRF |
| Buffer MW | 2 x 90 mL | 4 x 90 mL | 10 x 90 mL | See specific SDS | 7110-E02H-U00U-S7AH |
| Buffer ME | 1 x 80 mL | 2 x 80 mL | 5 x 80 mL | See specific SDS | 5410-WORX-500A-EJWK |
| RNase A | 1 x 8 mg | 2 x 8 mg | 5 x 8 mg | See specific SDS | |
| NZYTech Plasmid Maxi columns | 5 columns | 2 x 5 columns | 5 x 5 columns | 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 (EC) No 2020/878.

MB051 - Buffer M2

Date of compilation: 12/08/2020


Revised: 05/01/2024

Version: 3 (Replaced 2)

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

- 1.1 Product identifier:** MB051 - Buffer M2
- Other means of identification:**
Non-applicable
- 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:** Contact Local Poison Information Center or Local Emergency Number

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.
Eye Dam. 1: Serious eye damage, Category 1, H318
Met. Corr. 1: Corrosive to metals, Category 1, H290
Skin Corr. 1: Skin corrosion, Category 1, H314
- 2.2 Label elements:**
- CLP Regulation (EC) No 1272/2008:**
Labelling of packages where the contents do not exceed 125 ml:
Danger
- 
- Hazard statements:**
Skin Corr. 1: H314 - Causes severe skin burns and eye damage.
- Precautionary statements:**
P264: Wash thoroughly after handling.
P280: Wear protective gloves/face protection/protective clothing/protective footwear.
P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310: Immediately call a poison center/doctor.
- Substances that contribute to the classification**
sodium hydroxide
- UFI:** DV00-D0PR-700U-FJ5D
- 2.3 Other hazards:**
Product does not meet PBT/vPvB criteria
Endocrine-disrupting properties: The product does not meet the criteria.

*** Changes with regards to the previous version**** Changes with regards to the previous version*

- CONTINUED ON NEXT PAGE -

MB051 - Buffer M2

Date of compilation: 12/08/2020

Revised: 05/01/2024

Version: 3 (Replaced 2)

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:

| Identification | Chemical name/Classification | Concentration |
|---|--|----------------------|
| CAS: 151-21-3 EC: 205-788-1 Index: Non-applicable REACH: 01-2119489461-32-XXXX | Sodium dodecyl sulphate (powder)⁽¹⁾ Self-classified | 1 - <2,5 % |
| | Regulation 1272/2008 Acute Tox. 4: H302+H332; Aquatic Chronic 3: H412; Eye Dam. 1: H318; Flam. Sol. 2: H228; Skin Irrit. 2: H315; STOT SE 3: H335 - Danger | |
| CAS: 1310-73-2 EC: 215-185-5 Index: 011-002-00-6 REACH: 01-2119457892-27-XXXX | sodium hydroxide⁽¹⁾ Self-classified | <1 % |
| | Regulation 1272/2008 Eye Dam. 1: H318; Met. Corr. 1: H290; Skin Corr. 1A: H314 - Danger | |

⁽¹⁾ Substances presenting a health or environmental hazard which meet criteria laid down in Regulation (EU) No. 2020/878

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

Other information:

| Identification | Specific concentration limit |
|---|--|
| sodium hydroxide CAS: 1310-73-2 EC: 215-185-5 | % (w/w) >=0,1: Met. Corr. 1 - H290 % (w/w) >=5: Skin Corr. 1A - H314 2<= % (w/w) <5: Skin Corr. 1B - H314 0,5<= % (w/w) <2: Skin Irrit. 2 - H315 % (w/w) >=2: Eye Dam. 1 - H318 0,5<= % (w/w) <2: Eye Irrit. 2 - H319 |

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 |
|--|-----------------|----------------|
| Sodium dodecyl sulphate (powder) CAS: 151-21-3 EC: 205-788-1 | LD50 oral | Non-applicable |
| | LD50 dermal | Non-applicable |
| | LC50 inhalation | 11 mg/L (ATEi) |

** Changes with regards to the previous version

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures:

Request medical assistance immediately, showing the SDS of this product.

By inhalation:

This product is not classified as hazardous through inhalation. However, in case of intoxication symptoms it is recommended to remove the person affected from the area of exposure, provide clean air and keep at rest. Request medical attention if symptoms 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:

- CONTINUED ON NEXT PAGE -

MB051 - Buffer M2

Date of compilation: 12/08/2020

Revised: 05/01/2024

Version: 3 (Replaced 2)

SECTION 4: FIRST AID MEASURES (continued)

Request immediate medical assistance, showing the SDS of this product. Do not induce vomiting, because its expulsion from the stomach can be hazardous to the mucus of the main digestive tract, and also risk damage to the respiratory system through inhalation. Rinse out the mouth and throat, as they may have been affected during ingestion. In the case of loss of consciousness do not administer anything orally unless supervised by a doctor. 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:

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 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:

It is recommended to avoid environmental spillage of both the product and its container.

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

- CONTINUED ON NEXT PAGE -

MB051 - Buffer M2

Date of compilation: 12/08/2020

Revised: 05/01/2024

Version: 3 (Replaced 2)

SECTION 7: HANDLING AND STORAGE (continued)

7.1 Precautions for safe handling:

A.- General precautions for safe use

Comply with the current legislation concerning the prevention of industrial risks. 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. **KEEP ONLY IN ORIGINAL PACKAGING.**

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 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):

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 |
| Sodium dodecyl sulphate (powder) CAS: 151-21-3 EC: 205-788-1 | Oral | Non-applicable | Non-applicable | Non-applicable | Non-applicable |
| | Dermal | Non-applicable | Non-applicable | 4060 mg/kg | Non-applicable |
| | Inhalation | Non-applicable | Non-applicable | 285 mg/m ³ | Non-applicable |
| sodium hydroxide CAS: 1310-73-2 EC: 215-185-5 | Oral | Non-applicable | Non-applicable | Non-applicable | Non-applicable |
| | Dermal | Non-applicable | Non-applicable | Non-applicable | Non-applicable |
| | Inhalation | Non-applicable | Non-applicable | Non-applicable | 1 mg/m ³ |

DNEL (General population):

| Identification | | Short exposure | | Long exposure | |
|--|------------|----------------|----------------|----------------------|---------------------|
| | | Systemic | Local | Systemic | Local |
| Sodium dodecyl sulphate (powder) CAS: 151-21-3 EC: 205-788-1 | Oral | Non-applicable | Non-applicable | 24 mg/kg | Non-applicable |
| | Dermal | Non-applicable | Non-applicable | 2440 mg/kg | Non-applicable |
| | Inhalation | Non-applicable | Non-applicable | 85 mg/m ³ | Non-applicable |
| sodium hydroxide CAS: 1310-73-2 EC: 215-185-5 | Oral | Non-applicable | Non-applicable | Non-applicable | Non-applicable |
| | Dermal | Non-applicable | Non-applicable | Non-applicable | Non-applicable |
| | Inhalation | Non-applicable | Non-applicable | Non-applicable | 1 mg/m ³ |

PNEC:

- CONTINUED ON NEXT PAGE -

MB051 - Buffer M2

Date of compilation: 12/08/2020

Revised: 05/01/2024

Version: 3 (Replaced 2)

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

| Identification | | | | |
|--|--------------|----------------|-------------------------|-------------|
| Sodium dodecyl sulphate (powder) CAS: 151-21-3 EC: 205-788-1 | STP | 1,35 mg/L | Fresh water | 0,176 mg/L |
| | Soil | 1,29 mg/kg | Marine water | 0,018 mg/L |
| | Intermittent | 0,055 mg/L | Sediment (Fresh water) | 6,97 mg/kg |
| | Oral | Non-applicable | Sediment (Marine water) | 0,697 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: Linear low-density polyethylene (LLDPE), Breakthrough time: > 480 min, Thickness: 0.062 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 | Face shield |  | EN 166:2002 EN 167:2002 EN 168:2002 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 |
|---|---|---|--|---|
|  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 | For professional use only. Clean periodically according to the manufacturer's instructions. |
|  Mandatory foot protection | Safety footwear for protection against chemical risk |  | EN ISO 20345:2011 EN 13832-1:2019 | Replace boots at any sign of deterioration. |

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:

- CONTINUED ON NEXT PAGE -

MB051 - Buffer M2

Date of compilation: 12/08/2020

Revised: 05/01/2024

Version: 3 (Replaced 2)

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

| | |
|---------------------------|-----------------------------|
| V.O.C. (Supply): | 0 % weight |
| V.O.C. density at 20 °C: | 0 kg/m ³ (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 |
| Appearance: | Not available |
| Colour: | Colourless |
| Odour: | Not available |
| Odour threshold: | Non-applicable * |

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: | Non-applicable * |

Product description:

| | |
|--|--------------------------|
| Density at 20 °C: | 1036,9 kg/m ³ |
| Relative density at 20 °C: | 1,037 |
| 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: | 12 - 13 |
| 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: | Non-applicable * |
| 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 classes:

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

- CONTINUED ON NEXT PAGE -

MB051 - Buffer M2

Date of compilation: 12/08/2020

Revised: 05/01/2024

Version: 3 (Replaced 2)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)

| | |
|--|----------------------------------|
| Explosive properties: | Non-applicable * |
| Oxidising properties: | Non-applicable * |
| Corrosive to metals: | H290 May be corrosive to metals. |
| Heat of combustion: | Non-applicable * |
| Aerosols-total percentage (by mass) of flammable components: | Non-applicable * |
| Other safety characteristics: | |
| 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 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 |
|--------------------|------------------|-------------------------|------------|----------------|
| Precaution | Not applicable | Precaution | Precaution | Not applicable |

10.5 Incompatible materials:

| Acids | Water | Oxidising materials | Combustible materials | Others |
|--------------------|----------------|---------------------|-----------------------|----------------|
| Avoid strong acids | Not applicable | Precaution | Not applicable | Not applicable |

10.6 Hazardous decomposition products:

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO₂), carbon monoxide and other organic compounds.

SECTION 11: TOXICOLOGICAL INFORMATION **

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008:

The experimental information related to the toxicological properties of the product itself is not available

Dangerous health implications:

In case of exposure that is repetitive, prolonged or at concentrations higher than the recommended occupational exposure limits, adverse effects on health may result, depending on the means of exposure:

A- Ingestion (acute effect):

- Acute toxicity: Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous for consumption. For more information see section 3.
- Corrosivity/Irritability: Corrosive product, if it is swallowed causes burns destroying the tissues. For more information about secondary effects from skin contact see section 2.

B- Inhalation (acute effect):

- Acute toxicity : Based on available data, the classification criteria are not met. However, it contains substances classified as hazardous for inhalation. For more information see section 3.
- Corrosivity/Irritability: Prolonged inhalation of the product is corrosive to mucous membranes and the upper respiratory tract

** Changes with regards to the previous version

- CONTINUED ON NEXT PAGE -

MB051 - Buffer M2

Date of compilation: 12/08/2020

Revised: 05/01/2024

Version: 3 (Replaced 2)

SECTION 11: TOXICOLOGICAL INFORMATION ** (continued)

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

- Contact with the skin: Above all, skin contact may occur as fabrics of all thicknesses can be destroyed, resulting in burns. For more information on the secondary effects see section 2.
- Contact with the eyes: Produces serious 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: 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. However, it contains substances classified as hazardous for inhalation. 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 |
|--|-----------------|----------------|-------|
| | | | |
| Sodium dodecyl sulphate (powder) CAS: 151-21-3 EC: 205-788-1 | LD50 oral | 1200 mg/kg | Rat |
| | LD50 dermal | >2000 mg/kg | |
| | LC50 inhalation | 11 mg/L (ATEi) | |
| sodium hydroxide CAS: 1310-73-2 EC: 215-185-5 | LD50 oral | >2000 mg/kg | |
| | LD50 dermal | >2000 mg/kg | |
| | LC50 inhalation | >5 mg/L | |

Acute Toxicity Estimate (ATE mix):

| ATE mix | | Ingredient(s) of unknown toxicity |
|------------|--------------------------------------|-----------------------------------|
| Oral | 120000 mg/kg (Calculation method) | 0 % |
| Dermal | >2000 mg/kg (Calculation method) | Non-applicable |
| Inhalation | 1100 mg/L (4 h) (Calculation method) | 0 % |

11.2 Information on other hazards:

Endocrine disrupting properties

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

Other information

Non-applicable

** Changes with regards to the previous version

** Changes with regards to the previous version

- CONTINUED ON NEXT PAGE -

MB051 - Buffer M2

Date of compilation: 12/08/2020

Revised: 05/01/2024

Version: 3 (Replaced 2)

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. However, it does contain substances classified as hazardous for this effect. For more information see section 3.

12.1 Toxicity:

Acute toxicity:

| Identification | Concentration | | Species | Genus |
|--|---------------|-----------------------|-----------------|------------|
| Sodium dodecyl sulphate (powder) CAS: 151-21-3 EC: 205-788-1 | LC50 | >10 - 100 mg/L (96 h) | | Fish |
| | EC50 | >10 - 100 mg/L (48 h) | | Crustacean |
| | EC50 | >10 - 100 mg/L (72 h) | | Algae |
| sodium hydroxide CAS: 1310-73-2 EC: 215-185-5 | LC50 | 189 mg/L (48 h) | Leuciscus idus | Fish |
| | EC50 | 33 mg/L | Crangon crangon | Crustacean |
| | EC50 | Non-applicable | | |

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

** Changes with regards to the previous version

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

| Code | Description | Waste class (Regulation (EU) No 1357/2014) |
|------|---|--|
| | It is not possible to assign a specific code, as it depends on the intended use by the user | Dangerous |

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

HP8 Corrosive

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:

** Changes with regards to the previous version

- CONTINUED ON NEXT PAGE -

MB051 - Buffer M2

Date of compilation: 12/08/2020

Revised: 05/01/2024

Version: 3 (Replaced 2)

SECTION 14: TRANSPORT INFORMATION ** (continued)



- | | |
|--|---|
| 14.1 UN number or ID number: | UN3267 |
| 14.2 UN proper shipping name: | CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (sodium hydroxide) |
| 14.3 Transport hazard class(es): | 8 |
| Labels: | 8 |
| 14.4 Packing group: | II |
| 14.5 Environmental hazards: | No |
| 14.6 Special precautions for user | |
| Special regulations: | 274 |
| Tunnel restriction code: | E |
| Physico-Chemical properties: | see section 9 |
| Limited quantities: | 1 L |
| 14.7 Maritime transport in bulk according to IMO instruments: | Non-applicable |

Transport of dangerous goods by sea:

With regard to IMDG 40-20:



- | | |
|--|---|
| 14.1 UN number or ID number: | UN3267 |
| 14.2 UN proper shipping name: | CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (sodium hydroxide) |
| 14.3 Transport hazard class(es): | 8 |
| Labels: | 8 |
| 14.4 Packing group: | II |
| 14.5 Marine pollutant: | No |
| 14.6 Special precautions for user | |
| Special regulations: | 274 |
| EmS Codes: | F-A, S-B |
| Physico-Chemical properties: | see section 9 |
| Limited quantities: | 1 L |
| Segregation group: | SGG18 |
| 14.7 Maritime transport in bulk according to IMO instruments: | Non-applicable |

Transport of dangerous goods by air:

With regard to IATA/ICAO 2023:



- | | |
|--|---|
| 14.1 UN number or ID number: | UN3267 |
| 14.2 UN proper shipping name: | CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (sodium hydroxide) |
| 14.3 Transport hazard class(es): | 8 |
| Labels: | 8 |
| 14.4 Packing group: | II |
| 14.5 Environmental hazards: | No |
| 14.6 Special precautions for user | |
| Physico-Chemical properties: | see section 9 |
| 14.7 Maritime transport in bulk according to IMO instruments: | Non-applicable |

** Changes with regards to the previous version

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

- CONTINUED ON NEXT PAGE -

MB051 - Buffer M2

Date of compilation: 12/08/2020

Revised: 05/01/2024

Version: 3 (Replaced 2)

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):

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.:

COMMISSION REGULATION (EU) 2020/878

COMPOSITION/INFORMATION ON INGREDIENTS (SECTION 3, SECTION 11, SECTION 12):

- New declared substances
sodium hydroxide (1310-73-2)
- Removed substances
sodium hydroxide (1310-73-2)

Substances that contribute to the classification (SECTION 2):

- New declared substances
sodium hydroxide (1310-73-2)

CLP Regulation (EC) No 1272/2008 (SECTION 2, SECTION 16):

- Pictograms
- Hazard statements
- Precautionary statements

TRANSPORT INFORMATION (SECTION 14):

- UN number
- Packing group

Texts of the legislative phrases mentioned in section 2:

H290: May be corrosive to metals.

H314: Causes severe skin burns and eye damage.

H318: Causes serious eye damage.

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:

** Changes with regards to the previous version

- CONTINUED ON NEXT PAGE -

MB051 - Buffer M2

Date of compilation: 12/08/2020

Revised: 05/01/2024

Version: 3 (Replaced 2)

SECTION 16: OTHER INFORMATION ** (continued)

Acute Tox. 4: H302+H332 - Harmful if swallowed or if inhaled.
Aquatic Chronic 3: H412 - Harmful to aquatic life with long lasting effects.
Eye Dam. 1: H318 - Causes serious eye damage.
Flam. Sol. 2: H228 - Flammable solid.
Met. Corr. 1: H290 - May be corrosive to metals.
Skin Corr. 1A: H314 - Causes severe skin burns and eye damage.
Skin Irrit. 2: H315 - Causes skin irritation.
STOT SE 3: H335 - May cause respiratory irritation.

Classification procedure:

Skin Corr. 1: Calculation method

Eye Dam. 1: 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

*** 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.

- END OF SAFETY DATA SHEET -

MB051 - Buffer M3

Date of compilation: 12/08/2020


Revised: 05/01/2024

Version: 3 (Replaced 2)

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

- 1.1 Product identifier:** MB051 - Buffer M3
Other means of identification:
Non-applicable
- 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:** Contact Local Poison Information Center or Local Emergency Number

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.
Eye Irrit. 2: Eye irritation, Category 2, H319
Flam. Liq. 3: Flammable liquids, Category 3, H226
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:**
Non-applicable
- Precautionary statements:**
Non-applicable
- UFI:** 1S00-W00A-X00C-S6KA
- 2.3 Other hazards:**
Product does not meet PBT/vPvB criteria
Endocrine-disrupting properties: The product does not meet the criteria.

*** Changes with regards to the previous version***SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS ****

- 3.1 Substance:**
Non-applicable
- 3.2 Mixture:**
Chemical description: Mixture of substances
Components:

*** Changes with regards to the previous version*

- CONTINUED ON NEXT PAGE -

MB051 - Buffer M3


Date of compilation: 12/08/2020

Revised: 05/01/2024

Version: 3 (Replaced 2)

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

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

| Identification | Chemical name/Classification | Concentration |
|--|--|---|
| CAS: 64-19-7 EC: 200-580-7 Index: 607-002-00-6 REACH: 01-2119475328-30-XXXX | Acetic acid⁽¹⁾ | ATP CLP00 |
| | Regulation 1272/2008 Flam. Liq. 3: H226; Skin Corr. 1A: H314 - Danger | 10 - <25 %  |

⁽¹⁾ Substances presenting a health or environmental hazard which meet criteria laid down in Regulation (EU) No. 2020/878

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

Other information:

| Identification | Specific concentration limit |
|--|--|
| Acetic acid CAS: 64-19-7 EC: 200-580-7 | % (w/w) >=90: Skin Corr. 1A - H314 25<= % (w/w) <90: Skin Corr. 1B - H314 10<= % (w/w) <25: Skin Irrit. 2 - H315 % (w/w) >=25: Eye Dam. 1 - H318 10<= % (w/w) <25: Eye Irrit. 2 - H319 |

** Changes with regards to the previous version

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures:

The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the SDS of this product.

By inhalation:

This product does not contain substances classified as hazardous for inhalation, however, in case of symptoms of intoxication remove the person affected from the exposure area and provide with fresh air. Seek medical attention if the symptoms get worse or persist.

By skin contact:

Remove contaminated clothing and footwear, rinse skin or shower the person affected if appropriate with plenty of cold water and neutral soap. In serious cases see a doctor. If the product causes burns or freezing, clothing should not be removed as this could worsen the injury caused if it is stuck to the skin. If blisters form on the skin, these should never be burst as this will increase the risk of infection.

By eye contact:

Rinse eyes thoroughly with lukewarm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, in which case this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.

By ingestion/aspiration:

Do not induce vomiting, but if it does happen keep the head down to avoid aspiration. Keep the person affected at rest. Rinse out the mouth and throat, as they may have been affected during ingestion.

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

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

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

Non-applicable

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media:

Suitable extinguishing media:

If possible use polyvalent powder fire extinguishers (ABC powder), alternatively use foam or carbon dioxide extinguishers (CO₂).

Unsuitable extinguishing media:

IT IS RECOMMENDED NOT to use full jet water as an extinguishing agent.

- CONTINUED ON NEXT PAGE -

MB051 - Buffer M3

Date of compilation: 12/08/2020

Revised: 05/01/2024

Version: 3 (Replaced 2)

SECTION 5: FIREFIGHTING MEASURES (continued)

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. Evacuate the area and keep out those without protection. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Above all prevent the formation of any vapour-air flammable mixtures, through either ventilation or the use of an inert medium. Remove any source of ignition. Eliminate electrostatic charges by interconnecting all the conductive surfaces on which static electricity could form, and also ensuring that all surfaces are connected to the ground.

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. 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

Transfer in well ventilated areas, preferably through localized extraction. Fully control sources of ignition (mobile phones, sparks,...) and ventilate during cleaning operations. Avoid the existence of dangerous atmospheres inside containers, applying inertization systems where possible. Transfer at a slow speed to avoid the creation of electrostatic charges. Against the possibility of electrostatic charges: ensure a perfect equipotential connection, always use groundings, do not wear work clothes made of acrylic fibres, preferably wearing cotton clothing and conductive footwear. Comply with the essential security requirements for equipment and systems defined in Directive 2014/34/EC (ATEX 100) and with the minimum requirements for protecting the security and health of workers under the selection criteria of Directive 1999/92/EC (ATEX 137). Consult section 10 for 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

- CONTINUED ON NEXT PAGE -

MB051 - Buffer M3

Date of compilation: 12/08/2020

Revised: 05/01/2024

Version: 3 (Replaced 2)

SECTION 7: HANDLING AND STORAGE (continued)

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):

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):

Directive (EU) 2000/39, Directive 2004/37/EC, Directive (EU) 2006/15, Directive (EU) 2009/161, Directive (EU) 2017/164, Directive (EU) 2019/1831:

| Identification | Occupational exposure limits | | |
|---|------------------------------|--------|----------------------|
| Acetic acid CAS: 64-19-7 EC: 200-580-7 | IOELV (8h) | 10 ppm | 25 mg/m ³ |
| | IOELV (STEL) | 20 ppm | 50 mg/m ³ |

DNEL (Workers):

| Identification | | Short exposure | | Long exposure | |
|--|------------|----------------|----------------------|----------------|----------------------|
| | | Systemic | Local | Systemic | Local |
| Acetic acid CAS: 64-19-7 EC: 200-580-7 | Oral | Non-applicable | Non-applicable | Non-applicable | Non-applicable |
| | Dermal | Non-applicable | Non-applicable | Non-applicable | Non-applicable |
| | Inhalation | Non-applicable | 25 mg/m ³ | Non-applicable | 25 mg/m ³ |

DNEL (General population):

| Identification | | Short exposure | | Long exposure | |
|--|------------|----------------|----------------------|----------------|----------------------|
| | | Systemic | Local | Systemic | Local |
| Acetic acid CAS: 64-19-7 EC: 200-580-7 | Oral | Non-applicable | Non-applicable | Non-applicable | Non-applicable |
| | Dermal | Non-applicable | Non-applicable | Non-applicable | Non-applicable |
| | Inhalation | Non-applicable | 25 mg/m ³ | Non-applicable | 25 mg/m ³ |

PNEC:

| Identification | | | | |
|--|--------------|----------------|-------------------------|-------------|
| Acetic acid CAS: 64-19-7 EC: 200-580-7 | STP | 85 mg/L | Fresh water | 3,058 mg/L |
| | Soil | 0,47 mg/kg | Marine water | 0,306 mg/L |
| | Intermittent | 30,58 mg/L | Sediment (Fresh water) | 11,36 mg/kg |
| | Oral | Non-applicable | Sediment (Marine water) | 1,136 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

- CONTINUED ON NEXT PAGE -



MB051 - Buffer M3

Date of compilation: 12/08/2020

Revised: 05/01/2024



Version: 3 (Replaced 2)

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)





| Pictogram | PPE | Labelling | CEN Standard | Remarks |
|--|--|---|-------------------|--|
|  Mandatory hand protection | Chemical protective gloves (Material: Viton®-Butyl, Breakthrough time: > 480 min, Thickness: 0.7 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. |

E.- Body protection

| Pictogram | PPE | Labelling | CEN Standard | Remarks |
|---|---|---|--|---|
|  Mandatory complete body protection | Antistatic and fireproof protective clothing |  | EN 1149-1:2006 EN 1149-2:1997 EN 1149-3:2004 EN 168:2002 EN ISO 14116:2015 EN 1149-5:2018 | Limited protection against flames. |
|  Mandatory foot protection | Safety footwear with antistatic and heat resistant properties |  | EN ISO 13287:2020 EN ISO 20345:2011 | Replace boots at any sign of deterioration. |

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): | 20 % weight |
| V.O.C. density at 20 °C: | 228,7 kg/m ³ (228,7 g/L) |
| Average carbon number: | 2 |
| Average molecular weight: | 60,1 g/mol |

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

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

** Changes with regards to the previous version

- CONTINUED ON NEXT PAGE -

MB051 - Buffer M3

Date of compilation: 12/08/2020

Revised: 05/01/2024

Version: 3 (Replaced 2)

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

| | |
|--|--------------------------|
| Colour: | Colourless |
| Odour: | Not available |
| Odour threshold: | Non-applicable * |
| Volatility: | |
| Boiling point at atmospheric pressure: | 104 °C |
| Vapour pressure at 20 °C: | 2267 Pa |
| Vapour pressure at 50 °C: | 11867,88 Pa (11,87 kPa) |
| Evaporation rate at 20 °C: | Non-applicable * |
| Product description: | |
| Density at 20 °C: | 1143,5 kg/m ³ |
| Relative density at 20 °C: | 1,143 |
| Dynamic viscosity at 20 °C: | 1,82 cP |
| Kinematic viscosity at 20 °C: | 1,59 mm ² /s |
| Kinematic viscosity at 40 °C: | Non-applicable * |
| Concentration: | Non-applicable * |
| pH: | 5,4 - 5,6 |
| 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: | 46 °C |
| Flammability (solid, gas): | Non-applicable * |
| Autoignition temperature: | 427 °C |
| Lower flammability limit: | Not available |
| Upper flammability limit: | Not available |
| Particle characteristics: | |
| Median equivalent diameter: | Non-applicable |

9.2 Other information:

Information with regard to physical hazard classes:

| | |
|--|------------------|
| Explosive properties: | Non-applicable * |
| Oxidising properties: | Non-applicable * |
| Corrosive to metals: | Non-applicable * |
| Heat of combustion: | Non-applicable * |
| Aerosols-total percentage (by mass) of flammable components: | Non-applicable * |

Other safety characteristics:

| | |
|---------------------------|------------------|
| 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.

** Changes with regards to the previous version

SECTION 10: STABILITY AND REACTIVITY

- CONTINUED ON NEXT PAGE -

MB051 - Buffer M3

Date of compilation: 12/08/2020

Revised: 05/01/2024

Version: 3 (Replaced 2)

SECTION 10: STABILITY AND REACTIVITY (continued)

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 | Risk of combustion | Avoid direct impact | Not applicable |

10.5 Incompatible materials:

| Acids | Water | Oxidising materials | Combustible materials | Others |
|--------------------|----------------|---------------------|-----------------------|-------------------------------|
| Avoid strong acids | Not applicable | Avoid direct impact | Not applicable | Avoid alkalis or strong bases |

10.6 Hazardous decomposition products:

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO₂), carbon monoxide and other organic compounds.

SECTION 11: TOXICOLOGICAL INFORMATION **

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008:

The experimental information related to the toxicological properties of the product itself is not available

Dangerous health implications:

In case of exposure that is repetitive, prolonged or at concentrations higher than the recommended occupational exposure limits, adverse effects on health may result, depending on the means of exposure:

A- Ingestion (acute effect):

- Acute toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous 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: 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:

** Changes with regards to the previous version

- CONTINUED ON NEXT PAGE -

MB051 - Buffer M3

Date of compilation: 12/08/2020

Revised: 05/01/2024

Version: 3 (Replaced 2)

SECTION 11: TOXICOLOGICAL INFORMATION ** (continued)

- 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 |
|----------------|-----------------|-------------|-------|
| Acetic acid | LD50 oral | >2000 mg/kg | |
| CAS: 64-19-7 | LD50 dermal | >2000 mg/kg | |
| EC: 200-580-7 | LC50 inhalation | >20 mg/L | |

Acute Toxicity Estimate (ATE mix):

| ATE mix | | Ingredient(s) of unknown toxicity |
|------------|-------------------------------------|-----------------------------------|
| Oral | >2000 mg/kg (Calculation method) | Non-applicable |
| 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

Non-applicable

** Changes with regards to the previous version

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 |
|----------------|---------------|----------------|---------------------|------------|
| Acetic acid | LC50 | 75 mg/L (96 h) | Lepomis macrochirus | Fish |
| CAS: 64-19-7 | EC50 | 47 mg/L (24 h) | Daphnia magna | Crustacean |
| EC: 200-580-7 | EC50 | Non-applicable | | |

Chronic toxicity:

** Changes with regards to the previous version

- CONTINUED ON NEXT PAGE -

MB051 - Buffer M3

Date of compilation: 12/08/2020

Revised: 05/01/2024

Version: 3 (Replaced 2)

SECTION 12: ECOLOGICAL INFORMATION ** (continued)

| Identification | Concentration | | Species | Genus |
|---|---------------|-----------|---------------------|------------|
| Acetic acid CAS: 64-19-7 EC: 200-580-7 | NOEC | 57,2 mg/L | Oncorhynchus mykiss | Fish |
| | NOEC | 80 mg/L | Daphnia magna | Crustacean |

12.2 Persistence and degradability:

Substance-specific information:

| Identification | Degradability | | Biodegradability | |
|--|---------------|----------------|------------------|----------|
| Acetic acid CAS: 64-19-7 EC: 200-580-7 | BOD5 | Non-applicable | Concentration | 100 mg/L |
| | COD | Non-applicable | Period | 14 days |
| | BOD5/COD | Non-applicable | % Biodegradable | 74 % |

12.3 Bioaccumulative potential:

Substance-specific information:

| Identification | Bioaccumulation potential | |
|--|---------------------------|-------|
| Acetic acid CAS: 64-19-7 EC: 200-580-7 | BCF | 3 |
| | Pow Log | -0.71 |
| | Potential | Low |

12.4 Mobility in soil:

| Identification | Absorption/desorption | | Volatility | |
|--|-----------------------|----------------------|------------|----------------|
| Acetic acid CAS: 64-19-7 EC: 200-580-7 | Koc | Non-applicable | Henry | Non-applicable |
| | Conclusion | Non-applicable | Dry soil | Non-applicable |
| | Surface tension | 2,699E-2 N/m (25 °C) | Moist soil | Non-applicable |

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

** Changes with regards to the previous version

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

| Code | Description | Waste class (Regulation (EU) No 1357/2014) |
|------|---|--|
| | It is not possible to assign a specific code, as it depends on the intended use by the user | Dangerous |

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

HP3 Flammable, HP8 Corrosive

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:

- CONTINUED ON NEXT PAGE -

MB051 - Buffer M3

Date of compilation: 12/08/2020

Revised: 05/01/2024

Version: 3 (Replaced 2)

SECTION 14: TRANSPORT INFORMATION (continued)

With regard to ADR 2023 and RID 2023:



- 14.1 UN number or ID number:** UN2790
- 14.2 UN proper shipping name:** ACETIC ACID SOLUTION
- 14.3 Transport hazard class(es):** 8
Labels: 8
- 14.4 Packing group:** III
- 14.5 Environmental hazards:** No
- 14.6 Special precautions for user**
Special regulations: 597, 647
Tunnel restriction code: E
Physico-Chemical properties: see section 9
Limited quantities: 5 L
- 14.7 Maritime transport in bulk according to IMO instruments:** Non-applicable

Transport of dangerous goods by sea:

With regard to IMDG 40-20:



- 14.1 UN number or ID number:** UN2790
- 14.2 UN proper shipping name:** ACETIC ACID SOLUTION
- 14.3 Transport hazard class(es):** 8
Labels: 8
- 14.4 Packing group:** III
- 14.5 Marine pollutant:** No
- 14.6 Special precautions for user**
Special regulations: Non-applicable
EmS Codes: F-A, S-B
Physico-Chemical properties: see section 9
Limited quantities: 5 L
Segregation group: SGG1
- 14.7 Maritime transport in bulk according to IMO instruments:** Non-applicable

Transport of dangerous goods by air:

With regard to IATA/ICAO 2023:



- 14.1 UN number or ID number:** UN2790
- 14.2 UN proper shipping name:** ACETIC ACID SOLUTION
- 14.3 Transport hazard class(es):** 8
Labels: 8
- 14.4 Packing group:** III
- 14.5 Environmental hazards:** No
- 14.6 Special precautions for user**
Physico-Chemical properties: see section 9
- 14.7 Maritime transport in bulk according to IMO instruments:** Non-applicable

SECTION 15: REGULATORY INFORMATION **

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

Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Non-applicable

Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Non-applicable

** Changes with regards to the previous version

MB051 - Buffer M3

Date of compilation: 12/08/2020

Revised: 05/01/2024

Version: 3 (Replaced 2)

SECTION 15: REGULATORY INFORMATION ** (continued)

Regulation (EC) No 1005/2009, about substances that deplete the ozone layer: Non-applicable

Article 95, REGULATION (EU) No 528/2012: Acetic acid

REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Non-applicable

Seveso III:

| Section | Description | Lower-tier requirements | Upper-tier requirements |
|---------|-------------------|-------------------------|-------------------------|
| P5c | FLAMMABLE LIQUIDS | 5000 | 50000 |

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.

*** Changes with regards to the previous version*

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.:

COMMISSION REGULATION (EU) 2020/878

COMPOSITION/INFORMATION ON INGREDIENTS (SECTION 3, SECTION 11, SECTION 12):

- New declared substances
Acetic acid (64-19-7)
- Removed substances
Acetic acid (64-19-7)

CLP Regulation (EC) No 1272/2008 (SECTION 2, SECTION 16):

- Pictograms
- Hazard statements
- Precautionary statements

Information on basic physical and chemical properties (SECTION 9):

- Flash Point

REGULATORY INFORMATION (SECTION 15):

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

Texts of the legislative phrases mentioned in section 2:

H315: Causes skin irritation.

H226: Flammable liquid and vapour.

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:

Flam. Liq. 3: H226 - Flammable liquid and vapour.

Skin Corr. 1A: H314 - Causes severe skin burns and eye damage.

*** Changes with regards to the previous version*

- CONTINUED ON NEXT PAGE -

MB051 - Buffer M3

Date of compilation: 12/08/2020

Revised: 05/01/2024

Version: 3 (Replaced 2)

SECTION 16: OTHER INFORMATION ** (continued)

Classification procedure:

Skin Irrit. 2: Calculation method
Flam. Liq. 3: Calculation method (2.6.4.3)
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

*** 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.

- END OF SAFETY DATA SHEET -

MB051 - Buffer MEQ


Date of compilation: 05/01/2024

Version: 1

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

- 1.1 Product identifier:** MB051 - Buffer MEQ
Other means of identification:
Non-applicable
- 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.
Flam. Liq. 3: Flammable liquids, Category 3, H226
- 2.2 Label elements:**
CLP Regulation (EC) No 1272/2008:
Labelling of packages where the contents do not exceed 125 ml:
Warning

Hazard statements:
Non-applicable
Precautionary statements:
Non-applicable
UFI: 6Y00-W0D4-J00A-3VRF
- 2.3 Other hazards:**
Product does not meet PBT/vPvB criteria
The product contains substances with endocrine-disrupting properties: Polyethylene glycol mono(octylphenyl) ether

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:

- CONTINUED ON NEXT PAGE -

MB051 - Buffer MEQ

Date of compilation: 05/01/2024

Version: 1

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS (continued)

| Identification | Chemical name/Classification | Concentration |
|--|---|----------------------|
| CAS: 64-17-5 EC: 200-578-6 Index: 603-002-00-5 REACH: 01-2119457610-43-XXXX | ethanol⁽¹⁾ Self-classified | 10 - <25 % |
| | Regulation 1272/2008 Eye Irrit. 2: H319; Flam. Liq. 2: H225 - Danger <div style="text-align: right; font-size: small;"> </div> | |
| CAS: 9036-19-5 EC: 935-231-4 Index: Non-applicable REACH: Non-applicable | Polyethylene glycol mono(octylphenyl) ether⁽¹⁾ Self-classified | <1 % |
| | Regulation 1272/2008 Acute Tox. 4: H302; Aquatic Chronic 1: H410; Eye Dam. 1: H318; Skin Irrit. 2: H315 - Danger <div style="text-align: right; font-size: small;"> </div> | |

⁽¹⁾ Substances presenting a health or environmental hazard which meet criteria laid down in Regulation (EU) No. 2020/878

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

Other information:

| Identification | Specific concentration limit |
|--|-----------------------------------|
| ethanol CAS: 64-17-5 EC: 200-578-6 | % (w/w) >=50: Eye Irrit. 2 - H319 |

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:

This product is not classified as hazardous when in contact with the skin. However, in case of skin contact it is recommended to remove contaminated clothes and shoes, rinse the skin or if necessary shower the affected person thoroughly with cold water and neutral soap. In case of serious reaction consult a doctor.

By eye contact:

Rinse eyes thoroughly with water for at least 15 minutes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, in which case removal could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS for 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:

Non-applicable

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media:

Suitable extinguishing media:

If possible use polyvalent powder fire extinguishers (ABC powder), alternatively use foam or carbon dioxide extinguishers (CO₂).

Unsuitable extinguishing media:

IT IS RECOMMENDED NOT to use full jet water as an extinguishing agent.

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.

- CONTINUED ON NEXT PAGE -

MB051 - Buffer MEQ

Date of compilation: 05/01/2024

Version: 1

SECTION 5: FIREFIGHTING MEASURES (continued)

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. Evacuate the area and keep out those without protection. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Above all prevent the formation of any vapour-air flammable mixtures, through either ventilation or the use of an inert medium. Remove any source of ignition. Eliminate electrostatic charges by interconnecting all the conductive surfaces on which static electricity could form, and also ensuring that all surfaces are connected to the ground.

For emergency responders:

Wear protective equipment. Keep unprotected persons away. See section 8.

6.2 Environmental precautions:

It is recommended to avoid environmental spillage of both the product and its container.

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. 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

Transfer in well ventilated areas, preferably through localized extraction. Fully control sources of ignition (mobile phones, sparks,...) and ventilate during cleaning operations. Avoid the existence of dangerous atmospheres inside containers, applying inertization systems where possible. Transfer at a slow speed to avoid the creation of electrostatic charges. Against the possibility of electrostatic charges: ensure a perfect equipotential connection, always use groundings, do not wear work clothes made of acrylic fibres, preferably wearing cotton clothing and conductive footwear. Comply with the essential security requirements for equipment and systems defined in Directive 2014/34/EC (ATEX 100) and with the minimum requirements for protecting the security and health of workers under the selection criteria of Directive 1999/92/EC (ATEX 137). Consult section 10 for 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

- CONTINUED ON NEXT PAGE -

MB051 - Buffer MEQ

Date of compilation: 05/01/2024

Version: 1

SECTION 7: HANDLING AND STORAGE (continued)

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 (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 |
| ethanol CAS: 64-17-5 EC: 200-578-6 | Oral | Non-applicable | Non-applicable | Non-applicable | Non-applicable |
| | Dermal | Non-applicable | Non-applicable | 343 mg/kg | Non-applicable |
| | Inhalation | Non-applicable | Non-applicable | 950 mg/m ³ | Non-applicable |

DNEL (General population):

| Identification | | Short exposure | | Long exposure | |
|--|------------|----------------|----------------|-----------------------|----------------|
| | | Systemic | Local | Systemic | Local |
| ethanol CAS: 64-17-5 EC: 200-578-6 | Oral | Non-applicable | Non-applicable | 87 mg/kg | Non-applicable |
| | Dermal | Non-applicable | Non-applicable | 206 mg/kg | Non-applicable |
| | Inhalation | Non-applicable | Non-applicable | 114 mg/m ³ | Non-applicable |

PNEC:

| Identification | | | | | |
|--|--------------|------------|-------------------------|-----------|--|
| ethanol CAS: 64-17-5 EC: 200-578-6 | STP | 580 mg/L | Fresh water | 0,96 mg/L | |
| | Soil | 0,63 mg/kg | Marine water | 0,79 mg/L | |
| | Intermittent | 2,75 mg/L | Sediment (Fresh water) | 3,6 mg/kg | |
| | Oral | 0,38 g/kg | Sediment (Marine water) | 2,9 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: Linear low-density polyethylene (LLDPE), Breakthrough time: > 480 min, Thickness: 0.062 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



- CONTINUED ON NEXT PAGE -

MB051 - Buffer MEQ





Date of compilation: 05/01/2024

Version: 1



SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

| 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 |
|---|---|---|--|---|
|  Mandatory complete body protection | Antistatic and fireproof protective clothing |  | EN 1149-1:2006 EN 1149-2:1997 EN 1149-3:2004 EN 168:2002 EN ISO 14116:2015 EN 1149-5:2018 | Limited protection against flames. |
|  Mandatory foot protection | Safety footwear with antistatic and heat resistant properties |  | EN ISO 13287:2020 EN ISO 20345:2011 | Replace boots at any sign of deterioration. |

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): | 15 % weight |
| V.O.C. density at 20 °C: | 153,16 kg/m ³ (153,16 g/L) |
| Average carbon number: | 2 |
| Average molecular weight: | 46,1 g/mol |

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 |
| Odour threshold: | Non-applicable * |

Volatility:

| | |
|--|-------------------------|
| Boiling point at atmospheric pressure: | 96 °C |
| Vapour pressure at 20 °C: | 2650 Pa |
| Vapour pressure at 50 °C: | 13690,71 Pa (13,69 kPa) |
| Evaporation rate at 20 °C: | Non-applicable * |

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

- CONTINUED ON NEXT PAGE -

MB051 - Buffer MEQ

Date of compilation: 05/01/2024

Version: 1

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)

Product description:

| | |
|--|--------------------------|
| Density at 20 °C: | 1021,1 kg/m ³ |
| Relative density at 20 °C: | 1,021 |
| 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: | 6,2 - 6,4 |
| 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: | 39 °C |
| Flammability (solid, gas): | Non-applicable * |
| Autoignition temperature: | 423 °C |
| Lower flammability limit: | Not available |
| Upper flammability limit: | Not available |

Particle characteristics:

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

9.2 Other information:

Information with regard to physical hazard classes:

| | |
|--|------------------|
| Explosive properties: | Non-applicable * |
| Oxidising properties: | Non-applicable * |
| Corrosive to metals: | Non-applicable * |
| Heat of combustion: | Non-applicable * |
| Aerosols-total percentage (by mass) of flammable components: | Non-applicable * |

Other safety characteristics:

| | |
|---------------------------|------------------|
| 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 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:

- CONTINUED ON NEXT PAGE -

MB051 - Buffer MEQ

Date of compilation: 05/01/2024

Version: 1

SECTION 10: STABILITY AND REACTIVITY (continued)

| Shock and friction | Contact with air | Increase in temperature | Sunlight | Humidity |
|--------------------|------------------|-------------------------|---------------------|----------------|
| Not applicable | Not applicable | Risk of combustion | Avoid direct impact | Not applicable |

10.5 Incompatible materials:

| Acids | Water | Oxidising materials | Combustible materials | Others |
|--------------------|----------------|---------------------|-----------------------|-------------------------------|
| Avoid strong acids | Not applicable | Avoid direct impact | Not applicable | Avoid alkalis or strong bases |

10.6 Hazardous decomposition products:

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO₂), carbon monoxide and other organic compounds.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008:

The experimental information related to the toxicological properties of the product itself is not available

Dangerous health implications:

In case of exposure that is repetitive, prolonged or at concentrations higher than the recommended occupational exposure limits, adverse effects on health may result, depending on the means of exposure:

A- Ingestion (acute effect):

- Acute toxicity: Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous for consumption. For more information see section 3.
- Corrosivity/Irritability: 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.

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: Based on available data, the classification criteria are not met. However, it contains substances classified as hazardous for skin contact. For more information see section 3.
- Contact with the eyes: 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.

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: ethanol (1)
- 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.

- CONTINUED ON NEXT PAGE -

MB051 - Buffer MEQ

Date of compilation: 05/01/2024

Version: 1

SECTION 11: TOXICOLOGICAL INFORMATION (continued)

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 |
|--|------------------|-------------|--------|
| | LD50 oral | LD50 dermal | |
| ethanol CAS: 64-17-5 EC: 200-578-6 | 6200 mg/kg | 20000 mg/kg | Rat |
| | 124,7 mg/L (4 h) | | Rabbit |
| | | | Rat |
| Polyethylene glycol mono(octylphenyl) ether CAS: 9036-19-5 EC: 935-231-4 | >2000 mg/kg | >2000 mg/kg | |
| | >2000 mg/kg | | |
| | Non-applicable | | |

Acute Toxicity Estimate (ATE mix):

| ATE mix | | Ingredient(s) of unknown toxicity |
|------------|-------------------------------------|-----------------------------------|
| Oral | >2000 mg/kg (Calculation method) | Non-applicable |
| 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

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. However, it does contain substances classified as hazardous for this effect. For more information see section 3.

12.1 Toxicity:

Acute toxicity:

| Identification | Concentration | | Species | Genus |
|--|----------------------|-------------------|------------------------|------------|
| | LC50 | EC50 | | |
| ethanol CAS: 64-17-5 EC: 200-578-6 | 11000 mg/L (96 h) | 9268 mg/L (48 h) | Alburnus alburnus | Fish |
| | | 1450 mg/L (192 h) | Daphnia magna | Crustacean |
| | | | Microcystis aeruginosa | Algae |
| Polyethylene glycol mono(octylphenyl) ether CAS: 9036-19-5 EC: 935-231-4 | >0.1 - 1 mg/L (96 h) | | | Fish |
| | >0.1 - 1 mg/L (48 h) | | | Crustacean |
| | >0.1 - 1 mg/L (72 h) | | | Algae |

Chronic toxicity:

| Identification | Concentration | | Species | Genus |
|---------------------------------------|---------------|--|--------------------|------------|
| | NOEC | | | |
| ethanol CAS: 64-17-5 EC: 200-578-6 | 250 mg/L | | Danio rerio | Fish |
| | 2 mg/L | | Ceriodaphnia dubia | Crustacean |

12.2 Persistence and degradability:

Substance-specific information:

| Identification | Degradability | | Biodegradability | |
|--|----------------|----------------|------------------|---------|
| | BOD5 | COD | Concentration | Period |
| ethanol CAS: 64-17-5 EC: 200-578-6 | Non-applicable | Non-applicable | 100 mg/L | 14 days |
| | | | % Biodegradable | 89 % |
| | | | | |

- CONTINUED ON NEXT PAGE -

MB051 - Buffer MEQ

Date of compilation: 05/01/2024

Version: 1

SECTION 12: ECOLOGICAL INFORMATION (continued)

12.3 Bioaccumulative potential:

Substance-specific information:

| Identification | Bioaccumulation potential | |
|--|---------------------------|-------|
| ethanol CAS: 64-17-5 EC: 200-578-6 | BCF | 3 |
| | Pow Log | -0.31 |
| | Potential | Low |

12.4 Mobility in soil:

| Identification | Absorption/desorption | | Volatility | |
|--|-----------------------|----------------------|------------|--------------------------------|
| ethanol CAS: 64-17-5 EC: 200-578-6 | Koc | 1 | Henry | 4,61E-1 Pa·m ³ /mol |
| | Conclusion | Very High | Dry soil | Yes |
| | Surface tension | 2,339E-2 N/m (25 °C) | Moist soil | Yes |

12.5 Results of PBT and vPvB assessment:

Product does not meet PBT/vPvB criteria

12.6 Endocrine disrupting properties:

Contains Polyethylene glycol mono(octylphenyl) ether. A substance shall be considered as having endocrine-disrupting properties that may cause adverse effects on non-target organisms if: (a) it shows an adverse effect in non-target organisms, which is a change in the morphology, physiology, growth, development, reproduction or life span of an organism, system or (sub)population that results in an impairment of functional capacity, an impairment of the capacity to compensate for additional stress or an increase in susceptibility to other influences

(b) it has an endocrine mode of action, i.e. it alters the function(s) of the endocrine system

(c) the adverse effect is a consequence of the endocrine mode of action.

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 | Dangerous |

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

HP3 Flammable

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:

- CONTINUED ON NEXT PAGE -

MB051 - Buffer MEQ

Date of compilation: 05/01/2024

Version: 1

SECTION 14: TRANSPORT INFORMATION (continued)



- | | |
|--|------------------------------------|
| 14.1 UN number or ID number: | UN1993 |
| 14.2 UN proper shipping name: | FLAMMABLE LIQUID, N.O.S. (ethanol) |
| 14.3 Transport hazard class(es): | 3 |
| Labels: | 3 |
| 14.4 Packing group: | III |
| 14.5 Environmental hazards: | No |
| 14.6 Special precautions for user | |
| Special regulations: | 274, 601 |
| Tunnel restriction code: | D/E |
| Physico-Chemical properties: | see section 9 |
| Limited quantities: | 5 L |
| 14.7 Maritime transport in bulk according to IMO instruments: | Non-applicable |

Transport of dangerous goods by sea:

With regard to IMDG 40-20:



- | | |
|--|------------------------------------|
| 14.1 UN number or ID number: | UN1993 |
| 14.2 UN proper shipping name: | FLAMMABLE LIQUID, N.O.S. (ethanol) |
| 14.3 Transport hazard class(es): | 3 |
| Labels: | 3 |
| 14.4 Packing group: | III |
| 14.5 Marine pollutant: | No |
| 14.6 Special precautions for user | |
| Special regulations: | 274, 223, 955 |
| EmS Codes: | F-E, S-E |
| Physico-Chemical properties: | see section 9 |
| Limited quantities: | 5 L |
| Segregation group: | Non-applicable |
| 14.7 Maritime transport in bulk according to IMO instruments: | Non-applicable |

Transport of dangerous goods by air:

With regard to IATA/ICAO 2023:



- | | |
|--|------------------------------------|
| 14.1 UN number or ID number: | UN1993 |
| 14.2 UN proper shipping name: | FLAMMABLE LIQUID, N.O.S. (ethanol) |
| 14.3 Transport hazard class(es): | 3 |
| Labels: | 3 |
| 14.4 Packing group: | III |
| 14.5 Environmental hazards: | No |
| 14.6 Special precautions for user | |
| Physico-Chemical properties: | see section 9 |
| 14.7 Maritime transport in bulk according to IMO instruments: | Non-applicable |

SECTION 15: REGULATORY INFORMATION

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

Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Polyethylene glycol mono(octylphenyl) ether

Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Polyethylene glycol mono(octylphenyl) ether (04/01/2021)

Regulation (EC) No 1005/2009, about substances that deplete the ozone layer: Non-applicable

- CONTINUED ON NEXT PAGE -

MB051 - Buffer MEQ

Date of compilation: 05/01/2024

Version: 1

SECTION 15: REGULATORY INFORMATION (continued)

Article 95, REGULATION (EU) No 528/2012: ethanol (Product-type 1, 2, 4)

REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Non-applicable

Seveso III:

| Section | Description | Lower-tier requirements | Upper-tier requirements |
|---------|-------------------|-------------------------|-------------------------|
| P5c | FLAMMABLE LIQUIDS | 5000 | 50000 |

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.:

Non-applicable

Texts of the legislative phrases mentioned in section 2:

H226: Flammable liquid and vapour.

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.

Aquatic Chronic 1: H410 - Very toxic to aquatic life with long lasting effects.

Eye Dam. 1: H318 - Causes serious eye damage.

Eye Irrit. 2: H319 - Causes serious eye irritation.

Flam. Liq. 2: H225 - Highly flammable liquid and vapour.

Skin Irrit. 2: H315 - Causes skin irritation.

Classification procedure:

Flam. Liq. 3: Calculation method (2.6.4.3)

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:

- CONTINUED ON NEXT PAGE -

MB051 - Buffer MEQ

Date of compilation: 05/01/2024

Version: 1

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 -

Date of compilation: 05/01/2024

Version: 1

Page 12/12

MB051 - Buffer MW


Date of compilation: 05/01/2024

Version: 1

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

- 1.1 Product identifier:** MB051 - Buffer MW
Other means of identification:
Non-applicable
- 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.
Flam. Liq. 3: Flammable liquids, Category 3, H226
- 2.2 Label elements:**
CLP Regulation (EC) No 1272/2008:
Labelling of packages where the contents do not exceed 125 ml:
Warning

Hazard statements:
Non-applicable
Precautionary statements:
Non-applicable
UFI: 7110-E02H-U00U-S7AH
- 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:


- CONTINUED ON NEXT PAGE -

MB051 - Buffer MW

Date of compilation: 05/01/2024

Version: 1

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS (continued)

| Identification | Chemical name/Classification | Concentration |
|--|---|---|
| CAS: 64-17-5 EC: 200-578-6 Index: 603-002-00-5 REACH: 01-2119457610-43-XXXX | ethanol⁽¹⁾ | Self-classified |
| | Regulation 1272/2008 Eye Irrit. 2: H319; Flam. Liq. 2: H225 - Danger |  |

⁽¹⁾ Substances presenting a health or environmental hazard which meet criteria laid down in Regulation (EU) No. 2020/878

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

Other information:

| Identification | Specific concentration limit |
|--|-----------------------------------|
| ethanol CAS: 64-17-5 EC: 200-578-6 | % (w/w) >=50: Eye Irrit. 2 - H319 |

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:

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 eyes thoroughly with water for at least 15 minutes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, in which case removal could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS for the product.

By ingestion/aspilation:

In case of consumption, seek immediate medical assistance showing the SDS for the product.

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:

Suitable extinguishing media:

If possible use polyvalent powder fire extinguishers (ABC powder), alternatively use foam or carbon dioxide extinguishers (CO₂).

Unsuitable extinguishing media:

IT IS RECOMMENDED NOT to use full jet water as an extinguishing agent.

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.

- CONTINUED ON NEXT PAGE -

MB051 - Buffer MW

Date of compilation: 05/01/2024

Version: 1

SECTION 5: FIREFIGHTING MEASURES (continued)**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. Evacuate the area and keep out those without protection. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Above all prevent the formation of any vapour-air flammable mixtures, through either ventilation or the use of an inert medium. Remove any source of ignition. Eliminate electrostatic charges by interconnecting all the conductive surfaces on which static electricity could form, and also ensuring that all surfaces are connected to the ground.

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. 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

Transfer in well ventilated areas, preferably through localized extraction. Fully control sources of ignition (mobile phones, sparks,...) and ventilate during cleaning operations. Avoid the existence of dangerous atmospheres inside containers, applying inertization systems where possible. Transfer at a slow speed to avoid the creation of electrostatic charges. Against the possibility of electrostatic charges: ensure a perfect equipotential connection, always use groundings, do not wear work clothes made of acrylic fibres, preferably wearing cotton clothing and conductive footwear. Comply with the essential security requirements for equipment and systems defined in Directive 2014/34/EC (ATEX 100) and with the minimum requirements for protecting the security and health of workers under the selection criteria of Directive 1999/92/EC (ATEX 137). Consult section 10 for 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

- CONTINUED ON NEXT PAGE -

MB051 - Buffer MW

Date of compilation: 05/01/2024

Version: 1

SECTION 7: HANDLING AND STORAGE (continued)

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 |
| ethanol CAS: 64-17-5 EC: 200-578-6 | Oral | Non-applicable | Non-applicable | Non-applicable | Non-applicable |
| | Dermal | Non-applicable | Non-applicable | 343 mg/kg | Non-applicable |
| | Inhalation | Non-applicable | Non-applicable | 950 mg/m ³ | Non-applicable |

DNEL (General population):

| Identification | | Short exposure | | Long exposure | |
|--|------------|----------------|----------------|-----------------------|----------------|
| | | Systemic | Local | Systemic | Local |
| ethanol CAS: 64-17-5 EC: 200-578-6 | Oral | Non-applicable | Non-applicable | 87 mg/kg | Non-applicable |
| | Dermal | Non-applicable | Non-applicable | 206 mg/kg | Non-applicable |
| | Inhalation | Non-applicable | Non-applicable | 114 mg/m ³ | Non-applicable |

PNEC:

| Identification | | | | | |
|--|--------------|------------|-------------------------|-----------|--|
| ethanol CAS: 64-17-5 EC: 200-578-6 | STP | 580 mg/L | Fresh water | 0,96 mg/L | |
| | Soil | 0,63 mg/kg | Marine water | 0,79 mg/L | |
| | Intermittent | 2,75 mg/L | Sediment (Fresh water) | 3,6 mg/kg | |
| | Oral | 0,38 g/kg | Sediment (Marine water) | 2,9 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: Linear low-density polyethylene (LLDPE), Breakthrough time: > 480 min, Thickness: 0.062 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



- CONTINUED ON NEXT PAGE -

MB051 - Buffer MW





Date of compilation: 05/01/2024

Version: 1



SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

| 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 |
|---|---|---|--|---|
|  Mandatory complete body protection | Antistatic and fireproof protective clothing |  | EN 1149-1:2006 EN 1149-2:1997 EN 1149-3:2004 EN 168:2002 EN ISO 14116:2015 EN 1149-5:2018 | Limited protection against flames. |
|  Mandatory foot protection | Safety footwear with antistatic and heat resistant properties |  | EN ISO 13287:2020 EN ISO 20345:2011 | Replace boots at any sign of deterioration. |

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): | 15 % weight |
| V.O.C. density at 20 °C: | 154,53 kg/m ³ (154,53 g/L) |
| Average carbon number: | 2 |
| Average molecular weight: | 46,1 g/mol |

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 |
| Odour threshold: | Non-applicable * |

Volatility:

| | |
|--|------------------------|
| Boiling point at atmospheric pressure: | 96 °C |
| Vapour pressure at 20 °C: | 2657 Pa |
| Vapour pressure at 50 °C: | 13718,4 Pa (13,72 kPa) |
| Evaporation rate at 20 °C: | Non-applicable * |

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

- CONTINUED ON NEXT PAGE -

MB051 - Buffer MW

Date of compilation: 05/01/2024

Version: 1

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)

Product description:

| | |
|--|--------------------------|
| Density at 20 °C: | 1030,2 kg/m ³ |
| Relative density at 20 °C: | 1,03 |
| Dynamic viscosity at 20 °C: | 1,29 cP |
| Kinematic viscosity at 20 °C: | 1,25 mm ² /s |
| Kinematic viscosity at 40 °C: | Non-applicable * |
| Concentration: | Non-applicable * |
| pH: | 6,2 - 6,4 |
| 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: | 38 °C |
| Flammability (solid, gas): | Non-applicable * |
| Autoignition temperature: | 423 °C |
| Lower flammability limit: | Not available |
| Upper flammability limit: | Not available |

Particle characteristics:

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

9.2 Other information:

Information with regard to physical hazard classes:

| | |
|--|------------------|
| Explosive properties: | Non-applicable * |
| Oxidising properties: | Non-applicable * |
| Corrosive to metals: | Non-applicable * |
| Heat of combustion: | Non-applicable * |
| Aerosols-total percentage (by mass) of flammable components: | Non-applicable * |

Other safety characteristics:

| | |
|---------------------------|------------------|
| 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 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:

- CONTINUED ON NEXT PAGE -

MB051 - Buffer MW

Date of compilation: 05/01/2024

Version: 1

SECTION 10: STABILITY AND REACTIVITY (continued)

| Shock and friction | Contact with air | Increase in temperature | Sunlight | Humidity |
|--------------------|------------------|-------------------------|---------------------|----------------|
| Not applicable | Not applicable | Risk of combustion | Avoid direct impact | Not applicable |

10.5 Incompatible materials:

| Acids | Water | Oxidising materials | Combustible materials | Others |
|--------------------|----------------|---------------------|-----------------------|-------------------------------|
| Avoid strong acids | Not applicable | Avoid direct impact | Not applicable | Avoid alkalis or strong bases |

10.6 Hazardous decomposition products:

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO₂), carbon monoxide and other organic compounds.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008:

The experimental information related to the toxicological properties of the product itself is not available

Dangerous health implications:

In case of exposure that is repetitive, prolonged or at concentrations higher than the recommended occupational exposure limits, adverse effects on health may result, depending on the means of exposure:

A- Ingestion (acute effect):

- Acute toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for consumption. 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.

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: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for skin contact. For more information see section 3.
- Contact with the eyes: 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.

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: ethanol (1)
- 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.

- CONTINUED ON NEXT PAGE -

MB051 - Buffer MW

Date of compilation: 05/01/2024

Version: 1

SECTION 11: TOXICOLOGICAL INFORMATION (continued)

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 |
|----------------|------------------|-------------|--------|
| | LD50 oral | LD50 dermal | |
| ethanol | 6200 mg/kg | | Rat |
| CAS: 64-17-5 | 20000 mg/kg | | Rabbit |
| EC: 200-578-6 | 124,7 mg/L (4 h) | | Rat |

Acute Toxicity Estimate (ATE mix):

| ATE mix | | Ingredient(s) of unknown toxicity |
|------------|-------------------------------------|-----------------------------------|
| Oral | >2000 mg/kg (Calculation method) | Non-applicable |
| 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

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:

Acute toxicity:

| Identification | Concentration | | Species | Genus |
|----------------|-------------------|------|------------------------|------------|
| | LC50 | EC50 | | |
| ethanol | 11000 mg/L (96 h) | | Alburnus alburnus | Fish |
| CAS: 64-17-5 | 9268 mg/L (48 h) | | Daphnia magna | Crustacean |
| EC: 200-578-6 | 1450 mg/L (192 h) | | Microcystis aeruginosa | Algae |

Chronic toxicity:

| Identification | Concentration | | Species | Genus |
|----------------------------|---------------|--|--------------------|------------|
| | NOEC | | | |
| ethanol | 250 mg/L | | Danio rerio | Fish |
| CAS: 64-17-5 EC: 200-578-6 | 2 mg/L | | Ceriodaphnia dubia | Crustacean |

12.2 Persistence and degradability:

Substance-specific information:

| Identification | Degradability | | Biodegradability | |
|----------------|----------------|----------------|------------------|---------|
| | BOD5 | COD | Concentration | Period |
| ethanol | Non-applicable | Non-applicable | 100 mg/L | 14 days |
| CAS: 64-17-5 | Non-applicable | Non-applicable | | |
| EC: 200-578-6 | Non-applicable | Non-applicable | % Biodegradable | 89 % |

12.3 Bioaccumulative potential:

Substance-specific information:

| Identification | Bioaccumulation potential | |
|----------------|---------------------------|---------|
| | BCF | Pow Log |
| ethanol | 3 | -0.31 |
| CAS: 64-17-5 | | |
| EC: 200-578-6 | Potential | Low |

- CONTINUED ON NEXT PAGE -

MB051 - Buffer MW

Date of compilation: 05/01/2024

Version: 1

SECTION 12: ECOLOGICAL INFORMATION (continued)

12.4 Mobility in soil:

| Identification | Absorption/desorption | | Volatility | |
|----------------|--|----------------------|------------|-------|
| | ethanol CAS: 64-17-5 EC: 200-578-6 | Koc | 1 | Henry |
| | Conclusion | Very High | Dry soil | Yes |
| | Surface tension | 2,339E-2 N/m (25 °C) | Moist soil | Yes |

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 | Dangerous |

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

HP3 Flammable

Waste management (disposal and evaluation):

Consult the authorized waste service manager on the assessment and disposal operations in accordance with Annex 1 and Annex 2 (Directive 2008/98/EC). As under 15 01 (2014/955/EC) of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. Waste should not be disposed of to drains. See paragraph 6.2.

Regulations related to waste management:

In accordance with Annex II of Regulation (EC) No 1907/2006 (REACH) the community or state provisions related to waste management are stated

Community legislation: Directive 2008/98/EC, 2014/955/EU, Regulation (EU) No 1357/2014

SECTION 14: TRANSPORT INFORMATION

Transport of dangerous goods by land:

With regard to ADR 2023 and RID 2023:



- 14.1 UN number or ID number:** UN1993
- 14.2 UN proper shipping name:** FLAMMABLE LIQUID, N.O.S. (ethanol)
- 14.3 Transport hazard class(es):** 3
Labels: 3
- 14.4 Packing group:** III
- 14.5 Environmental hazards:** No
- 14.6 Special precautions for user**
Special regulations: 274, 601
Tunnel restriction code: D/E
Physico-Chemical properties: see section 9
Limited quantities: 5 L
- 14.7 Maritime transport in bulk according to IMO instruments:** Non-applicable

Transport of dangerous goods by sea:

With regard to IMDG 40-20:

- CONTINUED ON NEXT PAGE -

MB051 - Buffer MW

Date of compilation: 05/01/2024

Version: 1

SECTION 14: TRANSPORT INFORMATION (continued)



- 14.1 UN number or ID number:** UN1993
14.2 UN proper shipping name: FLAMMABLE LIQUID, N.O.S. (ethanol)
14.3 Transport hazard class(es): 3
 Labels: 3
14.4 Packing group: III
14.5 Marine pollutant: No
14.6 Special precautions for user
 Special regulations: 274, 223, 955
 EmS Codes: F-E, S-E
 Physico-Chemical properties: see section 9
 Limited quantities: 5 L
 Segregation group: Non-applicable
14.7 Maritime transport in bulk according to IMO instruments: Non-applicable

Transport of dangerous goods by air:

With regard to IATA/ICAO 2023:



- 14.1 UN number or ID number:** UN1993
14.2 UN proper shipping name: FLAMMABLE LIQUID, N.O.S. (ethanol)
14.3 Transport hazard class(es): 3
 Labels: 3
14.4 Packing group: III
14.5 Environmental hazards: No
14.6 Special precautions for user
 Physico-Chemical properties: see section 9
14.7 Maritime transport in bulk according to IMO instruments: Non-applicable

SECTION 15: REGULATORY INFORMATION

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

Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Non-applicable
 Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Non-applicable
 Regulation (EC) No 1005/2009, about substances that deplete the ozone layer: Non-applicable
 Article 95, REGULATION (EU) No 528/2012: ethanol (Product-type 1, 2, 4)
 REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Non-applicable

Seveso III:

| Section | Description | Lower-tier requirements | Upper-tier requirements |
|---------|-------------------|-------------------------|-------------------------|
| P5c | FLAMMABLE LIQUIDS | 5000 | 50000 |

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:

- CONTINUED ON NEXT PAGE -

MB051 - Buffer MW

Date of compilation: 05/01/2024

Version: 1

SECTION 15: REGULATORY INFORMATION (continued)

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.:

Non-applicable

Texts of the legislative phrases mentioned in section 2:

H226: Flammable liquid and vapour.

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:

Eye Irrit. 2: H319 - Causes serious eye irritation.

Flam. Liq. 2: H225 - Highly flammable liquid and vapour.

Classification procedure:

Flam. Liq. 3: Calculation method (2.6.4.3)

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 -

MB051 - Buffer ME


Date of compilation: 05/01/2024

Version: 1

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

- 1.1 Product identifier:** MB051 - Buffer ME
- Other means of identification:**
Non-applicable
- 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.
Flam. Liq. 3: Flammable liquids, Category 3, H226
- 2.2 Label elements:**
CLP Regulation (EC) No 1272/2008:
Labelling of packages where the contents do not exceed 125 ml:
Warning
- 
- Hazard statements:**
Non-applicable
- Precautionary statements:**
Non-applicable
- UFI:** 5410-W0RX-500A-EJWK
- 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:

- CONTINUED ON NEXT PAGE -

MB051 - Buffer ME

Date of compilation: 05/01/2024

Version: 1

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS (continued)

| Identification | Chemical name/Classification | Concentration |
|--|---|-----------------|
| CAS: 64-17-5 EC: 200-578-6 Index: 603-002-00-5 REACH: 01-2119457610-43-XXXX | ethanol⁽¹⁾ | Self-classified |
| | Regulation 1272/2008 Eye Irrit. 2: H319; Flam. Liq. 2: H225 - Danger | |

⁽¹⁾ Substances presenting a health or environmental hazard which meet criteria laid down in Regulation (EU) No. 2020/878

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

Other information:

| Identification | Specific concentration limit |
|--|-----------------------------------|
| ethanol CAS: 64-17-5 EC: 200-578-6 | % (w/w) >=50: Eye Irrit. 2 - H319 |

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:

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 eyes thoroughly with water for at least 15 minutes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, in which case removal could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS for the product.

By ingestion/aspilation:

In case of consumption, seek immediate medical assistance showing the SDS for the product.

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:

Suitable extinguishing media:

If possible use polyvalent powder fire extinguishers (ABC powder), alternatively use foam or carbon dioxide extinguishers (CO₂).

Unsuitable extinguishing media:

IT IS RECOMMENDED NOT to use full jet water as an extinguishing agent.

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.

- CONTINUED ON NEXT PAGE -

MB051 - Buffer ME

Date of compilation: 05/01/2024

Version: 1

SECTION 5: FIREFIGHTING MEASURES (continued)

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. Evacuate the area and keep out those without protection. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Above all prevent the formation of any vapour-air flammable mixtures, through either ventilation or the use of an inert medium. Remove any source of ignition. Eliminate electrostatic charges by interconnecting all the conductive surfaces on which static electricity could form, and also ensuring that all surfaces are connected to the ground.

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. 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

Transfer in well ventilated areas, preferably through localized extraction. Fully control sources of ignition (mobile phones, sparks,...) and ventilate during cleaning operations. Avoid the existence of dangerous atmospheres inside containers, applying inertization systems where possible. Transfer at a slow speed to avoid the creation of electrostatic charges. Against the possibility of electrostatic charges: ensure a perfect equipotential connection, always use groundings, do not wear work clothes made of acrylic fibres, preferably wearing cotton clothing and conductive footwear. Comply with the essential security requirements for equipment and systems defined in Directive 2014/34/EC (ATEX 100) and with the minimum requirements for protecting the security and health of workers under the selection criteria of Directive 1999/92/EC (ATEX 137). Consult section 10 for 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

- CONTINUED ON NEXT PAGE -

MB051 - Buffer ME

Date of compilation: 05/01/2024

Version: 1

SECTION 7: HANDLING AND STORAGE (continued)

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 |
| ethanol CAS: 64-17-5 EC: 200-578-6 | Oral | Non-applicable | Non-applicable | Non-applicable | Non-applicable |
| | Dermal | Non-applicable | Non-applicable | 343 mg/kg | Non-applicable |
| | Inhalation | Non-applicable | Non-applicable | 950 mg/m ³ | Non-applicable |

DNEL (General population):

| Identification | | Short exposure | | Long exposure | |
|--|------------|----------------|----------------|-----------------------|----------------|
| | | Systemic | Local | Systemic | Local |
| ethanol CAS: 64-17-5 EC: 200-578-6 | Oral | Non-applicable | Non-applicable | 87 mg/kg | Non-applicable |
| | Dermal | Non-applicable | Non-applicable | 206 mg/kg | Non-applicable |
| | Inhalation | Non-applicable | Non-applicable | 114 mg/m ³ | Non-applicable |

PNEC:

| Identification | | | | | |
|--|--------------|------------|-------------------------|-----------|--|
| ethanol CAS: 64-17-5 EC: 200-578-6 | STP | 580 mg/L | Fresh water | 0,96 mg/L | |
| | Soil | 0,63 mg/kg | Marine water | 0,79 mg/L | |
| | Intermittent | 2,75 mg/L | Sediment (Fresh water) | 3,6 mg/kg | |
| | Oral | 0,38 g/kg | Sediment (Marine water) | 2,9 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: Linear low-density polyethylene (LLDPE), Breakthrough time: > 480 min, Thickness: 0.062 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



- CONTINUED ON NEXT PAGE -

MB051 - Buffer ME





Date of compilation: 05/01/2024

Version: 1



SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

| 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 |
|---|---|---|--|---|
|  Mandatory complete body protection | Antistatic and fireproof protective clothing |  | EN 1149-1:2006 EN 1149-2:1997 EN 1149-3:2004 EN 168:2002 EN ISO 14116:2015 EN 1149-5:2018 | Limited protection against flames. |
|  Mandatory foot protection | Safety footwear with antistatic and heat resistant properties |  | EN ISO 13287:2020 EN ISO 20345:2011 | Replace boots at any sign of deterioration. |

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): | 15 % weight |
| V.O.C. density at 20 °C: | 153,71 kg/m ³ (153,71 g/L) |
| Average carbon number: | 2 |
| Average molecular weight: | 46,1 g/mol |

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 |
| Odour threshold: | Non-applicable * |

Volatility:

| | |
|--|------------------------|
| Boiling point at atmospheric pressure: | 96 °C |
| Vapour pressure at 20 °C: | 2653 Pa |
| Vapour pressure at 50 °C: | 13700,21 Pa (13,7 kPa) |
| Evaporation rate at 20 °C: | Non-applicable * |

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

- CONTINUED ON NEXT PAGE -

MB051 - Buffer ME

Date of compilation: 05/01/2024

Version: 1

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)

Product description:

| | |
|--|--------------------------|
| Density at 20 °C: | 1024,7 kg/m ³ |
| Relative density at 20 °C: | 1,025 |
| Dynamic viscosity at 20 °C: | 1,26 cP |
| Kinematic viscosity at 20 °C: | 1,23 mm ² /s |
| Kinematic viscosity at 40 °C: | Non-applicable * |
| Concentration: | Non-applicable * |
| pH: | 8,4 - 8,6 |
| 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: | 39 °C |
| Flammability (solid, gas): | Non-applicable * |
| Autoignition temperature: | 423 °C |
| Lower flammability limit: | Not available |
| Upper flammability limit: | Not available |

Particle characteristics:

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

9.2 Other information:

Information with regard to physical hazard classes:

| | |
|--|------------------|
| Explosive properties: | Non-applicable * |
| Oxidising properties: | Non-applicable * |
| Corrosive to metals: | Non-applicable * |
| Heat of combustion: | Non-applicable * |
| Aerosols-total percentage (by mass) of flammable components: | Non-applicable * |

Other safety characteristics:

| | |
|---------------------------|------------------|
| 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 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:

- CONTINUED ON NEXT PAGE -

MB051 - Buffer ME

Date of compilation: 05/01/2024

Version: 1

SECTION 10: STABILITY AND REACTIVITY (continued)

| Shock and friction | Contact with air | Increase in temperature | Sunlight | Humidity |
|--------------------|------------------|-------------------------|---------------------|----------------|
| Not applicable | Not applicable | Risk of combustion | Avoid direct impact | Not applicable |

10.5 Incompatible materials:

| Acids | Water | Oxidising materials | Combustible materials | Others |
|--------------------|----------------|---------------------|-----------------------|-------------------------------|
| Avoid strong acids | Not applicable | Avoid direct impact | Not applicable | Avoid alkalis or strong bases |

10.6 Hazardous decomposition products:

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO₂), carbon monoxide and other organic compounds.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008:

The experimental information related to the toxicological properties of the product itself is not available

Dangerous health implications:

In case of exposure that is repetitive, prolonged or at concentrations higher than the recommended occupational exposure limits, adverse effects on health may result, depending on the means of exposure:

A- Ingestion (acute effect):

- Acute toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for consumption. 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.

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: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for skin contact. For more information see section 3.
- Contact with the eyes: 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.

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: ethanol (1)
- 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.

- CONTINUED ON NEXT PAGE -

MB051 - Buffer ME

Date of compilation: 05/01/2024

Version: 1

SECTION 11: TOXICOLOGICAL INFORMATION (continued)

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 |
|--|-----------------|------------------|--------|
| | LD50 oral | 6200 mg/kg | |
| ethanol CAS: 64-17-5 EC: 200-578-6 | LD50 dermal | 20000 mg/kg | Rabbit |
| | LC50 inhalation | 124,7 mg/L (4 h) | Rat |

Acute Toxicity Estimate (ATE mix):

| ATE mix | | Ingredient(s) of unknown toxicity |
|------------|-------------------------------------|-----------------------------------|
| Oral | >2000 mg/kg (Calculation method) | Non-applicable |
| 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

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:

Acute toxicity:

| Identification | Concentration | | Species | Genus |
|--|---------------|-------------------|------------------------|------------|
| | LCS0 | 11000 mg/L (96 h) | | |
| ethanol CAS: 64-17-5 EC: 200-578-6 | EC50 | 9268 mg/L (48 h) | Daphnia magna | Crustacean |
| | EC50 | 1450 mg/L (192 h) | Microcystis aeruginosa | Algae |

Chronic toxicity:

| Identification | Concentration | | Species | Genus |
|---------------------------------------|---------------|----------|--------------------|------------|
| | NOEC | 250 mg/L | | |
| ethanol CAS: 64-17-5 EC: 200-578-6 | NOEC | 2 mg/L | Ceriodaphnia dubia | Crustacean |

12.2 Persistence and degradability:

Substance-specific information:

| Identification | Degradability | | Biodegradability | |
|--|---------------|----------------|------------------|----------|
| | BOD5 | Non-applicable | Concentration | 100 mg/L |
| ethanol CAS: 64-17-5 EC: 200-578-6 | COD | Non-applicable | Period | 14 days |
| | BOD5/COD | Non-applicable | % Biodegradable | 89 % |

12.3 Bioaccumulative potential:

Substance-specific information:

| Identification | Bioaccumulation potential | |
|--|---------------------------|-------|
| | BCF | 3 |
| ethanol CAS: 64-17-5 EC: 200-578-6 | Pow Log | -0.31 |
| | Potential | Low |

- CONTINUED ON NEXT PAGE -

MB051 - Buffer ME

Date of compilation: 05/01/2024

Version: 1

SECTION 12: ECOLOGICAL INFORMATION (continued)

12.4 Mobility in soil:

| Identification | Absorption/desorption | | Volatility | |
|----------------|-----------------------|----------------------|------------|--------------------------------|
| ethanol | Koc | 1 | Henry | 4,61E-1 Pa·m ³ /mol |
| CAS: 64-17-5 | Conclusion | Very High | Dry soil | Yes |
| EC: 200-578-6 | Surface tension | 2,339E-2 N/m (25 °C) | Moist soil | Yes |

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 | Dangerous |

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

HP3 Flammable

Waste management (disposal and evaluation):

Consult the authorized waste service manager on the assessment and disposal operations in accordance with Annex 1 and Annex 2 (Directive 2008/98/EC). As under 15 01 (2014/955/EC) of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. Waste should not be disposed of to drains. See paragraph 6.2.

Regulations related to waste management:

In accordance with Annex II of Regulation (EC) No 1907/2006 (REACH) the community or state provisions related to waste management are stated

Community legislation: Directive 2008/98/EC, 2014/955/EU, Regulation (EU) No 1357/2014

SECTION 14: TRANSPORT INFORMATION

Transport of dangerous goods by land:

With regard to ADR 2023 and RID 2023:



- 14.1 UN number or ID number:** UN1993
- 14.2 UN proper shipping name:** FLAMMABLE LIQUID, N.O.S. (ethanol)
- 14.3 Transport hazard class(es):** 3
Labels: 3
- 14.4 Packing group:** III
- 14.5 Environmental hazards:** No
- 14.6 Special precautions for user**
Special regulations: 274, 601
Tunnel restriction code: D/E
Physico-Chemical properties: see section 9
Limited quantities: 5 L
- 14.7 Maritime transport in bulk according to IMO instruments:** Non-applicable

Transport of dangerous goods by sea:

With regard to IMDG 40-20:

- CONTINUED ON NEXT PAGE -

MB051 - Buffer ME

Date of compilation: 05/01/2024

Version: 1

SECTION 14: TRANSPORT INFORMATION (continued)



- 14.1 UN number or ID number:** UN1993
- 14.2 UN proper shipping name:** FLAMMABLE LIQUID, N.O.S. (ethanol)
- 14.3 Transport hazard class(es):** 3
Labels: 3
- 14.4 Packing group:** III
- 14.5 Marine pollutant:** No
- 14.6 Special precautions for user**
Special regulations: 274, 223, 955
EmS Codes: F-E, S-E
Physico-Chemical properties: see section 9
Limited quantities: 5 L
Segregation group: Non-applicable
- 14.7 Maritime transport in bulk according to IMO instruments:** Non-applicable

Transport of dangerous goods by air:

With regard to IATA/ICAO 2023:



- 14.1 UN number or ID number:** UN1993
- 14.2 UN proper shipping name:** FLAMMABLE LIQUID, N.O.S. (ethanol)
- 14.3 Transport hazard class(es):** 3
Labels: 3
- 14.4 Packing group:** III
- 14.5 Environmental hazards:** No
- 14.6 Special precautions for user**
Physico-Chemical properties: see section 9
- 14.7 Maritime transport in bulk according to IMO instruments:** Non-applicable

SECTION 15: REGULATORY INFORMATION

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

Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Non-applicable
Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Non-applicable
Regulation (EC) No 1005/2009, about substances that deplete the ozone layer: Non-applicable
Article 95, REGULATION (EU) No 528/2012: ethanol (Product-type 1, 2, 4)
REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Non-applicable

Seveso III:

| Section | Description | Lower-tier requirements | Upper-tier requirements |
|---------|-------------------|-------------------------|-------------------------|
| P5c | FLAMMABLE LIQUIDS | 5000 | 50000 |

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:

- CONTINUED ON NEXT PAGE -

MB051 - Buffer ME

Date of compilation: 05/01/2024

Version: 1

SECTION 15: REGULATORY INFORMATION (continued)

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.:

Non-applicable

Texts of the legislative phrases mentioned in section 2:

H226: Flammable liquid and vapour.

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:

Eye Irrit. 2: H319 - Causes serious eye irritation.

Flam. Liq. 2: H225 - Highly flammable liquid and vapour.

Classification procedure:

Flam. Liq. 3: Calculation method (2.6.4.3)

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 -

Date of compilation: 05/01/2024

Version: 1

Page 11/11

MB051 - RNase A

Date of compilation: 12/08/2020

Revised: 05/01/2024

Version: 2 (Replaced 1)

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

1.1 Product identifier: MB051 - RNase A

Nuclease, ribo-

CAS: 9001-99-4

EC: 232-646-6

Index: Non-applicable

REACH: Non-applicable

Other means of identification:

Non-applicable

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.

Resp. Sens. 1: Sensitisation, respiratory, Category 1, H334

2.2 Label elements:

CLP Regulation (EC) No 1272/2008:

Labelling of packages where the contents do not exceed 125 ml:

Danger



Hazard statements:

Resp. Sens. 1: H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Precautionary statements:

P261: Avoid breathing dust/fume/gas/mist/vapours/spray.

P284: Wear respiratory protection.

P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P342+P311: If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

P501: Dispose of contents/container in accordance with regulations on hazardous waste or packaging and packaging waste respectively.

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:

- CONTINUED ON NEXT PAGE -

MB051 - RNase A

Date of compilation: 12/08/2020

Revised: 05/01/2024

Version: 2 (Replaced 1)

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS (continued)

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: 9001-99-4 EC: 232-646-6 Index: Non-applicable REACH: Non-applicable | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2" style="background-color: #cccccc;">Nuclease, ribo-</td> <td style="text-align: right;">Self-classified</td> </tr> <tr> <td style="width: 30%;">Regulation 1272/2008</td> <td style="width: 40%;">Resp. Sens. 1: H334 - Danger</td> <td style="text-align: center; vertical-align: middle;"> </td> </tr> </table> | Nuclease, ribo- | | Self-classified | Regulation 1272/2008 | Resp. Sens. 1: H334 - Danger | | 100 % |
| Nuclease, ribo- | | Self-classified | | | | | | |
| Regulation 1272/2008 | Resp. Sens. 1: H334 - Danger | | | | | | | |

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:

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:

Remove the person affected from the area of exposure, provide with fresh air and keep at rest. In serious cases such as cardiorespiratory failure, artificial resuscitation techniques will be necessary (mouth to mouth resuscitation, cardiac massage, oxygen supply, etc.) requiring immediate medical assistance.

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:

This product does not contain substances classified as hazardous for eye contact. Rinse eyes thoroughly for at least 15 minutes with lukewarm water, ensuring that the person affected does not rub or close their eyes.

By ingestion/aspiration:

In case of consumption, seek immediate medical assistance showing the SDS for the product.

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:

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:

- CONTINUED ON NEXT PAGE -

MB051 - RNase A

Date of compilation: 12/08/2020

Revised: 05/01/2024

Version: 2 (Replaced 1)

SECTION 5: FIREFIGHTING MEASURES (continued)

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:**

Preferably use aspiration for cleaning. Given the danger of the product by inhalation, any cleaning method that involves exposure to the product in this way (sweeping, etc.) is not recommended

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:

Preferably use aspiration for cleaning. Given the danger of the product by inhalation, any cleaning method that involves exposure to the product in this way (sweeping, etc.) is not recommended

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

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

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):

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):

- CONTINUED ON NEXT PAGE -

MB051 - RNase A

Date of compilation: 12/08/2020

Revised: 05/01/2024

Version: 2 (Replaced 1)

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Nuisance dust: Inhalable dust 10 mg/m³ // Respirable dust 4 mg/m³

DNEL (Workers):

Non-applicable

DNEL (General population):

Non-applicable

PNEC:



Non-applicable

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

| Pictogram | PPE | Labelling | CEN Standard | Remarks |
|--|-----------------------------------|--|---------------------|--|
|  Mandatory respiratory tract protection | Filter mask for gases and vapours |  | EN 405:2002+A1:2010 | Replace when there is a taste or smell of the contaminant inside the face mask. If the contaminant comes with warnings it is recommended to use isolation equipment. |



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 ISO 21420:2020 and EN ISO 374-1:2016+A1:2018 |



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 |

- CONTINUED ON NEXT PAGE -

MB051 - RNase A

Date of compilation: 12/08/2020

Revised: 05/01/2024

Version: 2 (Replaced 1)

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

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 ³ (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: | Solid |
| Appearance: | Not available |
| Colour: | White |
| Odour: | Odourless |
| Odour threshold: | Non-applicable * |

Volatility:

| | |
|--|------------------|
| Boiling point at atmospheric pressure: | 656 °C |
| 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: | 1400 kg/m ³ |
| Relative density at 20 °C: | 1,4 |
| 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: | Non-applicable * |
| 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: | 243 °C |

Flammability:

| | |
|----------------------------|------------------|
| Flash Point: | 351 °C |
| Flammability (solid, gas): | Non-applicable * |
| Autoignition temperature: | Non-applicable * |
| Lower flammability limit: | Non-applicable * |

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

- CONTINUED ON NEXT PAGE -

MB051 - RNase A

Date of compilation: 12/08/2020

Revised: 05/01/2024

Version: 2 (Replaced 1)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)

Upper flammability limit: Non-applicable *

Explosive (Solid):

Lower explosive limit: Non-applicable *

Upper explosive limit: Non-applicable *

Particle characteristics:

Median equivalent diameter: Non-applicable *

9.2 Other information:

Information with regard to physical hazard classes:

Explosive properties: Non-applicable *

Oxidising properties: Non-applicable *

Corrosive to metals: Non-applicable *

Heat of combustion: Non-applicable *

Aerosols-total percentage (by mass) of flammable components: Non-applicable *

Other safety characteristics:

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 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:

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO₂), carbon monoxide and other organic compounds.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008:

The experimental information related to the toxicological properties of the product itself is not available

Dangerous health implications:

In case of exposure that is repetitive, prolonged or at concentrations higher than the recommended occupational exposure limits, adverse effects on health may result, depending on the means of exposure:

A- Ingestion (acute effect):

- CONTINUED ON NEXT PAGE -

MB051 - RNase A

Date of compilation: 12/08/2020

Revised: 05/01/2024

Version: 2 (Replaced 1)

SECTION 11: TOXICOLOGICAL INFORMATION (continued)

- Acute toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for consumption. 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.
- 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: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for skin contact. For more information see section 3.
 - Contact with the eyes: 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.
- 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: 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: Prolonged exposure can result in specific respiratory hypersensitivity.
 - 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 |
|--|-----------------|-------------|-------|
| Nuclease, ribo- CAS: 9001-99-4 EC: 232-646-6 | LD50 oral | >2000 mg/kg | |
| | LD50 dermal | >2000 mg/kg | |
| | 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

- CONTINUED ON NEXT PAGE -

MB051 - RNase A

Date of compilation: 12/08/2020 Revised: 05/01/2024 Version: 2 (Replaced 1)

SECTION 12: ECOLOGICAL INFORMATION

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

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

| Code | Description | Waste class (Regulation (EU) No 1357/2014) |
|-----------|--|--|
| 16 03 05* | organic wastes containing hazardous substances | Dangerous |

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

HP13 Sensitising

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:

- CONTINUED ON NEXT PAGE -

MB051 - RNase A

Date of compilation: 12/08/2020

Revised: 05/01/2024

Version: 2 (Replaced 1)

SECTION 14: TRANSPORT INFORMATION (continued)

- | | |
|--|----------------|
| 14.1 UN number or ID number: | Non-applicable |
| 14.2 UN proper shipping name: | Non-applicable |
| 14.3 Transport hazard class(es): | Non-applicable |
| Labels: | Non-applicable |
| 14.4 Packing group: | Non-applicable |
| 14.5 Environmental hazards: | No |
| 14.6 Special precautions for user | |
| Special regulations: | Non-applicable |
| Tunnel restriction code: | Non-applicable |
| Physico-Chemical properties: | see section 9 |
| Limited quantities: | Non-applicable |
| 14.7 Maritime transport in bulk according to IMO instruments: | Non-applicable |

Transport of dangerous goods by sea:

With regard 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 |
| 14.4 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 Maritime transport in bulk according to IMO instruments: | Non-applicable |

Transport of dangerous goods by air:

With regard to IATA/ICAO 2023:

- | | |
|--|----------------|
| 14.1 UN number or ID number: | Non-applicable |
| 14.2 UN proper shipping name: | Non-applicable |
| 14.3 Transport hazard class(es): | Non-applicable |
| Labels: | Non-applicable |
| 14.4 Packing group: | Non-applicable |
| 14.5 Environmental hazards: | No |
| 14.6 Special precautions for user | |
| Physico-Chemical properties: | see section 9 |
| 14.7 Maritime transport in bulk according to IMO instruments: | Non-applicable |

SECTION 15: REGULATORY INFORMATION

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

Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Non-applicable
 Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Non-applicable
 Regulation (EC) No 1005/2009, about substances that deplete the ozone layer: Non-applicable
 Article 95, REGULATION (EU) No 528/2012: Non-applicable

- CONTINUED ON NEXT PAGE -

MB051 - RNase A

Date of compilation: 12/08/2020

Revised: 05/01/2024

Version: 2 (Replaced 1)

SECTION 15: REGULATORY INFORMATION (continued)

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:

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.:

COMMISSION REGULATION (EU) 2020/878

Texts of the legislative phrases mentioned in section 2:

H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

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:

Resp. Sens. 1: H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.

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 -