

**MATERIAL SAFETY DATA SHEET**  
*Prepared in accordance with EU directive 91/155/EEC*

Printed: 28.12.2006

Revised: 28.12.2006

**1 Identification of the substance/preparation and of the company/undertaking**

- **Product details**
- **Trade name:** *NheI*
- **Application of the substance / the preparation:** *Laboratory chemicals*
- **Manufacturer/Supplier:**  
*Fermentas UAB*  
*V.Graiciuno 8*  
*LT-02241 Vilnius*  
*Lithuania*  
*Tel.: +370 5 2602131*  
*Fax.: +370 5 2602142*
- **Further information obtainable from:**  
*Please visit our site: <http://www.fermentas.com/>*  
*Contact us: [info@fermentas.com](mailto:info@fermentas.com)*  
*Or contact Fermentas distributor in your country.*
- **Information in case of emergency:**  
*Poison Information Centre, Mainz, Germany,*  
*Tel.: +49 (0)6131 19240 / 24h*

**2 Composition/information on ingredients**

- **Chemical characterization**
- **Description:** *Solution, consisting of the following components.*

· **Components:**

CAS: 56-81-5 EINECS: 200-289-5	glycerol	>50%
CAS: 7732-18-5 EINECS: 231-791-2	water	25-50%

- **Other components:**  
*Components not listed here are not dangerous or their concentrations do not exceed the limits specified in the EU directive 1999/45/EC.*
- **Additional information:** *For the wording of the listed risk phrases refer to section 16.*

**3 Hazards identification**

- **Hazard description:** *Not applicable.*
- **Information concerning particular hazards for human and environment:**  
*The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.*
- **Classification system:**  
*The classification is according to the latest editions of the EU-lists, and extended by company and literature data.*

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## 4 First aid measures

- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.

## 5 Fire-fighting measures

- **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Protective equipment:** No special measures required.

## 6 Accidental release measures

- **Person-related safety precautions:** Not required.
- **Measures for environmental protection:**  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Additional information:** No dangerous substances are released.

## 7 Handling and storage

- **Handling:**
- **Information for safe handling:** No special measures required.
- **Information about fire - and explosion protection:** No special measures required.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.

## 8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Ingredients with limit values that require monitoring at the workplace:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists valid during the making were used as basis.
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
The usual precautionary measures are to be adhered to when handling chemicals.
- **Respiratory protection:** Not required.
- **Protection of hands:**  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

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*Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.*

*Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation*

· **Material of gloves**

*The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.*

· **Penetration time of glove material**

*The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.*

· **Eye protection:** *Goggles recommended during refilling*

## 9 Physical and chemical properties

· **General Information**

<b>Form:</b>	Solution
<b>Colour:</b>	Colourless
<b>Odour:</b>	Nearly odourless

· **Change in condition**

**Melting point/Melting range:** *Undetermined.*

**Boiling point/Boiling range:** *Undetermined.*

· **Flash point:** *Not applicable.*

· **Self-igniting:** *Product is not selfigniting.*

· **Danger of explosion:** *Product does not present an explosion hazard.*

· **Density at 20°C:** *1,16 g/cm<sup>3</sup>*

· **Solubility in / Miscibility with water:** *Fully miscible.*

· **pH-value at 25°C:** *8,0*

## 10 Stability and reactivity

· **Thermal decomposition / conditions to be avoided:**

*No decomposition if used according to specifications.*

· **Dangerous reactions** *No dangerous reactions known.*

· **Dangerous decomposition products:** *No dangerous decomposition products known.*

## 11 Toxicological information

· **Acute toxicity:**

· **Primary irritant effect:**

· **on the skin:** *No irritant effect.*

· **on the eye:** *No irritating effect.*

· **Sensitization:** *No sensitizing effects known.*

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· **Additional toxicological information:**

*The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.*

*When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.*

## 12 Ecological information

· **General notes:**

*Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water*

*Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.*

## 13 Disposal considerations

· **Product:**

· **Recommendation:** *Smaller quantities can be disposed of with household waste.*

· **Uncleaned packaging:**

· **Recommendation:** *Disposal must be made according to official regulations.*

· **Recommended cleansing agents:** *Water, if necessary together with cleansing agents.*

## 14 Transport information

· **Land transport ADR/RID (cross-border)**

· **ADR/RID class:** -

· **Maritime transport IMDG:**

· **IMDG Class:** -

· **Marine pollutant:** *No*

· **Air transport ICAO-TI and IATA-DGR:**

· **ICAO/IATA Class:** -

## 15 Regulatory information

· **Labelling according to EU guidelines:**

*Observe the general safety regulations when handling chemicals.*

*The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (German GefStoffV).*

## 16 Other information

*This information is based on our present knowledge and shall be used only as a guide. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship. Fermentas is not held liable for any damage resulting from handling or from contact with the above mentioned products.*

*MSDS has been prepared in accordance with EU directives 67/548/EEC, 91/155/EEC and other European Union legislation in force.*

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**1 Identification of the substance/preparation and of the company/undertaking**

- **Product details**
- **Trade name:** 10x Buffer Tango™
- **Application of the substance / the preparation:** Laboratory chemicals
- **Manufacturer/Supplier:**  
Fermentas UAB  
V.Graiciuno 8  
LT-02241 Vilnius  
Lithuania  
Tel.: +370 5 2602131  
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- **Further information obtainable from:**  
Please visit our site: <http://www.fermentas.com/>  
Contact us: [info@fermentas.com](mailto:info@fermentas.com)  
Or contact Fermentas distributor in your country.
- **Information in case of emergency:**  
Poison Information Centre, Mainz, Germany,  
Tel.: +49 (0)6131 19240 / 24h

**2 Composition/information on ingredients**

- **Chemical characterization**
- **Description:** Solution, consisting of the following components.

· **Components:**

CAS: 7732-18-5 EINECS: 231-791-2	water	>50%
CAS: 127-08-2 EINECS: 204-822-2	potassium acetate	2,5-10%
CAS: 6850-28-8 EINECS: 229-939-6	[2-hydroxy-1,1-bis(hydroxymethyl)ethyl]ammonium acetate	2,5-10%
CAS: 142-72-3 EINECS: 205-554-9	magnesium di(acetate)	1-2,5%

- **Other components:**  
Components not listed here are not dangerous or their concentrations do not exceed the limits specified in the EU directive 1999/45/EC.
- **Additional information:** For the wording of the listed risk phrases refer to section 16.

**3 Hazards identification**

- **Hazard description:** Not applicable.
- **Information concerning particular hazards for human and environment:**  
The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

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## 4 First aid measures

- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.

## 5 Fire-fighting measures

- **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Protective equipment:** No special measures required.

## 6 Accidental release measures

- **Person-related safety precautions:** Not required.
- **Measures for environmental protection:**  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Additional information:** No dangerous substances are released.

## 7 Handling and storage

- **Handling:**
- **Information for safe handling:** No special measures required.
- **Information about fire - and explosion protection:** No special measures required.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.

## 8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Ingredients with limit values that require monitoring at the workplace:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
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- **Respiratory protection:** Not required.
- **Protection of hands:**  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**  
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material**  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Goggles recommended during refilling

## 9 Physical and chemical properties

### · General Information

<b>Form:</b>	Solution
<b>Colour:</b>	Colourless
<b>Odour:</b>	Odourless

### · Change in condition

**Melting point/Melting range:** Undetermined.  
**Boiling point/Boiling range:** Undetermined.

<b>Flash point:</b>	Not applicable.
<b>Self-igniting:</b>	Product is not selfigniting.
<b>Danger of explosion:</b>	Product does not present an explosion hazard.
<b>Density at 20°C:</b>	1,05 g/cm <sup>3</sup>
<b>Solubility in / Miscibility with water:</b>	Fully miscible.
<b>pH-value at 37°C:</b>	7,9

## 10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications.
- **Dangerous reactions** No dangerous reactions known.
- **Dangerous decomposition products:** No dangerous decomposition products known.

EU

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When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

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- **General notes:**  
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

## 13 Disposal considerations

- **Product:**
- **Recommendation:** Smaller quantities can be disposed of with household waste.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

## 14 Transport information

- **Land transport ADR/RID (cross-border)**
- **ADR/RID class:** -
- **Maritime transport IMDG:**
- **IMDG Class:** -
- **Marine pollutant:** No
- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** -

## 15 Regulatory information

- **Labelling according to EU guidelines:**  
Observe the general safety regulations when handling chemicals.  
The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (German GefStoffV).

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