



Trade name: FastDigest™ XhoI

**#FD0694**

**#FD0698**

**Both supplied with:**

10x FastDigest™ Buffer

**MATERIAL SAFETY DATA SHEET**  
*Prepared in accordance with ISO 11014-1 Standard*

Printed: 03/15/2007

Revised: 12/28/2006

**1 Product and company identification**

- **Product details**
- **Trade name:** XhoI  
· FastDigest™ XhoI
- **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.
- **Emergency information:**  
For Chemical Emergency (Spill, Leak, Fire, Exposure or Accident),  
Call CHEMTREC Day or Night  
Domestic North America: 1-800-424-9300  
International: 1-703-527-3887 (collect calls accepted)

**2 Composition/Information on ingredients**

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

· **Components:**

|           |          |        |
|-----------|----------|--------|
| 56-81-5   | glycerol | >50%   |
| 7732-18-5 | water    | 25-50% |

- **Other components:**  
Components not listed here are not hazardous or their concentrations do not exceed the limits specified in the OSHA Hazard Communication Standard 29 CFR 1910.1200.

**3 Hazards identification**

- **Hazard description:** Not applicable.
- **Information pertaining to particular dangers for man and environment:**  
The product does not have to be labelled due to the calculation procedure of international guidelines.
- **Classification system:**  
The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

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· **NFPA ratings (scale 0 - 4)**

Health = 0  
Fire = 0  
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

HEALTH 0 Health = 0  
FIRE 0 Fire = 0  
REACTIVITY 0 Reactivity = 0

## 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>, extinguishing 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 protection against explosions and fires:** 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.

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## 8 Exposure controls and personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Components with limit values that require monitoring at the workplace:**

### 56-81-5 glycerol

|     |  |
|-----|--|
| PEL | 15* 5** mg/m <sup>3</sup><br>*total dust **respirable fraction |
| TLV | 10 ppm   |

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Personal protective equipment:**

· **General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.

· **Breathing equipment:** 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>Color:</b> | Colorless       |
| <b>Odor:</b>  | Nearly odorless |

· **Change in condition**

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

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

· **Flash point:** Not applicable.

· **Auto igniting:** Product is not selfigniting.

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

· **Density at 20°C (68°F):** 1.16 g/cm<sup>3</sup>

· **Solubility in / Miscibility with**

**Water:** Fully miscible.

· **pH-value at 25°C (77°F):** 7.4

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## 10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications.
- **Dangerous reactions:** No dangerous reactions known.
- **Dangerous products of decomposition:** 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.
- **Additional toxicological information:**  
The product is not subject to classification according to internally approved calculation methods for preparations:  
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

## 12 Ecological information

- **General notes:**  
Water hazard class 1 (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 packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

## 14 Transport information

- **DOT regulations:**
- **Hazard class:** -
- **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:** -

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## 15 Regulations

- **Sara**

- **Section 355 (extremely hazardous substances):**

- None of the ingredients is listed.

- **Section 313 (Specific toxic chemical listings):**

- None of the ingredients is listed.

- **TSCA (Toxic Substances Control Act):**

- All ingredients are listed.

- **Proposition 65**

- **Chemicals known to cause cancer:**

- None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for females:**

- None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for males:**

- None of the ingredients is listed.

- **Chemicals known to cause developmental toxicity:**

- None of the ingredients is listed.

- **Carcinogen categories**

- **EPA (Environmental Protection Agency)**

- None of the ingredients is listed.

- **IARC (International Agency for Research on Cancer)**

- None of the ingredients is listed.

- **NTP (National Toxicology Program)**

- None of the ingredients is listed.

- **TLV (Threshold Limit Value established by ACGIH)**

- None of the ingredients is listed.

- **NIOSH-Ca (National Institute for Occupational Safety and Health)**

- None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

- None of the ingredients is listed.

- **Product related hazard information:**

- Observe the general safety regulations when handling chemicals.

- The product is not subject to identification regulations according to directives on hazardous materials.

## 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 ISO 11014-1 Standard and OSHA Hazard Communication Standard 29 CFR 1910.1200.*

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- **Trade name:** 10x FastDigest™ Buffer
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LT-02241 Vilnius  
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Fax.: +370 5 2602142
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Contact us: [info@fermentas.com](mailto:info@fermentas.com)  
Or contact Fermentas distributor in your country.
- **Emergency information:**  
For Chemical Emergency (Spill, Leak, Fire, Exposure or Accident),  
Call CHEMTREC Day or Night  
Domestic North America: 1-800-424-9300  
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**2 Composition/Information on ingredients**

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

· **Components:**

|           |       |      |
|-----------|-------|------|
| 7732-18-5 | water | >50% |
|-----------|-------|------|

- **Other components:**  
Components not listed here are not hazardous or their concentrations do not exceed the limits specified in the OSHA Hazard Communication Standard 29 CFR 1910.1200.

**3 Hazards identification**

- **Hazard description:** Not applicable.
- **Information pertaining to particular dangers for man and environment:**  
The product does not have to be labelled due to the calculation procedure of international guidelines.
- **Classification system:**  
The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.
- **NFPA ratings (scale 0 - 4)**



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· **HMIS-ratings (scale 0 - 4)**

|            |   |                |
|------------|---|----------------|
| HEALTH     | 0 | Health = 0     |
| FIRE       | 0 | Fire = 0       |
| REACTIVITY | 0 | Reactivity = 0 |

## 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>, extinguishing 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 protection against explosions and fires:** 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 and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Components 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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- **Additional information:** *The lists that were valid during the creation were used as basis.*
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
*The usual precautionary measures for handling chemicals should be followed.*
- **Breathing equipment:** *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>Color:</b> | Colorless  |
| <b>Odor:</b>  | Unpleasant |

### · Change in condition

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

· **Flash point:** *Not applicable.*

· **Auto igniting:** *Product is not selfigniting.*

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

· **Density:** *Not determined.*

### · Solubility in / Miscibility with

**Water:** *Fully miscible.*

## 10 Stability and reactivity

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

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- **Hazard class:** -
- **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 Regulations

- **Sara**
- **Section 355 (extremely hazardous substances):**  
*None of the ingredients is listed.*
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*None of the ingredients is listed.*

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· **TSCA (Toxic Substances Control Act):**

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· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenicity categories**

· **EPA (Environmental Protection Agency)**

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· **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

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