



# DATA SHEET

## MATERIAL SAFETY DATA SHEET

(The format of the MSDS complies with Commission Directive 2001/58/EC as amended.)

Revised: 01 December 2006

### 1. IDENTIFICATION OF THE PREPARATION/SUBSTANCE AND OF THE COMPANY

Preparation Name:

Msp I restriction endonuclease (nuclease, restriction endodeoxyribonuclease) - buffered aqueous glycerol solution.

(Supplied with: SE-buffer B).

Source:

Isolated from Moraxella species.

Catalogue numbers of the product:

E091, E092, SE092, ME092, LE092 (depending on the quantity).

Use of the preparation:

For laboratory use.

### 2. COMPOSITION/ INFORMATION ON INGREDIENTS

Ingredients:

- |                               |               |              |                |
|-------------------------------|---------------|--------------|----------------|
| 1. Msp I                      | < 0.1% (w/v)  | EC#          | CAS#           |
| 2. Glycerol                   | 50% (v/v)     | EC#200-289-5 | CAS#56-81-5    |
| 3. Potassium chloride         | < 1% (w/v)    | EC#231-211-8 | CAS#7447-40-7  |
| 4. Tris-HCl                   | < 1% (w/v)    |              |                |
| (mix of Tris (Trometamol)     |               | EC#201-064-4 | CAS#77-86-1    |
| and Hydrochloric acid         |               | EC#231-595-7 | CAS#7647-01-0) |
| 5. EDTA (disodium salt)       | < 0.01% (w/v) | EC#205-358-3 | CAS#139-33-3   |
| 6. 2-Mercaptoethanol          | < 0.1% (w/v)  | EC#200-464-6 | CAS#60-24-2    |
| 7. BSA (Bovine serum albumin) | 0.02% (w/v)   | EC#232-936-2 | CAS#9048-46-8  |
| 8. Water                      | ~ 48% (v/v)   | EC#231-791-2 | CAS#7732-18-5  |

Ingredients indicated above do not present a health or environmental hazard within the meaning of Council Directive 67/548/EEC, or their concentrations do not exceed the limits specified in Council Directive 1999/45/EC, and in Commission Directive 2001/58/EC.

### 3. HAZARDS IDENTIFICATION

The preparation is not classified as dangerous according to Directive 1999/45/EC or Directive 67/548/EC, and is not labeled with danger symbols or indications of danger.

Hazards deriving from physical-chemical properties:

The data available do not support any physical or chemical hazard.

Human health hazards:

Aqueous glycerol enzyme solutions are aerosol-free preparations. However, inappropriate handling may cause formation of aerosols. Inhalation of enzyme aerosols may cause allergic type reactions in sensitized individuals. Prolonged skin contact may cause minor irritation.

Caution: Avoid inhalation, ingestion, and skin contacts.

Environmental hazards:

The data available do not support any environmental hazard.

#### **4. FIRST-AID MEASURES**

##### **Ingestion:**

If swallowed, rinse mouth and throat thoroughly with water. Consult a doctor in event of any complaints.

##### **Inhalation:**

If inhaled, remove victim from area of exposure. If symptoms of irritation or respiratory allergy occur, consult a doctor.

##### **Skin contact:**

Generally, the product does not irritate the skin. If symptoms of irritation after prolonged exposure occur, consult a doctor.

##### **Eye contact:**

In case of contact, wash out opened eyes with plenty of water for several minutes. Consult a doctor in event of any complaints.

#### **5. FIRE-FIGHTING MEASURES**

The preparation cannot cause fire.

##### **Suitable extinguishing agents:**

Water spray, Carbon Dioxide, dry chemical powder or appropriate foam.

##### **Not suitable extinguishing agents:**

None.

##### **Special exposure hazards from decomposition products:**

Not thoroughly investigated.

##### **Protective equipment:**

Wear self-contained breathing apparatus and protective clothing.

#### **6. ACCIDENTAL RELEASE MEASURES**

##### **Personal precautions:**

Wear appropriate gloves (see Section 8), safety glasses to clean small releases/spillage. In case of vapour/aerosol formation, wear suitable respiratory protection means. Ventilate the area.

##### **Environmental precautions:**

No special measures required.

##### **Methods for cleaning up:**

Absorb spillages with liquid-binding material. Ventilate and wash the area after the spillage is completely removed.

##### **Additional information:**

No dangerous substances are released.

#### **7. HANDLING AND STORAGE**

##### **Handling:**

No further requirements.

Use appropriate personal protection measures (see Section 8). Avoid any contact with the liquid. Avoid the formation of aerosols. Ventilate area.

##### **Storage:**

Store at - 20°C.

None other specific requirements relating to the preparation.

#### **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Ingredients with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that need to be monitored at the workplace.

General protective and hygienic measures:

The usual precautionary measures are the same as for chemicals handling.

Engineering measures:

None specific requirements relating to the preparation.

Personal protection:

- Respiratory protection: No special measures required.
- Hand protection: Wear rubber gloves. None special requirements to rubber.
- Eye protection: No need to wear glasses (goggles) when ordinary operations with the preparation. Safety glasses are recommended during certain operations when aerosol formation is possible.
- Skin protection: The usual precautionary measures accepted in research laboratories, e.g. protective clothes (gowns). None specific requirements.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Liquid.

Colour: Colourless.

Odour: Odourless.

pH-value at 25°C: 7.5.

Boiling point: 182°C.

Melting Point: 20°C.

Flash Point: Not applicable.

Flammability/autoflammability: The preparation is not flammable/self-igniting.

Explosive properties: The preparation does not possess explosive properties.

Oxidizing properties: Not applicable.

Vapour pressure: Not applicable.

Relative density at 20°C: 1.13 g/cm

Solubility in/miscibility with water: Fully miscible.

Fat solubility: Not applicable.

Vapour density: Not applicable.

Evaporation rate: Not applicable.

Conductivity: Not applicable.

Viscosity: Viscous.

## 10. STABILITY AND REACTIVITY

Stability:

Stable under storage conditions (see Section 7). Storage at room temperature may result in lowering of the specific activity, but not result in any hazardous reactions.

Conditions to avoid:

No conditions which may cause dangerous reactions.

Possibility of hazardous reactions:

No dangerous reactions known.

Materials to avoid:

No materials which may cause dangerous reactions.

Hazardous decomposition products:

No dangerous decomposition products known.

Hazardous polymerization:

Will not occur.

## **11. TOXICOLOGICAL INFORMATION**

**Routes of exposure:**

**Inhalation:** Inhalation of enzyme aerosols may cause allergic type reactions in sensitized individuals.

**Ingestion:** Repeated ingestion or excessive dosage may cause irritation of the gastrointestinal tract.

**Skin and eye contact:** Generally, the product does not irritate the skin and eyes. Prolonged skin or eye contact may cause minor irritation.

**Additional toxicological information:**

When used and handled according to specifications, the product does not have any harmful effects.

The product is not listed in a priority list (as foreseen under Council Regulation (EEC) No 793/93 on the evaluation and control of the risks of the existing substances.).

## **12. ECOLOGICAL INFORMATION**

**Ecotoxicity:**

The preparation is considered not dangerous to the environment with respect to mobility, persistence and degradability, bioaccumulation, aquatic toxicity and other data relating to ecotoxicity.

**Persistence and degradability:**

The preparation is readily biodegradable.

**Bioaccumulative potential:**

It is considered that the preparation does not accumulate in biota, and does not pass through the food chain.

**Other adverse effects:**

Not applicable.

## **13. DISPOSAL CONSIDERATIONS**

The disposal of the product does not present a danger.

No special disposal methods required, except to be in accordance with current local environmental regulations.

## **14. TRANSPORT INFORMATION**

**Special precautions:**

None known.

**Proper shipping name:**

Not dangerous goods according to transport regulations.

**National transport regulations:**

No additional national transport regulations are known to the supplier.

**IMDG:** Non-hazardous for sea freight.

**ADR:** Non-hazardous for road transport.

**RID:** Non-hazardous for rail transport.

**ICAO/IATA:** Non-hazardous for air transport.

**Other information:**

The preparation has to be stored in ice during the transportation not to lose its specific properties.

## **15. REGULATORY INFORMATION**

US

**Labelling according to US Regulations: Caution: Avoid contact and inhalation.**

**US Regulatory information: SARA LISTED: No.**

**EU**

**Labelling according to EU Guidelines: The preparation is not dangerous within the meaning of Directives 67/548/EC, 1999/45/EC, and 88/379/ECC, and is not labelled with danger symbols or indications of danger.**

**Canada**

**WHMIS classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.**

**DSL: No.**

**NDSL: No.**

#### **16. OTHER INFORMATION**

**The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. SibEnzyme shall not be held liable for any damage resulting from handling or from contact with the above product.**

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