SibEnzyme Ltd.

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MATERIAL SAFETY DATA SHEET

(The format of the MSDS complies with Commission Directive 2001/58/EC as amended.)
Revised: 06 November 2009

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

Preparation Name:

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

(**Supplied with:** SE-buffer Y, BSA-solution).

Source:
An *E. coli* strain that carries the cloned FauND I gene from *Flavobacterium aquatile ND.*

Catalogue numbers of the product:
E009, E010, SE010, ME010, LE010 (depending on the quantity).

Use of the preparation:
For laboratory use.

Company identification:
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2. COMPOSITION/ INFORMATION ON INGREDIENTS

Ingredients:

1. FauND 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. BSA (Bovine serum albumin)	0.02% (w/v)	EC#232-936-2	CAS#9048-46-8
7. DTT (Dithiothreitol)	< 0.1% (w/v)	EC#222-468-7	CAS#3483-12-3
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^3.
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.

Export and Import Information:

The preparation is not listed in the Annex I of Regulation (EC) No 689/2008.

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.