

Material Safety Data Sheet

GDP-HiFi DNA Polymerase (1 U/ μ l)

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

Revised: 27 Nov 2010

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

Preparation Name: GDP-HiFi DNA Polymerase (1 U/ μ l)

Product code: MB601-E

Use of the preparation:

For laboratory use.

Suitable for application for Proof-reading PCR.

Company identification:

Genedirex, Inc.

Site: <http://www.genedirex.com>

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients:

Water > 45% (v/v)

EC#231-791-2

CAS#7732-18-5

Glycerol 45~55% (v/v)

EC#200-289-5

CAS#56-81-5

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

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.

Form

Liquid

Hazards deriving from physical-chemical properties:

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

Human health hazards:

Inappropriate handling may cause formation of aerosols. Inhalation of 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.

Material Safety Data Sheet

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 vapor/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.

Material Safety Data Sheet

- 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.

Color: Colorless.

Odor: Odorless.

pH-value at 25°C: 8.0.

Boiling point: 105°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.

Vapor pressure: Not applicable.

Relative density at 20°C: ~1.15 g/cm³.

Solubility in/miscibility with water: Fully miscible.

Fat solubility: Not applicable.

Vapor density: Not applicable.

Evaporation rate: Not applicable.

Conductivity: Not applicable.

Viscosity: Not viscous.

10. STABILITY AND REACTIVITY

Stability: Stable under storage conditions (see Section 7).

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 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.

Material Safety Data Sheet

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 may be stored in ice during the transportation.

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

This material is sold for research and development purposes only. It is not for any human or animal therapeutic or clinical diagnostic use. It is not intended for food, drug, household, agricultural, or cosmetic use. An individual technically qualified to handle potentially hazardous chemicals must supervise the use of this material.

Material Safety Data Sheet

The above information was acquired by diligent search and/ or investigation and the recommendations are based on prudent application of professional judgment. The information shall not be taken as being all inclusive and is to be used only as a guide. All materials and mixtures may be present unknown hazards and should be used with caution. Since GenedireX Corporation cannot control the actual methods, volumes, or conditions of use, the Company shall not be held liable for any damages or losses resulting from the handling or from contact with the product as described herein. The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. GeneDireX shall not be held liable for any damage resulting from handling or from contact with the above product.