

## — Safety Data Sheet —

**50bp DNA Ladder RTU (Ready-to-Use)****Identification of the preparation / Substance and of the company**

Preparation Name : 50bp DNA Ladder RTU

Catalog Number : DM012

Use of the preparation : For laboratory use.

Suitable for use as molecular weight standards for agarose gel electrophoresis.

Company identification : BIO-HELIX Co.,LTD.

Site : <http://www.bio-helix.com>

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**Composition / Information on ingredients**

Ingredients :

Water	> 50% (v/v)	EC#231-791-2	CAS#7732-18-5
Glycerol	10-25% (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.

**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 :

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.

**First Aid Measures**

Ingestion :

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

## — Safety Data Sheet —

**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.

**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.

**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.

**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.

## — Safety Data Sheet —

**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.

**Physical and chemical properties**

Appearance : Liquid.

Color : Colorless.

Odor : Odorless.

pH-value at 25°C : 8.0.

Boiling point : 100°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 g/cm<sup>3</sup>.

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.

## — Safety Data Sheet —

**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.

**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.

**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.

**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.

## — Safety Data Sheet —

## 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.

## 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 SDS contains all the information required by the CPR.

DSL : No.

NDSL : No.

## 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. Bio-Helix Co., Ltd. shall not be held liable for any damage resulting from handling or from contact with the above product.