



Nano *Taq* II Hot-Start DNA Polymerase

Document Type: Global Master SDS (International Use)

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Version: 1.0

1. Identification

Prepared in accordance with:

United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

Intended use:

This Global Master SDS is intended for international hazard communication and may be supplemented by country- or region-specific addenda to meet local regulatory requirements.

Product Name: NanoTaq II Hot-Start DNA Polymerase

Catalog Number: DP003-0100(N) / DP003-0600(N)

Recommended Use: Laboratory research use only. Molecular biology / PCR applications

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2. Hazard(s) Identification

Classification according to GHS: Not classified as a hazardous chemical / dangerous preparation.

Signal word: None

Hazard pictogram: None

Hazard statements: None

Precautionary statements:

P261 – Avoid breathing dust/fume/gas/mist/vapors/spray.

P264 – Wash hands thoroughly after handling.

P280 – Wear protective gloves/protective clothing/eye protection.

P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes.

Other Hazards: Inhalation of aerosols may cause allergic-type reactions in sensitized individuals; prolonged skin or eye contact may cause minor irritation.





3. Composition / Information on Ingredients

Ingredients:

Substance	CAS No.	EC No.	Concentration
Water	7732-18-5	231-633-2	~ 48% (v/v)
Glycerol	56-81-5	200-578-6	50% (v/v)
Nano enhancer based on monosaccharide	-	-	< 0.1% (w/v)
DNA polymerase	-	-	<0.1% (w/v)
Potassium chloride	7447-40-7	231-211-8	0.75% (w/v)
EDTA	139-33-3	205-358-3	<0.01% (w/v)
Dithiothreitol	3483-12-3	222-468-7	<0.02% (w/v)
Tween-20	9005-64-5	500-018-3	0.5% (v/v)
Tris-HCl	1185-53-1	214-684-5	0.315% (w/v)

The remaining components are non-hazardous or present below reportable concentrations.

4. First-Aid Measures

Inhalation:

Move person to fresh air. If symptoms of irritation or respiratory allergy occur, seek medical advice.

Skin contact:

Wash off immediately with plenty of water. If irritation develops and persists, consult a physician.

Eye contact:

Rinse cautiously with plenty of water for several minutes, lifting upper and lower eyelids. Remove contact lenses if present and easy to do. Seek medical advice if complaints persist.

Ingestion:

Rinse mouth and throat thoroughly with water. Never give anything by mouth to an unconscious person. Consult a doctor in the event of complaints.

Most Important Symptoms/Effects:

Aerosol exposure may provoke minor allergic/irritant responses in sensitive individuals.

5. Fire-Fighting Measures

Suitable extinguishing media: Water spray, carbon dioxide (CO₂), dry chemical powder, or appropriate foam.

Unsuitable extinguishing media: None known.

Specific hazards: Combustion products may include carbon oxides (CO, CO₂) and trace toxic vapors.

Protective equipment: Wear self-contained breathing apparatus (SCBA) and full protective bunker gear.

6. Accidental Release Measures

Personal precautions:

Wear appropriate personal protective equipment (gloves, safety goggles). Avoid aerosol formation and ensure adequate ventilation.



**Environmental precautions:**

Prevent further spillage or release into waterways/drains.

Cleanup methods:

Absorb spill with inert absorbent material (sand, silica gel, universal binder). Collect in suitable closed containers for disposal. Wash contaminated area with water.

7. Handling and Storage

Handling:

Avoid direct contact with skin and eyes. Avoid ingestion and inhalation of mists/aerosols. Work in well-ventilated areas. Wash thoroughly after handling.

Storage:

Store tightly closed at -20°C in a dry, well-ventilated area away from heat and incompatible materials

8. Exposure Controls / Personal Protection

Engineering controls: Glycerol mist: Taiwan PEL-TWA: 10 mg/m³; OSHA PEL-TWA: 15 mg/m³ (total dust).

Engineering Controls: General laboratory ventilation.

Personal protective equipment:

-Respiratory protection: Not required under normal laboratory conditions. Use respiratory protection if ventilation is inadequate.

-Hand protection: Impervious gloves (butyl rubber recommended).

-Eye protection: Safety glasses or chemical goggles.

-Skin protection: Laboratory coat and appropriate protective clothing.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practices.

9. Physical and Chemical Properties

Appearance: Liquid

Color: Light Brown solution

Odor: Odorless / Characteristic

pH: 7.6

Boiling point: No data available

Flash point: No data available

Flammability: Non-flammable

Water solubility: Fully miscible

Explosive properties: No data available

Oxidizing properties: No data available

10. Stability and Reactivity

Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: No hazardous reactions known; hazardous polymerization will not occur

Conditions to avoid: Elevated temperatures for prolonged periods (may reduce enzymatic activity).

Incompatible materials: Strong oxidizing agents, strong acids, strong bases.

Hazardous decomposition products: Carbon oxides (CO, CO₂) under fire conditions.





11. Toxicological Information

Acute toxicity data: Non-toxic at specified concentrations. Glycerol oral LD_{50} (rat): > 12600 mg/kg.

Likely routes of exposure: Inhalation, skin contact, eye contact, ingestion.

Potential health effects:

- Eyes: May cause irritation.
- Skin: May cause irritation.
- Inhalation: May cause respiratory irritation.
- Ingestion: May cause mucous membrane irritation.

Carcinogenicity: No data available.

Mutagenicity: No data available.

Reproductive toxicity: No data available.

12. Ecological Information

Ecotoxicity data: Not classified as environmentally hazardous under current GHS criteria

Persistence and Degradability: Readily biodegradable.

Bioaccumulative Potential: Low bioaccumulation potential

Mobility in Soil / Other Adverse Effects: High water solubility; no known endocrine disruption or ozone depletion effects.

13. Disposal Considerations

Dispose of contents and container in accordance with local, regional, and national regulations.

14. Transport Information

IATA / IMDG / ADR: Not regulated as dangerous goods for transport

Proper Shipping Name: Not regulated as dangerous goods

UN number: Not regulated

Hazard class: Not regulated

Packing group: Not regulated

Environmental hazards: Not regulated

15. Regulatory Information

This product is classified and labeled in accordance with the United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

This Safety Data Sheet is intended to serve as a Global Master SDS. Compliance with specific regional or national regulations may require additional information or adaptations.

16. Other Information

Revision history:

Version 1.0



**Disclaimer:**

The information provided in this Safety Data Sheet is believed to be accurate and represents the best information currently available to BIO-HELIX Co., Ltd. at the time of issue. It is intended solely as guidance for safe handling, use, processing, storage, transportation, disposal and release of the product.

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