MATERIAL SAFETY DATA SHEET

Company	ELPIS-Biotech. Inc.
Address	123-12 Jeonglim-dong, Seo-gu, Daejeon, Korea
Emergency Telephone NO	+82-42-581-8448
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e-mail address	elpis@elpisbio.com

SECTION 1. CHEMICAL INFORMATION

Product name rTaq DNA Polymerase

Cat. No. EBT-1013

Enzyme (protein) in buffer solution; buffer solution. Volume of product package: 100ul.

Supplied with: 10x rTaq reaction buffer (2ml)

Product Use : Laboratory Reagent. For R&D use only. Not for drug, household or other uses.

Manufacturer/ Supplier information

Supply company : ELPIS-Biotech. Inc.

Address : 123-12 Jeonglim-dong, Seo-gu, Daejeon, Korea

Information service or emergency call : +82-42-581-8448 (042-581-8448, Korea)

Department in charge : Research Department

SECTION 2. HAZARDOUS IDENTIFICATION

Potential Acute Health Effects: Slightly hazardous in case of skin contact (irritant, permeator), of eye contact (irritant), of ingestion, of inhalation.

Potential Chronic Health Effects: CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to kidneys. Repeated or prolonged exposure to the substance can produce target organs damage.

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical characterization

Description: Solution, consisting of the following components.

Buffer's Components in Water:

Reagent	CAS#	Concentration, %
Taq polymerase	9012-90-2	
Tris-HCl	77-86-1	< 1
Magnesium chloride	7786-30-3	< 1
Potassium chloride	7447-40-7	< 1
Dithiothreitol (DTT)	3483-12-03	< 1
Glycerol	56-81-5	≤50
EDTA	6381-92-6	< 1
Tween-20	9005-64-5	< 1
Ammonium sulfate	7783-20-2	< 1

Components:

Glycerol	CAS: 56-81-5	EI;ECS: 200-289-5	≤50 %
water	CAS: 7732-18-5	EI;ECS: 231-791-2	25-50 %

Other components are not dangerous or their concentrations do not exceed the limits specified in the EU directive 1999/45/EC.

SECTION 4. FIRST AID MEASURES

After skin contact

Wash skin with water and soap and rinse thoroughly. Remove contaminated clothing. Get medical attention if irritating occurs.

After eye contact

Rinse opened eyes for several minutes under running water. Get medical attention if eyes become irritating.

After swallowing (ingestion)

Rinse mouth. Drink plenty of water. Get medical attention if irritating or symptoms occur.

After inhalation

If inhaled, remove to fresh air. If breathing is difficult, call a physician.

SECTION 5. FIRE FIGHTING MEASURES

Extinguishing media

Water spray, Carbon dioxide, dry chemical powder or appopriate foam.

Special firefighting procedures

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Unusual fire and explosions hazards

Emit toxic fumes undrer fire conditions

Prevent contact with skin and eyes.

Flash Point : N/A

Flammability : N/A

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Not required.

Environmental precautions

Do not allow entering sewers, surfaces or ground water.

Measures for cleaning / collecting

Collect spilled liquid with liquid-binding material or inert absorbent and place it in container for disposal. Wash spill site after material pickup is complete.

SECTION 7. HANDLING AND STORAGE

Handling : User Exposure : Avoid contact with eyes, skin, and clothing.

Avoid inhalation. Avoid prolonged or repeated exposure.

Storage : No special measures necessary. Keep tightly closed. Store at -20'C.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls : safety shower and eye bath. Mechanical exhaust required.

Personal Protective euqipment : **Respiratory** : NIOSH/MSHA-approved respirator

Hand : Compatible chemical -resistant gloves.

Eye : Campatible safety goggles.

General Hygiene Measures : Wash throughly after handling.

Wash contaminated clothing before use.

Keep tightly closed. Store in a cool dry place. Freeze. Store at -20'C.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Liquid.
Color	Clear
Odor	Odorless.
Melting point	20° C
Boiling point	182° C
Flash point	> 392 F, > 200° C
Explosive properties	No data available.
Vapor pressure	< 1 MMHG @ 20°C

SECTION 10. STABILITY AND REACTIVITY

Stability	Stable.
Hazardous polymerization	Will not occur
Materials to Avoid	Strong oxidizing agents, strong bases.

Hazardous Decomposition Products: Carbon Monoxide, Carbon Dioxide

Protect from heat and moisture

SECTION 11. TOXICOLOGICAL INFORMATION

Eye Contact: Irritating to eyes

Skin Contact Irritating to skin.

Multiple Routes May be harmful by inhalation, ingestion, or skin absorption

Materials may be irritating to mucous membranes and upper respiratory tract.

Chronic Effects : Target Organs, Kidney

Signs and Symptoms of Exposure : Prolonged exposure can cause : Nausea, headache and vomiting

To the best of our knowledge, the properties have not yet been thoroughly investigated.

SECTION 12. ECOLOGICAL INFORMATION

Data not yet avaliable

SECTION 13. DISPOSAL CONSIDERATIONS

Contact a licensed professional waste disposal service to dispose of this material.

Observe all federal, state and local environmental regulations

Dissolve or mix the material with a combustable solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

SECTION 14. TRANSPORT INFORMATION

Contact ELPIS Biotech, Inc. Company for Transportation Information.

SECTION 15. REGULATORY INFORMATION

US Classification and Label text

US Statements : Caution: Avoid contact and inhalation

United States regulatory information

SARA Listed : No

Canada regulatory information

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

SECTION 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.

ELPIS Biotech Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.

Date of preparation of the first version : 2011. 09. 10.

Revised frequency and Date of preparation of the latest version : 2013. 05. 20. (2nd version)