



# MATERIAL SAFETY DATA SHEET

Company	ELPIS-Biotech. Inc.
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## SECTION 1. CHEMICAL INFORMATION

Product name	Pfu Plus 5x PCR Master Mix
Cat. No.	EBT-1403

Protein in buffer solution; buffer solution. Volume of product package: 1,000ul.

**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



**Primary routes of entry** : Skin or eye contact from splashes. Inhalation of the vapor at room temperature is unlikely.

**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.

**Evidence for reproductive toxicity, carcinogenicity and mutagenicity** : No data available

HMIS RATING - Health : 2 Flammability : 0 Reactivity : 0

### SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical characterization : Mixtures

**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
Dithiothreitol (DTT)	3483-12-03	< 1
Glycerol	56-81-5	≤40
EDTA	6381-92-6	< 1
Tween-20	9005-64-5	< 1
Ammonium sulfate	7783-20-2	< 1
dNTP	none	< 1
Bromophenol blue	62625-28-9	0.01

**Components:**

Glycerol	CAS: 56-81-5	EI;ECS: 200-289-5	≤40
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 inhalation**

Supply fresh air. If breathing becomes difficult, call a physician.

**After skin contact**

Wash skin with water and soap and rinse thoroughly. Remove contaminated clothing. Call a physician.

**After eye contact**

Rinse opened eyes for several minutes under running water for at least 15 minutes. Assure adequate flushing by separating the eyelids with finger. Get medical attention if eyes become irritating.

**After swallowing (ingestion)**

Wash out mouth with water provided person is conscious. If symptoms persist consult doctor.

### SECTION 5. FIRE FIGHTING MEASURES

**Extinguishing media**

Water spray, Carbon dioxide, dry chemical powder or appropriate 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 under 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 equipment :

**Respiratory** : NIOSH/MSHA-approved respirator

**Hand** : Compatible chemical -resistant gloves.

**Eye** : Compatible safety goggles.

**General Hygiene Measures** : Wash thoroughly 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

<b>Appearance</b>	Liquid.
<b>Color</b>	Blue
<b>Odor</b>	Odorless.
<b>Melting point</b>	20° C
<b>Boiling point</b>	182° C
<b>Flash point</b>	> 392 F, > 200° C
<b>Explosive properties</b>	No data available.
<b>Vapor pressure</b>	< 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 available

## **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 combustible 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.

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