



### SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical characterization : Mixtures

Description : Mixture of the substances listed below with nonhazardous additions.

#### Buffer's Components in Water:

Reagent	CAS#	Concentration, %
Tris-HCl	77-86-1	≤ 0.98
Sodium chloride	7647-14-5	≤ 0.176
Glycerol	56-81-5	≤ 5
EDTA	6381-92-6	≤ 0.04

#### Components:

Glycerol	CAS: 56-81-5	EI;ECS: 200-289-5	≤ 20 %
water	CAS: 7732-18-5	EI;ECS: 231-791-2	≤ 70 %

**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

### 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**

**Autoignition Temp : 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

No special measures necessary. Good laboratory technique should be used when handling.

### Storage

Suitable: Keep tightly closed. No special measures necessary. Store at -20°C.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Exposure limits Eye protection Skin protection

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace

Hygiene measures Breathing equipment

### Avoid inhalation

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>	Bule
<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

<b>Stability</b>	Stable.
<b>Hazardous polymerization</b>	Will not occur
<b>Materials to Avoid</b>	Strong oxidizing agents, strong bases.
<b>Hazardous Decomposition Products:</b>	Carbon Monoxide, Carbon Dioxide
<b>Protect from heat and moisture</b>	

## SECTION 11. TOXICOLOGICAL INFORMATION

<b>Eye Contact:</b>	Irritating to eyes
<b>Skin Contact</b>	Irritating to skin.
<b>Multiple Routes</b>	May be harmful by inhalation, ingestion, or skin absorption
Materials may be irritating to mucous membranes and upper respiratory tract.	
Preparations may cause allergic reactions in certain sensitive individuals.	
<b>Chronic Effects</b>	Target organs, Kidney

## 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

Korea regulatory information : None of the ingredients listed.

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

**Disclaimer** : For R&D use only. Not for drug, household or other uses.

**Warranty** : The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide

## 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. 08. 10.

Revised frequency and Date of preparation of the latest version : 2013. 06. 24. (2nd version)