

# Material Safety Data Sheet

$\gamma$  - Glutamyltransferase ( $\gamma$ GT) - Liquizyme (1+1) E.C.2.3.2.2.

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Name:**  $\gamma$  - Glutamyltransferase ( $\gamma$  GT) - Liquizyme (1+1) E.C.2.3.2.2.

**Catalog Numbers:** 247 001, 247 002

**Use:** Spectrum Diagnostics liquizyme  $\gamma$ - glutamyltransferase reagent is intended for the in-vitro quantitative, diagnostic determination of  $\gamma$ -glutamyltransferase in human serum and plasma on both automated and manual systems.

### Contact Point

#### Egypt

Egyptian Company for Biotechnology (S.A.E.)

Obour city Industrial area, block 20008

Piece 19 A. P.O Box 30 Obour City

Cairo, Egypt.

Phone: +2 02 4489 2248 Fax: +2 02 4489 2247

Email: [info@spectrum-diagnostics.com](mailto:info@spectrum-diagnostics.com)

Internet: [www.spectrum-diagnostics.com](http://www.spectrum-diagnostics.com)

## 2. HAZARD IDENTIFICATION

Not classified as hazardous according to the EU criteria

**Hazard Classification:** NON-HAZARDOUS SUBSTANCE, NON DANGEROUS GOODS.

**Hazard Category:** None allocated.

**RISK PHRASES:** None allocated.

**SAFETY PHRASES:** None allocated.

**Poison Schedule:** None allocated.

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

SUBSTANCE NAME	Proportion	CAS Number
<b>Reagent 1 (R1)</b>		
Tris buffer	120 mmol/L	77-86-1
Glycylglycine	300 mmol/L	556-50-3
Sodium Azide	12 mmol/L	26628-22-8
<b>Reagent 2 (R2)</b>		
Modified L- $\gamma$ -Glutamyl-3-carboxy-4-nitroanilide	1 mmol/L	63699-78-5
Sodium Azide	8 mmol/L	26628-22-8

All ingredients determined not to be hazardous according to the EU criteria.

#### 4.FIRST AID MEASURES

**Swallowed:**

If swallowed, and if more than 15 minutes from a hospital, **induce vomiting**, preferably using Ipecac Syrup APF.

**Eye:**

If product enters the eyes, flush with plenty of water for at least 15 minutes, ensuring eye lids are held open. If irritation develops or persists, immediately transport to hospital or doctor.

**Skin:**

If product contacts the skin, remove any contaminated clothing and wash skin thoroughly with soap and water. If irritation persists transport to hospital or doctor.

**Inhaled:**

Move victim to fresh air. Apply resuscitation if victim is not breathing.

**First Aid Facilities:**

Eye wash fountain, safety shower and normal wash room facilities.

**Advice to Doctor:** Treat symptomatically.

#### 5.FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media:** Use extinguishing media suitable for surrounding fire situation.

**Hazards From Combustion Products:** Decomposes on heating emitting indeterminate decomposition products.

**Precautions for Fire Fighters and Special Protective Equipment:** If safe to do so, move undamaged containers from fire area. Fire fighters to wear Self-contained breathing apparatus (SCBA) in confined spaces, in oxygen deficient atmospheres or if exposed to products of decomposition. Full protective clothing is also recommended.

**Hazchem Code:** None allocated.

**Flammability:** This material is not a flammable or combustible liquid.

#### 6.ACCIDENTAL RELEASE MEASURES

**Emergency Procedures**

Keep unnecessary people away. Isolate hazard area and deny entry. If product spills onto floors it will represent a slip hazard, walk cautiously. Wear protective equipment to prevent skin and eye contact, as outlined under personal protection in this MSDS.

**Methods and Materials for Containment and Cleanup Procedures**

Dike area using with an absorbent such as diatomaceous earth - to prevent run off into drains and waterways. Throw further absorbent (diatomaceous earth or other inert material) on top of spill, then shovel up and seal in properly labeled containers for disposal.

## 7. HANDLING AND STORAGE

### Precautions for Safe Handling

Provide adequate ventilation. Avoid generating vapours.

### Conditions for Safe Storage

Store in a cool place and out of direct sunlight. Store away from sources of heat or ignition. Store away from oxidizing agents. Keep containers closed, when not using the product. When stored at 2 - 8°C the reagent will be stable until the expiry date on the bottle and kit box labels. Store in original packaging as approved by manufacturer.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Exposure Standards

No exposure standards have been assigned by (NOHSC) for this product or any of the components.

### Engineering Controls

Maintain adequate ventilation at all times. No other measures are required for this product.

### Personal Protection Equipment:

**Gloves:** Not normally required, however, if handling large quantities the use of natural rubber is recommended.

**Eyes:** Chemical glasses or face shield for spills.

**Respiratory Protection:** Avoid breathing of vapours. The use of a respirator is not normally required, however, if entering spaces where the airborne concentration of a contaminant is unknown then the use of a Self-contained breathing apparatus (SCBA) with positive pressure air supply complying with AS/NZS 1715 / 1716, or any other acceptable International Standard is recommended. Select and use respirators in accordance with AS/NZS 1715/1716.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

	Reagent 1	Reagent 2
Appearance	Colorless	Yellow
Solubility in water	soluble	soluble

Other properties

pH	8.2	Not available
----	-----	---------------

## 10. STABILITY AND REACTIVITY

**Chemical Stability:** Stable under normal conditions of use.

**Conditions to Avoid:** Generation of vapours.

**Incompatible Materials:** Strong oxidizing agents.

**Hazardous Decomposition Products:** Decomposes on heating emitting indeterminate decomposition products.

**Hazardous Reactions:** Will not occur.

## 11. TOXICOLOGICAL INFORMATION

There is no toxicological information available for this product

### Acute Health Effects

**Swallowed:** Drinking large quantities of this product may cause irritation to mouth, throat and stomach with effects including mucous build up, irritation to the tongue and lips and pains in the stomach, which may lead to nausea, vomiting and diarrhea.

**Eye:** May cause mild irritation to the eyes, with effects including: tearing and blurred vision. These effects are anticipated to be of a short acting nature and no long term injury is envisaged.

**Skin:** May cause mild irritation to the skin. Not anticipated to be absorbed through the skin.

**Inhaled:** If the product is heated, the vapours generated may cause irritation to the mouth, throat and upper respiratory system.

**Chronic:** Prolonged or repeated skin exposure may cause skin rashes in some susceptible individuals.

## 12. ECOLOGICAL INFORMATION

No ecological information available for this product. Do not dispose of large quantities to waterways, drains or sewers.

## 13. DISPOSAL CONSIDERATIONS

Refer to appropriate authority in your State. Normally suitable for disposal by approved waste disposal agent.

## 14. TRANSPORT INFORMATION

**UN Number:** None allocated.

**Proper Shipping Name:** None allocated.

**Dangerous Goods Class:** None allocated.

**Subsidiary risk:** None allocated.

**Packing Group:** None allocated.

**Hazchem Code:** None allocated.

**Road and Rail Transport:**

Not classified as a Dangerous Good according to the United Nations Recommendations for the Transport of Dangerous Goods and Globally Harmonized System for the Classification and Labeling of Chemicals.

**Air Transport:**

Not classified as a Dangerous Good according to the International Civil Aviation Organization (ICAO) and International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

**Marine Transport:**

Not classified as a Dangerous Good according to the International Maritime Organization Rules (Maritime Dangerous Goods Code - IMDG Code) for transport by sea.

**15.OTHER INFORMATION**

**Principal References**

Information supplied by manufacturer, reference sources including the public domain.

**Disclaimer**

This MSDS summarizes our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products.

If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company. Our responsibility for products sold is subject to our standard terms and conditions which are available on request.

**END OF MSDS**