Transferase, glutathione S- (cas 50812-37-8) MSDS

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifiers
Product name: glutathione S-Transferase, from equine liver
Product Number: G6511
Brand: 50812-37-8

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: Laboratory chemicals, Manufacture of substances

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008
This substance is not classified as dangerous according to Directive 67/548/EEC.

2.2 Label elements
Caution - substance not yet tested completely.

2.3 Other hazards - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances
Synonyms:
- Glutathione S-alkyltransferase
- Glutathione S-aryltransferase
- Glutathione S-aralkyltransferase
- Glutathione S-alkenetransferase
- Glutathione S-epoxidetransferase
- Glutathione R-transferase
- GST

4. FIRST AID MEASURES

4.1 Description of first aid measures

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration.

- G6511
Wash off with soap and plenty of water.

In case of skin contact
Flush eyes with water as a precaution.

In case of eye contact
Never give anything by mouth to an unconscious person. Rinse mouth with water.

4.2 Most important symptoms and effects, both acute and delayed
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

4.3 Indication of any immediate medical attention and special treatment needed
No data available

5. FIREFIGHTING MEASURES

5.1 Extinguishing media
Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture
Carbon oxides

5.3 Advice for firefighters
Wear self-contained breathing apparatus for fire fighting if necessary.

5.4 Further information
6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Avoid dust formation. Avoid breathing vapors, mist or gas.

6.2 Environmental precautions
Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up
Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Provide appropriate exhaust ventilation at places where dust is formed.

7.2 Conditions for safe storage, including any incompatibilities
Store in cool place. Keep container tightly closed in a dry and well-ventilated place.
Recommended storage temperature: -20 °C

7.3 Specific end uses
no data available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters
Components with workplace control parameters

8.2 Exposure controls
Appropriate engineering controls
General industrial hygiene practice.

Personal protective equipment

Eye/face protection
Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection
The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove’s outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection
Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) Appearance
   Form: powder, lyophilized

b) Odour
   no data available

c) Odour Threshold
   no data available

d) pH
   no data available

e) Melting point/freezing point
   no data available

f) Initial boiling point and boiling range
   no data available

g) Flash point
   no data available

h) Evaporation rate
   no data available

i) Flammability (solid, gas)
   no data available
j) Upper/lower flammability or explosive limits no data available

k) Vapour pressure no data available

l) Vapour density no data available

m) Relative density no data available

n) Water solubility no data available

o) Partition coefficient: n-octanol/water no data available

p) Autoignition temperature no data available

q) Decomposition temperature no data available

r) Viscosity no data available

s) Explosive properties no data available

t) Oxidizing properties no data available

9.2 **Other safety information**
   no data available

10. **STABILITY AND REACTIVITY**

10.1 **Reactivity**
    no data available

10.2 **Chemical stability**
    no data available

10.3 **Possibility of hazardous reactions**
    no data available

10.4 **Conditions to avoid**
    no data available

10.5 **Incompatible materials**
    Strong oxidizing agents

10.6 **Hazardous decomposition products**
    Other decomposition products - no data available

11. **TOXICOLOGICAL INFORMATION**

11.1 **Information on toxicological effects**

   **Acute toxicity**
   no data available

   **Skin corrosion/irritation**
   no data available

   **Serious eye damage/eye irritation**
   no data available

   **Respiratory or skin sensitization**
   Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.

   **Germ cell mutagenicity**
   no data available

   **Carcinogenicity**
   IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

   **Reproductive toxicity**
   no data available

   **Specific target organ toxicity - single exposure**
   no data available

   **Specific target organ toxicity - repeated exposure**
   no data available

   **Aspiration hazard**
   no data available

   **Potential health effects**

   **Inhalation** May be harmful if inhaled. May cause respiratory tract irritation.
   **Ingestion** May be harmful if swallowed.
Skin
Eyes

May be harmful if absorbed through skin. May cause skin irritation.

May cause eye irritation.

Signs and Symptoms of Exposure
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Additional Information
RTECS: Not available

12. ECOLOGICAL INFORMATION

12.1 Toxicity
no data available

12.2 Persistence and degradability
no data available

12.3 Bioaccumulative potential
no data available

12.4 Mobility in soil
no data available

12.5 Results of PBT and vPvB assessment
no data available

12.6 Other adverse effects
no data available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
Product
Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

14.1 UN number
ADR/RID: -
IMDG: -
IATA: -

14.2 UN proper shipping name
ADR/RID: Not dangerous goods
IMDG: Not dangerous goods
IATA: Not dangerous goods

14.3 Transport hazard class(es)
ADR/RID: -
IMDG: -
IATA: -

14.4 Packaging group
ADR/RID: -
IMDG: -
IATA: -

14.5 Environmental hazards
ADR/RID: no
IMDG Marine pollutant: no
IATA: no

14.6 Special precautions for user
no data available

15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
no data available

15.2 Chemical Safety Assessment
no data available

16. OTHER INFORMATION

Further 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. The information in this document is based on the present state of our knowledge and is applicable to the product with respect to potential safety hazards that may be associated with its use. The supplier of the product does not warrant the product and shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.