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

1.1 Product identifiers

Product name: Trizma® maleate

CAS-No.: 72200-76-1

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 dangerous substance according to GHS.
This substance is not classified as dangerous according to Directive 67/548/EEC.

2.2 Label elements

This substance is not classified as dangerous according to Directive 67/548/EEC.

2.3 Other hazards - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

| Synonyms | TRISmaleate salt  
|          | Tris(hydroxymethyl)aminomethanemaleate salt  
|          | Tromethaminemaleate |

| Component | C4H11NO3·C4H4O4 |
| Molecular Weight | 237.21 g/mol |

[2-Hydroxy-1,1-bis(hydroxymethyl)ethyl]ammonium hydrogen maleate

CAS-No. 72200-76-1

EC-No. 276-455-6

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.

In case of skin contact
Wash off with soap and plenty of water.

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

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water.

4.2 Most important symptoms and effects, both acute and delayed

4.3 Indication of immediate medical attention and special treatment needed

no data available
5. **FIRE-FIGHTING 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, nitrogen oxides (NOx)

5.3 **Precautions for fire-fighters**

Wear self contained breathing apparatus for fire fighting if necessary.

5.4 **Further information**

no data available

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. Normal measures for preventive fire protection.

7.2 **Conditions for safe storage, including any incompatibilities**

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

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**

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.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

**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: crystalline
  - Colour: white
- **b)** Odour
  - no data available
- **c)** Odour Threshold
  - no data available
- **d)** pH
  - 3.0 - 4.5
- **e)** Melting/freezing point
  - 104 - 106 °C
- **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
  - 118.61 g/l at 20 °C
- **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**

- Bases, Oxidizing agents

10.6 **Hazardous decomposition products**
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**: no data available
- **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**: May be harmful if absorbed through skin. May cause skin irritation.
- **Eyes**: May cause eye irritation.

**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 users
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 this document is based on the resent state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. guidechem 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.