SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product Identifier: Glanapon
Product Name: Glanapon DA 203
Product No.: 0700671
Synonyms: Glanapon

Relevant identified uses of the substance or mixture and uses advised against
Identified uses:
Uses advised against:

Details of the supplier of the safety data sheet
Supplier
TZ GROUP INC.
25511 Budde Rd. Ste. 1502
The Woodlands, TX. 77380. USA
Phone: 281-825-5301
Fax: 832-592-9546
Website: www.tauchemicals.com

Emergency Phone Number:
For emergency transportation information, in the United States: call Chemtel 1-800-255-3924 or for international +01-813-248-0585. Contract Number MIS0005345

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008
The substance is not classified according to the CLP regulation.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC Not applicable.
Classification system:
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.
2.2 Label elements
- Labelling according to Regulation (EC) No 1272/2008 Void
- Hazard pictograms Void
- Signal word Void
- Hazard statements Void

2.3 Other hazards Not applicable
- Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

- 3.1 Chemical characterisation: Substances
- CAS No. Description
  Not applicable
- Identification number(s) Not applicable
- Description:
  Mixture consisting of the following components:
  EO-PO-copolymer

SECTION 4: First aid measures

- 4.1 Description of first aid measures
  General information: No special measures required.
  After inhalation:
  Supply fresh air; consult doctor in case of complaints.

In case of unconsciousness place patient stably in side position for transportation.

- After skin contact:
  Generally the product does not irritate the skin.
  Immediately wash with water and soap and rinse thoroughly.

- After eye contact:
  Rinse opened eye for several minutes under running water. Then consult a doctor.

- After swallowing:
  Do not induce vomiting; call for medical help immediately.

- 4.2 Most important symptoms and effects, both acute and delayed
  No further relevant information available.
- 4.3 Indication of any immediate medical attention and special treatment needed
  No further relevant information available.
SECTION 5: Firefighting measures

- 5.1 Extinguishing media
- Suitable extinguishing agents:
  Use fire extinguishing methods suitable to surrounding conditions.
  CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- For safety reasons unsuitable extinguishing agents: Water with full jet

- 5.2 Special hazards arising from the substance or mixture
  In case of fire, the following can be released:
  Carbon monoxide (CO)

- 5.3 Advice for firefighters
- Protective equipment:
  Wear self-contained respiratory protective device.
  Do not inhale explosion gases or combustion gases.
  Wear fully protective suit.
- Additional information Cool endangered receptacles with water spray.

SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures
  Particular danger of slipping on leaked/spilled product.
- 6.2 Environmental precautions:
  Do not allow to enter sewers/ surface or ground water.
  Do not allow to penetrate the ground/soil.
  Inform respective authorities in case of seepage into water course or sewage system.
- 6.3 Methods and material for containment and cleaning up:
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  Dispose of the material collected according to regulations.
- 6.4 Reference to other sections
  No dangerous substances are released.
  See Section 7 for information on safe handling.
  See Section 13 for disposal information.

SECTION 7: Handling and storage

- 7.1 Precautions for safe handling
  Pay attention to the usual precautionary measures for handling chemicals.
  No special precautions are necessary if used correctly.
- Information about fire - and explosion protection:
  Keep ignition sources away - Do not smoke.
  Protect from heat.

- 7.2 Conditions for safe storage, including any incompatibilities
  Storage:
  Requirements to be met by storerooms and receptacles: Not applicable
  Information about storage in one common storage facility: Not required.
Further information about storage conditions:
Store in cool, dry conditions in well sealed receptacles.
Protect from heat and direct sunlight.
Store receptor in a well ventilated area.
7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

Additional information about design of technical facilities: No further data; see item 7.

8.1 Control parameters
Ingredients with limit values that require monitoring at the workplace: Not required.
Additional information: The lists valid during the making were used as basis.

8.2 Exposure controls
Personal protective equipment:
General protective and hygienic measures:
Keep away from foodstuffs, beverages and feed.
Avoid contact with the eyes and skin.
Do not inhale gases / fumes / aerosols.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
The usual precautionary measures are to be adhered to when handling chemicals.
Respiratory protection: Not required.
Protection of hands: Protective gloves.
Material of gloves: Synthetic rubber gloves.
Penetration time of glove material
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
Eye protection: Tightly sealed goggles.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties
General Information
Appearance:
Form: Fluid
Colour: Colourless
Odour: Characteristic
- pH-value (50 g/l) at 23 °C: app. 7
- Change in condition
  Melting point/Melting range: app. -30 °C
  Boiling point/Boiling range: Undetermined.
- Flash point: > 100 °C
- Ignition temperature: > 200 °C
- Danger of explosion: Product does not present an explosion hazard.
- Vapour pressure at 20 °C: <100 hPa
- Density at 20 °C: 0.99-1.03 g/cm³
- Solubility in / Miscibility with water at 15 °C: <100 g/l
- Viscosity:
  Dynamic at 23 °C: 300-400 mPas
- 9.2 Other information
  No further relevant information available.

SECTION 10: Stability and reactivity

- 10.1 Reactivity
- 10.2 Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- 10.3 Possibility of hazardous reactions
  Reacts with strong acids and oxidising agents.
  Reacts with strong alkali.
- 10.4 Conditions to avoid
No further relevant information available.
- 10.5 Incompatible materials:
No further relevant information available.
- 10.6 Hazardous decomposition products:
In case of fire formation of toxic fumes is possible.

SECTION 11: Toxicological information

- 11.1 Information on toxicological effects
- Acute toxicity:

<table>
<thead>
<tr>
<th>LD/LC50 values relevant for classification:</th>
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<tbody>
<tr>
<td>Oral LD50</td>
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<tr>
<td>Dermal LD50</td>
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- Primary irritant effect:
  - on the skin: Irritation possible
  - on the eye: Irritation possible
- Sensitisation: No sensitising effects known.
- Additional toxicological information:
  When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.
  The substance is not subject to classification according to the latest version of the EU lists.
SECTION 12: Ecological information

- 12.1 Toxicity
  - Aquatic toxicity:
    | Parameter    | Value                  |
    |--------------|------------------------|
    | Bacteriotoxicität | >2000 mg/l (bacteria) |
    | LC50/96 h      | >1000 mg/l (leuciscus idus) |

- 12.2 Persistence and degradability
  - OECD 301 B > 60 (28d) % ()

*Other information:* Readily biodegradable.
- 12.3 Bioaccumulative potential: No further relevant information available.
- 12.4 Mobility in soil: No further relevant information available.

*Additional ecological information:*
- General notes:
  - Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
  - Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- 12.5 Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.

- 12.6 Other adverse effects: No further relevant information available.

SECTION 13: Disposal considerations

- 13.1 Waste treatment methods
  - Recommendation
    - After prior treatment product has to be landfilled or incinerated adhering to the regulations pertaining to the disposal of especially hazardous waste.

- Uncleaned packaging:
  - Recommendation:
    - Disposal must be made according to official regulations.
    - Packaging may be reused or recycled after cleaning.
  - Recommended cleansing agents: Water, if necessary together with cleansing agents.
SECTION 14: Transport information

- 14.1 UN-Number  
  ADR, ADN, IMDG, IATA: Void

- 14.2 UN proper shipping name  
  ADR, ADN, IMDG, IATA: Void

- 14.3 Transport hazard class(es)  
  ADR, ADN, IMDG, IATA: Void

- 14.4 Packing group  
  ADR, IMDG, IATA: Void

- 14.5 Environmental hazards:  
  Not applicable.

- 14.6 Special precautions for user  
  Not applicable.

- 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code  
  Not applicable.

- UN "Model Regulation": -

SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture  
  Labelling according to Regulation (EC) No 1272/2008 Not applicable

- 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Abbreviations and acronyms:

- RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
- ICAO: International Civil Aviation Organization
- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent

* Data compared to the previous version altered.