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

1.1 Product identifier

- Trade name: S-BENZOYLTHIAMINE O-MONOPHOSPHATE
- Article number: 154835
- CAS Number: 22457-89-2

1.2 Relevant identified uses of the substance or mixture and uses advised against

No further relevant information available.

1.3 Details of the supplier of the safety data sheet

- Manufacturer/Supplier: MP Biomedicals Europe
  Parc d'Innovation BP 50067
  Rue Geiler de Kaysersberg
  Illkirch Cedex 67402
  France
  tel: +33 3.88.67.54.25
  www.mpbio.com

- Further information obtainable from: Quality Control Department

1.4 Emergency telephone number:

- CHEMTREC: 1-800-424-9300 (1-703-527-3887)
- n° ORFILA" (01-45-42-59-59)

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.

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

- 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
  22457-89-2 S-Benzoylthiamine O-Monophosphate

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.
- After skin contact: Generally the product does not irritate the skin.
- After eye contact: Rinse opened eye for several minutes under running water.
SECTION 5: Firefighting measures

- 5.1 Extinguishing media
- Suitable extinguishing agents:
  - CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

- 5.2 Special hazards arising from the substance or mixture No further relevant information available.

- 5.3 Advice for firefighters
- Protective equipment: No special measures required.

SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures Not required.

- 6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.

- 6.3 Methods and material for containment and cleaning up: Pick up mechanically.

- 6.4 Reference to other sections
  - See Section 7 for information on safe handling.
  - See Section 8 for information on personal protection equipment.
  - See Section 13 for disposal information.

SECTION 7: Handling and storage

- 7.1 Precautions for safe handling No special measures required.

- 7.2 Conditions for safe storage, including any incompatibilities
  - Storage: 2-8 °C
  - Requirements to be met by storerooms and receptacles: No special requirements.

- 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:
    - The usual precautionary measures are to be adhered to when handling chemicals.
  - Respiratory protection: Not required.
  - Protection of hands:
    - The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

(Contd. on page 3)
Trade name: S-BENZOYLTHIAMINE O-MONOPHOSPHATE

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**
  The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

- **Penetration time of glove material**
  The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection**: Not required.

<table>
<thead>
<tr>
<th>SECTION 9: Physical and chemical properties</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>9.1 Information on basic physical and chemical properties</strong></td>
</tr>
<tr>
<td><strong>General Information</strong></td>
</tr>
<tr>
<td><strong>Appearance</strong>:</td>
</tr>
<tr>
<td>Form: Powder</td>
</tr>
<tr>
<td>Colour: White</td>
</tr>
<tr>
<td>Odour: Indeterminate</td>
</tr>
<tr>
<td>Odour threshold: Not determined.</td>
</tr>
<tr>
<td><strong>pH-value</strong>: Not applicable.</td>
</tr>
<tr>
<td><strong>Change in condition</strong></td>
</tr>
<tr>
<td>Melting point/Melting range: Undetermined.</td>
</tr>
<tr>
<td>Boiling point/Boiling range: Undetermined.</td>
</tr>
<tr>
<td><strong>Flash point</strong>: Not applicable.</td>
</tr>
<tr>
<td><strong>Flammability (solid, gaseous)</strong>: Product is not flammable.</td>
</tr>
<tr>
<td><strong>Ignition temperature</strong>:</td>
</tr>
<tr>
<td>Decomposition temperature: Not determined.</td>
</tr>
<tr>
<td>Self-igniting: Not determined.</td>
</tr>
<tr>
<td>Danger of explosion: Product does not present an explosion hazard.</td>
</tr>
<tr>
<td><strong>Explosion limits</strong>:</td>
</tr>
<tr>
<td>Lower: Not determined.</td>
</tr>
<tr>
<td>Upper: Not determined.</td>
</tr>
<tr>
<td><strong>Vapour pressure</strong>: Not applicable.</td>
</tr>
<tr>
<td>Density: Not determined.</td>
</tr>
<tr>
<td>Relative density: Not determined.</td>
</tr>
<tr>
<td>Vapour density: Not applicable.</td>
</tr>
<tr>
<td>Evaporation rate: Not applicable.</td>
</tr>
<tr>
<td><strong>Solubility in / Miscibility with</strong></td>
</tr>
<tr>
<td>water: Easily soluble.</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water): Not determined.</td>
</tr>
<tr>
<td><strong>Viscosity</strong>:</td>
</tr>
<tr>
<td>Dynamic: Not applicable.</td>
</tr>
<tr>
<td>Kinematic: Not applicable.</td>
</tr>
<tr>
<td><strong>Solvent content</strong>:</td>
</tr>
<tr>
<td>Organic solvents: 0,0 %</td>
</tr>
<tr>
<td>VOC (EC) 0,00 %</td>
</tr>
</tbody>
</table>
• 9.2 Other information

No further relevant information available.

SECTION 10: Stability and reactivity

• 10.1 Reactivity No further relevant information available.
• 10.2 Chemical stability
• Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
• 10.3 Possibility of hazardous reactions No dangerous reactions known.
• 10.4 Conditions to avoid No further relevant information available.
• 10.5 Incompatible materials: No further relevant information available.
• 10.6 Hazardous decomposition products: No dangerous decomposition products known.

SECTION 11: Toxicological information

• 11.1 Information on toxicological effects
• Acute toxicity Based on available data, the classification criteria are not met.
• Primary irritant effect:
• Skin corrosion/irritation Based on available data, the classification criteria are not met.
• Serious eye damage/irritation Based on available data, the classification criteria are not met.
• Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
• CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
• Germ cell mutagenicity Based on available data, the classification criteria are not met.
• Carcinogenicity Based on available data, the classification criteria are not met.
• Reproductive toxicity Based on available data, the classification criteria are not met.
• STOT-single exposure Based on available data, the classification criteria are not met.
• STOT-repeated exposure Based on available data, the classification criteria are not met.
• Aspiration hazard Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

• 12.1 Toxicity
• Aquatic toxicity: No further relevant information available.
• 12.2 Persistence and degradability No further relevant information available.
• 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 3 (German Regulation) (Self-assessment): extremely hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Danger to drinking water if even extremely small quantities leak into the ground.
• 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 Smaller quantities can be disposed of with household waste.
 SECTION 14: Transport information

- 14.1 UN-Number
  - ADR, IMDG, IATA: Not regulated
- 14.2 UN proper shipping name
  - ADR, IMDG, IATA: Not regulated
- 14.3 Transport hazard class(es)
  - ADR, IMDG, IATA: Not regulated
- 14.4 Packing group
  - ADR, IMDG, IATA: Not regulated
- 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 and the IBC Code: Not applicable.
- UN "Model Regulation": Not regulated

 SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- Directive 2012/18/EU
- Named dangerous substances - ANNEX I Substance is not listed.
- 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.

- Department issuing SDS: Quality Control Dept.
- Abbreviations and acronyms:
  - 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)
  - VOC: Volatile Organic Compounds (USA, EU)
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative