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

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

- **Relevant identified uses of the substance or mixture and uses advised against**
  - No further relevant information available.

<table>
<thead>
<tr>
<th>Application of the substance / the mixture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research use only.</td>
</tr>
</tbody>
</table>

- **Details of the supplier of the safety data sheet**
  - **Further information obtainable from:** Quality Control Department
  - **Emergency telephone number:** CHEMTREC: 1-800-424-9300 (1-703-527-3887)

2 Hazards identification

- **Classification of the substance or mixture**
  - The substance is not classified according to the Globally Harmonised System (GHS).

<table>
<thead>
<tr>
<th>Label elements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Void</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazard pictograms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Void</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Signal word</th>
</tr>
</thead>
<tbody>
<tr>
<td>Void</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazard statements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Void</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

**Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterisation: Substances**
  - **CAS No. Description**
    - 22457-89-2 S-Benzyolthiamine O-Monophosphate

4 First aid measures

- **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.
  - **After swallowing:** If symptoms persist consult doctor.

<table>
<thead>
<tr>
<th>Information for doctor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most important symptoms and effects, both acute and delayed</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Indication of any immediate medical attention and special treatment needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>No further relevant information available.</td>
</tr>
</tbody>
</table>

(Contd. on page 2)
5 Firefighting measures

- Extinguishing media
  - Suitable extinguishing agents: CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
  - Protective equipment: No special measures required.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures Not required.
- Environmental precautions: Do not allow to enter sewers/surface or ground water.
- Methods and material for containment and cleaning up: Pick up mechanically.
- 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.

7 Handling and storage

- Handling:
  - Precautions for safe handling No special measures required.
  - Information about fire - and explosion protection: No special measures required.
  - Conditions for safe storage, including any incompatibilities
    - Storage: 2-8 °C
    - Requirements to be met by storerooms and receptacles: No special requirements.
  - Further information about storage conditions:
  - Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical facilities: No further data; see item 7.
- 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.
- Exposure controls
  - 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.
    - 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.
9 Physical and chemical properties

- **Information on basic physical and chemical properties**
  - **General Information**
  - **Appearance:**
    - Form: Powder
    - Colour: White
  - **Odour:** Indeterminate
  - **Odour threshold:** Not determined.
  - **pH-value:** Not applicable.

- **Change in condition**
  - **Melting point/Melting range:** Undetermined.
  - **Boiling point/Boiling range:** Undetermined.

- **Flash point:** Not applicable.

- **Flammability (solid, gaseous):** Product is not flammable.

- **Ignition temperature:**
  - **Decomposition temperature:** Not determined.
  - **Self-igniting:** Not determined.
  - **Danger of explosion:** Product does not present an explosion hazard.

- **Explosion limits:**
  - **Lower:** Not determined.
  - **Upper:** Not determined.

- **Vapour pressure:** Not applicable.

- **Density:** Not determined.
  - **Relative density:** Not determined.
  - **Vapour density:** Not applicable.
  - **Evaporation rate:** Not applicable.

- **Solubility in / Miscibility with**
  - **water:** Easily soluble.

- **Partition coefficient (n-octanol/water):** Not determined.

- **Viscosity:**
  - **Dynamic:** Not applicable.
  - **Kinematic:** Not applicable.

- **Solvent content:**
  - **Organic solvents:** 0,0 %
  - **VOC (EC):** 0,00 %

- **Other information** No further relevant information available.
### 10 Stability and reactivity

- **Reactivity**: No further relevant information available.
- **Chemical stability**: Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- **Possibility of hazardous reactions**: No dangerous reactions known.
- **Conditions to avoid**: No further relevant information available.
- **Incompatible materials**: No further relevant information available.
- **Hazardous decomposition products**: No dangerous decomposition products known.

### 11 Toxicological information

- **Information on toxicological effects**
  - **Acute toxicity**
    - **Primary irritant effect**: No irritant effect.
    - **Skin corrosion/irritation**: No irritating effect.
    - **Serious eye damage/irritation**: No sensitising effects known.
    - **Respiratory or skin 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.

### 12 Ecological information

- **Toxicity**
  - **Aquatic toxicity**: No further relevant information available.
  - **Persistence and degradability**: No further relevant information available.
  - **Behaviour in environmental systems**: Bioaccumulative potential: No further relevant information available.
  - **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.
    - **Results of PBT and vPvB assessment**
      - **PBT**: Not applicable.
      - **vPvB**: Not applicable.
    - **Other adverse effects**: No further relevant information available.

### 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**: Smaller quantities can be disposed of with household waste.
- **Uncleaned packaging**:
- **Recommendation**: Disposal must be made according to official regulations.
Trade name: S-BENZOYLTHIAMINE O-MONOPHOSPHATE

14 Transport information

- UN-Number
  - ADR, IMDG, IATA: Not regulated

- UN proper shipping name
  - ADR, IMDG, IATA: Not regulated

- Transport hazard class(es)
  - ADR, IMDG, IATA: Not regulated
  - Class: Not regulated

- Packing group
  - ADR, IMDG, IATA: Not regulated

- Environmental hazards:
  Not applicable.

- Special precautions for user
  Not applicable.

- Transport in bulk according to Annex II of Marpol and the IBC Code
  Not applicable.

- UN "Model Regulation":
  Not regulated

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
  - GHS label elements: Void
  - Hazard pictograms: Void
  - Signal word: Void
  - Hazard statements: Void

- Directive 2012/18/EU
  - Named dangerous substances - ANNEX I: Substance is not listed.

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

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
  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