1 Identification

- **Product identifier**
  - **Trade name:** S-BENZOYLTHIAMINE O-MONOPHOSPHATE
  - **Article number:** 154835
  - **CAS Number:** 22457-89-2
  - **Molecular Formula:** C_{19} H_{23} N_{4} O_{6} P S
  - **Molecular Weight:** 466.47 g/mol
  - **Application of the substance / the mixture:** For Research Use Only

- **Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:**
    MP Biomedicals, LLC
    29525 Fountain Parkway
    Solon, OH 44139
    United States
    www.mpbio.com
  - **Information department:** Quality Control Department
  - **Emergency telephone number:** CHEMTREC: 1-800-424-9300 (1-703-527-3887)

2 Hazard(s) identification

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

- **Label elements**
  - **GHS label elements:** Void
  - **Hazard pictograms:** Void
  - **Signal word:** Void
  - **Hazard statements:** Void
  - **Classification system:**
    - **NFPA ratings (scale 0 - 4)**
      - Health = 0
      - Fire = 0
      - Reactivity = 0
    - **HMIS-ratings (scale 0 - 4)**
      - Health = 0
      - Fire = 0
      - Reactivity = 0

3 Composition/information on ingredients

- **Chemical characterization:** Substances
  - **CAS No. Description**
    22457-89-2 S-Benzoylthiamine O-Monophosphate

4 First-aid measures

- **Description of first aid measures**
  - **General information:** No special measures required.
Safety Data Sheet  
acc. to OSHA HCS

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- **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:** Flush eyes with running water as a precaution.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
  - Most important symptoms and effects, both acute and delayed: No further relevant information available.
  - Indication of any immediate medical attention and special treatment needed:
  - No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
  - *Suitable extinguishing agents:* CO2, extinguishing 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.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
  - Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.
  - For personal protection see section 8.
  - *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 protection against explosions and fires:* No special requirements.
  - *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 systems:** No further data; see Section 7.
- **Control parameters**
  - *Components with limit values that require monitoring at the workplace:* Not required.
  - *Additional information:* The lists that were valid during the creation were used as basis.
Trade name: S-BENZOXYLTHIAMINE O-MONOPHOSPHATE

- Exposure controls
- Personal protective equipment:
- General protective and hygienic measures:
The usual precautionary measures for handling chemicals should be followed.
- Breathing equipment: 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.
- 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.

9 Physical and chemical properties

- Information on basic physical and chemical properties
- General Information
- Appearance:
  - Form: Powder
  - Color: White
- Odor: Indeterminate
- Odor threshold: Not determined.
- pH-value: Not applicable.
- Change in condition
  - Boiling point/Boiling range: Undetermined.
- Flash point: Not applicable.
- Flammability (solid, gaseous): Product is not flammable.
- Ignition temperature:
  - Decomposition temperature: Not determined.
- Auto igniting: Not determined.
- Danger of explosion: See section 10
- Explosion limits:
  - Lower: Not Applicable
  - Upper: Not Applicable
- Vapor pressure: Not applicable.
- Density: Not Applicable
- Relative density: Not determined.
- Vapor density: Not applicable.
- Evaporation rate: Not applicable.
- Solubility in / Miscibility with: Not Determined
Trade name: S-BENZOYLTHIAMINE O-MONOPHOSPHATE

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:
    - on the skin: No irritant effect.
    - on the eye: Irritant and potentially harmful
  - Sensitization: No sensitizing effects known.
- Additional toxicological information:
  When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.
  The substance is not subject to classification.

- Carcinogenic categories
  - IARC (International Agency for Research on Cancer)
    Substance is not listed.
  - NTP (National Toxicology Program)
    Substance is not listed.

12 Ecological information

- Toxicity
  - Aquatic toxicity: No further relevant information available.
  - Persistence and degradability: No further relevant information available.
- Behavior 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 (Self-assessment): extremely hazardous for water
    Do not allow product to reach ground water, water course or sewage system, even in small quantities.
43.0.21

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: Can not be disposed of together with household garbage. Do not allow product to reach sewage system.

- Uncleaned packagings:
  - Recommendation: Discard must be made according to official regulations.
  - Recommended cleansing agent: Water, if necessary with cleaning agents.

### 14 Transport information

- UN-Number
  - DOT, TDG, IMDG, IATA: Not regulated

- UN proper shipping name
  - DOT, TDG, IMDG, IATA: Not regulated

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

- Packing group
  - DOT, TDG, IMDG, IATA: Not regulated

- Environmental hazards:
  - Not applicable.

- Special precautions for user:
  - Not applicable.

- Transport in bulk according to Annex II of MARPOL73/78 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
  - Sara
    - Section 355 (extremely hazardous substances):
      - Substance is not listed.
    - Section 313 (Specific toxic chemical listings):
      - Substance is not listed.
    - TSCA (Toxic Substances Control Act):
      - Substance is not listed.
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- **Canadian substance listings:**
  - **Canadian Domestic Substances List (DSL)**
    - Substance is not listed.
  - **Canadian Ingredient Disclosure list (limit 0.1%)**
    - Substance is not listed.
  - **Canadian Ingredient Disclosure list (limit 1%)**
    - Substance is not listed.
  - **GHS label elements** Void
  - **Hazard pictograms** Void
  - **Signal word** Void
  - **Hazard statements** Void
  - **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.
- **Date of preparation / last revision** 12/28/2016 / -
- **Abbreviations and acronyms:**
  - IMDG: International Maritime Code for Dangerous Goods
  - DOT: US Department of Transportation
  - IATA: International Air Transport Association
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - NFPA: National Fire Protection Association (USA)
  - HMIS: Hazardous Materials Identification System (USA)
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative