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

- **Product identifier**
- **Trade name:** Metham Sodium
- **Part number:** PST-1505
- **CAS Number:** 137-42-8
- **EC number:** 205-293-0
- **Index number:** 006-013-00-8

Relevant identified uses of the substance or mixture and uses advised against
Reagents and Standards for Analytical Chemical Laboratory Use

2 Details of the supplier of the safety data sheet

- **Manufacturer/Supplier:**
  Agilent Technologies Manufacturing GmbH & Co. KG
  Hewlett-Packard-Str.8
  76337 Waldbronn
  Germany

- **Further information obtainable from:**
  Telephone: 0800 603 1000
  pdl-msds_author@agilent.com

- **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**

  - **Classification according to Regulation (EC) No 1272/2008**

  - GHS06 skull and crossbones
    Acute Tox. 3 H311 Toxic in contact with skin.

  - GHS05 corrosion
    Skin Corr. 1B H314 Causes severe skin burns and eye damage.

  - GHS09 environment
    Aquatic Acute 1 H400 Very toxic to aquatic life.
    Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.

  - GHS07
    Acute Tox. 4 H302 Harmful if swallowed.
    Skin Sens. 1 H317 May cause an allergic skin reaction.

(Contd. on page 2)
Trade name: Metham Sodium

· Label elements
· Labelling according to Regulation (EC) No 1272/2008
  The substance is classified and labelled according to the CLP regulation.
· Hazard pictograms
  
  GHS05  GHS06  GHS09

· Signal word Danger
· Hazard-determining components of labelling:
  metam-sodium
· Hazard statements
  H302 Harmful if swallowed.
  H311 Toxic in contact with skin.
  H314 Causes severe skin burns and eye damage.
  H317 May cause an allergic skin reaction.
  H410 Very toxic to aquatic life with long lasting effects.
· Precautionary statements
  P101 If medical advice is needed, have product container or label at hand.
  P102 Keep out of reach of children.
  P103 Read label before use.
  P260 Do not breathe dusts or mist.
  P264 Wash thoroughly after handling.
  P270 Do not eat, drink or smoke when using this product.
  P272 Contaminated work clothing should not be allowed out of the workplace.
  P273 Avoid release to the environment.
  P280 Wear protective gloves/protection clothing/eye protection/face protection.
  P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
  P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
  P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
  P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
  P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  P310 Immediately call a POISON CENTER/doctor.
  P321 Specific treatment (see on this label).
  P361+P364 Take off immediately all contaminated clothing and wash it before reuse.
  P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
  P391 Collect spillage.
  P405 Store locked up.
  P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Additional information:
  EUH031 Contact with acids liberates toxic gas.
· Other hazards
· Results of PBT and vPvB assessment
  · PBT: Not applicable.
Trade name: Metham Sodium

- vPvB: Not applicable.

### 3 Composition/information on ingredients

- Chemical characterisation: Substances
- CAS No. Description
  - 137-42-8 metam-sodium
- Identification number(s)
- EC number: 205-293-0
- Index number: 006-013-00-8

### 4 First aid measures

- Description of first aid measures
- General information:
  - Immediately remove any clothing soiled by the product.
  - Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
  - In case of irregular breathing or respiratory arrest provide artificial respiration.
- After inhalation:
  - Supply fresh air and to be sure call for a doctor.
  - In case of unconsciousness place patient stably in side position for transportation.
- After skin contact:
  - 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:
  - Call for a doctor immediately.
  - Drink plenty of water and provide fresh air. Call for a doctor immediately.
- 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 Firefighting measures

- Extinguishing media
- Suitable extinguishing agents: Use fire extinguishing methods suitable to surrounding conditions.
- Special hazards arising from the substance or mixture
  - During heating or in case of fire poisonous gases are produced.
- Advice for firefighters
- Protective equipment: Mouth respiratory protective device.

### 6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures
  - Mount respiratory protective device.
  - Wear protective equipment. Keep unprotected persons away.
- Environmental precautions:
  - Do not allow product to reach sewage system or any water course.
Trade name: Metham Sodium

Inform respective authorities in case of seepage into water course or sewage system. 
Do not allow to enter sewers/surface or ground water.

- **Methods and material for containment and cleaning up:**
  - Use neutralising agent.
  - Dispose contaminated material as waste according to item 13.
  - Ensure adequate ventilation.

- **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
  - Thorough dedusting.
  - Ensure good ventilation/exhaustion at the workplace.

- **Information about fire - and explosion protection:** Keep respiratory protective device available.

- **Conditions for safe storage, including any incompatibilities**
  - **Storage:**
    - Requirements to be met by storerooms and receptacles: No special requirements.
    - Information about storage in one common storage facility: Do not store together with acids.
    - Further information about storage conditions: Keep container tightly sealed.

- **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**
  - Personal protective equipment:
    - General protective and hygienic measures:
      - Keep away from foodstuffs, beverages and feed.
      - Immediately remove all soiled and contaminated clothing
      - Wash hands before breaks and at the end of work.
      - Store protective clothing separately.
      - Avoid contact with the eyes and skin.
      - Respiratory protection:
        - When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.
        - Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.
    - Protection of hands:
      - Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.
Trade name: Metham Sodium

- **Material of gloves**
  For normal use: nitrile rubber, 11-13 mil thickness
  For direct contact with the chemical: butyl rubber, 12-15 mil thickness
  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**
  For normal use: nitrile rubber: 1 hour
  For direct contact with the chemical: butyl rubber: > 4 hours

- **Eye protection:**
  Tightly sealed goggles

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### 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
  
- **General Information**
  
  - **Appearance:** Solid
  - **Colour:** Not determined.
  - **Odour:** Characteristic
  - **Odour threshold:** Not determined.

  - **pH-value:** Not applicable.

  - **Change in condition**
    
    - **Melting point/freezing point:** Undetermined.
    - **Initial boiling point and boiling range:** Undetermined.

  - **Flash point:** Not applicable.

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

  - **Decomposition temperature:** Not determined.

  - **Auto-ignition temperature:** Not determined.

  - **Explosive properties:**
    
    - **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:** Insoluble.

  - **Partition coefficient: n-octanol/water:** Not determined.
Trade name: Metham Sodium

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

- Solvent content:
  - VOC (EC) 0.00 %

- Solids content: 100.0 %

- 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
  Contact with acids releases toxic gases.

- 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
  Harmful if swallowed.
  Toxic in contact with skin.

- LD/LC50 values relevant for classification:

  ATE (Acute Toxicity Estimates)

<table>
<thead>
<tr>
<th>Route</th>
<th>LD50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>450 mg/kg (rat)</td>
</tr>
<tr>
<td>Dermal</td>
<td>800 mg/kg (rabbit)</td>
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  137-42-8 metam-sodium

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</tr>
</tbody>
</table>

- Primary irritant effect:

- Skin corrosion/irritation
  Causes severe skin burns and eye damage.

- Serious eye damage/irritation
  Causes severe skin burns and eye damage.

- Respiratory or skin sensitisation
  May cause an allergic skin reaction.

- 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.

(Contd. on page 7)
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.
- Ecotoxicological effects:
  - Remark: Very toxic for fish
  - Additional ecological information:
    - General notes:
      Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
      Do not allow product to reach ground water, water course or sewage system.
      Must not reach sewage water or drainage ditch undiluted or unneutralised.
      Danger to drinking water if even small quantities leak into the ground.
      Also poisonous for fish and plankton in water bodies.
      Very toxic for aquatic organisms
  - 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
  Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- European waste catalogue

  - HP 6: Acute Toxicity
  - HP 8: Corrosive
  - HP 12: Release of an acute toxic gas
  - HP 13: Sensitising
  - HP 14: Ecotoxic

- Uncleaned packaging:
- Recommendation: Disposal must be made according to official regulations.

14 Transport information

- UN-Number
- ADR, IMDG, IATA: UN2811
**Trade name:** Metham Sodium

### UN proper shipping name
- **ADR:** 2811 TOXIC SOLID, ORGANIC, N.O.S. (metam-sodium), ENVIRONMENTALLY HAZARDOUS
- **IMDG:** TOXIC SOLID, ORGANIC, N.O.S. (metam-sodium), MARINE POLLUTANT
- **IATA:** TOXIC SOLID, ORGANIC, N.O.S. (metam-sodium)

### Transport hazard class(es)
- **ADR, IMDG**
  - **Class:** 6.1 Toxic substances.
  - **Label:** 6.1

### IATA
- **Class:** 6.1 Toxic substances.
- **Label:** 6.1

### Packing group
- **ADR, IMDG, IATA**
  - **Class:** III

### Environmental hazards:
- **Marine pollutant:** Symbol (fish and tree)
- **Special marking (ADR):** Symbol (fish and tree)

### Special precautions for user
- **Warning:** Toxic substances.
- **Danger code (Kemler):** 60
- **EMS Number:** F-A,S-A
- **Stowage Category:** A
- **Stowage Code:** SW2 Clear of living quarters

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

### Transport/Additional information:
- **ADR**
  - **Limited quantities (LQ):** 5 kg
  - **Excepted quantities (EQ):** Code: E1
  - **Maximum net quantity per inner packaging:** 30 g
  - **Maximum net quantity per outer packaging:** 1000 g
- **Transport category**
  - **Code:** 2
- **Tunnel restriction code**
  - **Code:** E
- **IMDG**
  - **Limited quantities (LQ):** 5 kg

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*Contd. on page 9*
Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 24.03.2019  Version number 3  Revision: 24.03.2019

Trade name: Metham Sodium

- **Excepted quantities (EQ)**
  - Code: E1
  - Maximum net quantity per inner packaging: 30 g
  - Maximum net quantity per outer packaging: 1000 g

- **UN "Model Regulation"**: UN 2811 TOXIC SOLID, ORGANIC, N.O.S. (METAM-SODIUM), 6.1, III, ENVIRONMENTALLY HAZARDOUS

15 **Regulatory information**

- 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.
  - Seveso category E1 Hazardous to the Aquatic Environment
  - Qualifying quantity (tonnes) for the application of lower-tier requirements 100 t
  - Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t
  - Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 **Other information**

The information contained in this document is based on Agilent’s state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

- Department issuing SDS: Document Control / Regulatory
- Contact: regulatory@ultrasci.com
- 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
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - VOC: Volatile Organic Compounds (USA, EU)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative
  - Acute Tox. 4: Acute toxicity – Category 4
  - Acute Tox. 3: Acute toxicity – Category 3
  - Skin Corr. 1B: Skin corrosion/irritation – Category 1B
  - Skin Sens. 1: Skin sensitisation – Category 1
  - Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
  - Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

* Data compared to the previous version altered.