1 Identification

- **Product identifier**
- **Trade name:** SYSMEX STERILIZER
- **Article number:** No other identifiers
- **Recommended use and restriction on use**
  - **Recommended use:** Diagnostic Testing
  - **Restrictions on use:** No further relevant information available.
- **Details of the supplier of the Safety Data Sheet**
  - **Manufacturer/Supplier:** SYSMEX AMERICA, Inc
    577 Aptakisic Road
    Lincolnshire, IL 60069 USA
    Phone: 847-996-4500
    1-800-3SYSMEX (1-800-379-7639)

  - **Emergency telephone number:**
    ChemTel Inc.
    (800)255-3924, +1 (813)248-0585

2 Hazard(s) identification

- **Classification of the substance or mixture**
  - Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
  - Skin Sens. 1 H317 May cause an allergic skin reaction.

- **Additional information:**
  - There are no other hazards not otherwise classified that have been identified.
  - 0 percent of the mixture consists of ingredient(s) of unknown toxicity.

- **Label elements**
  - **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**

  ![GHS08]

- **Signal word** Danger

- **Hazard-determining components of labeling:**
  - potassium [2S-(2α,5α,6β)]-3,3-dimethyl-7-oxo-6-(phenylacetamido)-4-thia-1-azabicyclo[3.2.0]heptane-2-carboxylate
  - Poly (1-hexamethylenebiguanide hydrochloride

- **Hazard statements**
  - H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

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Trade name: SYSMEX STERILIZER

H317 May cause an allergic skin reaction.

- Precautionary statements
  P261 Avoid breathing mist, vapors, or spray.
  P280 Wear protective gloves/protective clothing/eye protection.
  P272 Contaminated work clothing must not be allowed out of the workplace.
  P342+P311 If experiencing respiratory symptoms: Call a poison center/doctor.
  P363 Wash contaminated clothing before reuse.
  P304+P311 If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
  P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
  P302+P352 If on skin: Wash with plenty of water.
  P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

3 Composition/information on ingredients

- Chemical characterization: Mixtures
- Description: Mixture of the substances listed below with nonhazardous additions.

<table>
<thead>
<tr>
<th>Dangerous components:</th>
</tr>
</thead>
<tbody>
<tr>
<td>113-98-4 potassium [2S-(2α,5α,6β)-3,3-dimethyl-7-oxo-6-(phenylacetamido)-4-thia-1-azabicyclo[3.2.0]heptane-2-carboxylate</td>
</tr>
<tr>
<td>27083-27-8 Poly (1-hexamethylenebiguanide hydrochloride</td>
</tr>
</tbody>
</table>

- Additional information:
  For the listed ingredients, the identity and exact percentages are being withheld as a trade secret.
  For the wording of the listed risk phrases refer to section 16.

4 First-aid measures

- Description of first aid measures
- General information:
  Immediately remove any clothing soiled by the product.
  Take affected persons out into the fresh air.

- After inhalation:
  Supply fresh air.
  Provide oxygen treatment if affected person has difficulty breathing.
  In case of irregular breathing or respiratory arrest provide artificial respiration.
  If experiencing respiratory symptoms: Call a poison center/doctor.

- After skin contact:
  Immediately wash with water and soap and rinse thoroughly.
  If skin irritation or rash occurs: Get medical advice/attention.

- After eye contact:
  Remove contact lenses if worn, if possible.
  Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

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Trade name: SYSMEX STERILIZER

- **After swallowing:**
  Rinse out mouth and then drink plenty of water.
  Do not induce vomiting; immediately call for medical help.

- **Information for doctor:**
  - Most important symptoms and effects, both acute and delayed
    - Asthma attacks
    - Breathing difficulty
    - Coughing
    - Allergic reactions
    - Nausea
    - Gastric or intestinal disorders
  - **Danger**
    - Danger of impaired breathing.
    - Danger of pulmonary edema.
  - **Indication of any immediate medical attention and special treatment needed**
    - Severe allergic skin reaction, bronchial spasms and anaphylactic shock are possible.
    - Medical supervision for at least 48 hours.
    - If necessary oxygen respiration treatment.
    - Treat skin and mucous membrane with antihistamine and corticoid preparations.
    - Contains potassium [2S-(2α,5α,6β)]-3,3-dimethyl-7-oxo-6-(phenylacetamido)-4-thia-1-azabicyclo[3.2.0]heptan e-2-carboxylate, Poly (1-hexamethylenebiguanide hydrochloride. May produce an allergic reaction.
    - In cases of irritation to the lungs, initial treatment with cortical steroid inhalants.

5 Fire-fighting measures

- **Extinguishing media**
  - **Suitable extinguishing agents:**
    - The product is not flammable.
    - Use fire fighting measures that suit the environment.
  - **For safety reasons unsuitable extinguishing agents:** None.
  - Special hazards arising from the substance or mixture
    - Formation of toxic gases is possible during heating or in case of fire.

- **Advice for firefighters**
  - **Protective equipment:**
    - Wear self-contained respiratory protective device.
    - Wear fully protective suit.

- **Additional information**
  - No further relevant information available.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
  - Ensure adequate ventilation.
  - Wear protective equipment. Keep unprotected persons away.

(Contd. of page 2)
Trade name: SYSMEX STERILIZER

For large spills, use respiratory protective device against the effects of fumes/dust/aerosol.

- Environmental precautions: Do not allow to enter sewers/surface or ground water.
- Methods and material for containment and cleaning up:
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  Dispose contaminated material as waste according to item 13.
  Send for recovery or disposal in suitable receptacles.
- 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
    Prevent formation of aerosols.
    Use only in well ventilated areas.
    Avoid splashes or spray in enclosed areas.
  - Information about protection against explosions and fires: Keep respiratory protective device available.

- Conditions for safe storage, including any incompatibilities
- Storage:
  - Requirements to be met by storerooms and receptacles:
    Store in a cool location.
    Provide ventilation for receptacles.
  - Information about storage in one common storage facility: Store away from foodstuffs.
  - Further information about storage conditions: Keep receptacle tightly sealed.
  - 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 item 7.
- Control parameters
  - Components with limit values that require monitoring at the workplace:
    The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
  - Additional information: The lists that were valid during the creation were used as basis.

- Exposure controls
  - Personal protective equipment:
    - General protective and hygienic measures:
      The usual precautionary measures for handling chemicals should be followed.
      Keep away from foodstuffs, beverages and feed.
      Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work. Do not inhale gases / fumes / aerosols. Avoid contact with the eyes and skin.

- **Engineering controls**: No further relevant information available.
- **Breathing equipment**: Wear appropriate NIOSH respirator when ventilation is inadequate and occupational exposure limits are exceeded.
- **Protection of hands**:
  - Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. 
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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **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**:
  - Safety glasses

- **Body protection**: Protective work clothing

- **Limitation and supervision of exposure into the environment**: Avoid release to the environment.
- **Risk management measures**: See Section 7 for additional information.

### 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
  - **General Information**
  
  - **Appearance**:
    - **Form**: Liquid
    - **Color**: Clear
    - **Odor**: Odorless
    - **Odor threshold**: Not determined.
    - **pH-value at 20 °C (68 °F)**: 7
  
  - **Change in condition**:
    - **Melting point/Melting range**: Undetermined.
    - **Boiling point/Boiling range**: 100 °C (212 °F)
Safety Data Sheet
acc. to OSHA HCS (29 CFR 1910.1200)

Trade name: SYSMEX STERILIZER

- Flash point: Not applicable.
- Flammability (solid, gaseous): Not applicable.
- Auto-ignition temperature: Not determined.
- Decomposition temperature: Not determined.
- Auto igniting: Product is not self-igniting.
- Danger of explosion: Product does not present an explosion hazard.
- Explosion limits:
  - Lower: Not determined.
  - Upper: Not determined.
- Vapor pressure: Not determined.
- Density: Not determined.
- Relative density: Not determined.
- Vapour density: Not determined.
- Evaporation rate: Not determined.
- Solubility in / Miscibility with Water: Fully miscible.
- Partition coefficient (n-octanol/water): Not determined.
- Viscosity:
  - Dynamic: Not determined.
  - Kinematic: Not determined.
- Other information: No further relevant information available.

10 Stability and reactivity

- Reactivity
- Chemical stability
  - Thermal decomposition / conditions to be avoided:
    No decomposition if used and stored 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:
    Carbon monoxide and carbon dioxide
    Nitrogen oxides (NOx)

(Contd. on page 7)
11 Toxicological information

- Information on toxicological effects
  - Acute toxicity:
    - LD/LC50 values that are relevant for classification:
      - 113-98-4 potassium [2S-(2α,5α,6β)]-3,3-dimethyl-7-oxo-6-(phenylacetamido)-4-thia-1-azabicyclo[3.2.0]heptane-2-carboxylate
      - Oral LD50: 6257 mg/kg (mouse)
        - 8900 mg/kg (rat)

- Primary irritant effect:
  - on the skin: Slight irritant effect on skin and mucous membranes.
  - on the eye: Slight irritant effect on eyes.
  - Sensitization: May cause sensitisation by inhalation and skin contact.
  - Subacute to chronic toxicity: No further relevant information available.

- Additional toxicological information:
  Contains potassium [2S-(2α,5α,6β)]-3,3-dimethyl-7-oxo-6-(phenylacetamido)-4-thia-1-azabicyclo[3.2.0]heptane-2-carboxylate, Poly (1-hexamethylenebiguanide hydrochloride. May produce an allergic reaction. Toxic and/or corrosive effects may be delayed up to 24 hours. The product shows the following dangers according to internally approved calculation methods for preparations:

- Carcinogenic categories

  - IARC (International Agency for Research on Cancer)
    None of the ingredients is listed.
  - NTP (National Toxicology Program)
    None of the ingredients is listed.
  - OSHA-Ca (Occupational Safety & Health Administration)
    None of the ingredients is listed.

- Probable Routes of Exposure
  Inhalation.
  Eye contact.
  Skin contact.
  Ingestion.

- Acute effects (acute toxicity, irritation and corrosivity): None.
- Repeated Dose Toxicity: Repeated exposures may result in skin and/or respiratory sensitivity.

12 Ecological information

- Toxicity
  - Aquatic toxicity: The material is harmful to the environment.
  - Persistence and degradability: No further relevant information available.

(Contd. on page 8)
Safety Data Sheet
acc. to OSHA HCS (29 CFR 1910.1200)

Trade name: SYSMEX STERILIZER

- Behavior in environmental systems:
  - Bioaccumulative potential: No further relevant information available.
  - Mobility in soil: No further relevant information available.
- Ecotoxicological effects:
  - Remark: Harmful to fish
- Additional ecological information:
- General notes:
  Do not allow product to reach ground water, water course or sewage system.
  Danger to drinking water if even small quantities leak into the ground.
- Other adverse effects: No further relevant information available.

13 Disposal considerations

- Waste treatment methods
- Recommendation:
  Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
  The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.
- Uncleaned packagings:
- Recommendation: Disposal must be made according to official regulations.

14 Transport information

- UN-Number
- DOT, ADN, IMDG, IATA: Not Regulated
- UN proper shipping name
- DOT, ADN, IMDG, IATA: Not Regulated
- Transport hazard class(es)
- DOT, ADN, IMDG, IATA: Not Regulated
- Class
- Packing group
- DOT, IMDG, IATA: Not Regulated
- Environmental hazards:
- Marine pollutant: No
- Special precautions for user: Not applicable.
- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable.

(Contd. on page 9)
15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- United States (USA)
- SARA

- Section 355 (extremely hazardous substances): None of the ingredients is listed.
- Section 313 (Specific toxic chemical listings): None of the ingredients are listed.
- TSCA (Toxic Substances Control Act): All ingredients are listed.
- Proposition 65 (California)

- Chemicals known to cause cancer: None of the ingredients are listed.
- Chemicals known to cause reproductive toxicity for females: None of the ingredients are listed.
- Chemicals known to cause reproductive toxicity for males: None of the ingredients is listed.
- Chemicals known to cause developmental toxicity: None of the ingredients is listed.

- Carcinogenic categories
- EPA (Environmental Protection Agency) None of the ingredients is listed.
- IARC (International Agency for Research on Cancer) None of the ingredients is listed.
- TLV (Threshold Limit Value established by ACGIH) None of the ingredients is listed.
- NIOSH-Ca (National Institute for Occupational Safety and Health) None of the ingredients is listed.

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.

- Date of preparation / last revision 05/11/2015 / -(Contd. on page 10)
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
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
HMIS: Hazardous Materials Identification System (USA)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1