Section 1. Identification

GHS product identifier : Tytin FC™
Other means of identification : Not available.
Product type : Solid.

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

Product use : Dental product: Precapsulated dental amalgam
Area of application : Professional applications.

Manufacturer : Kerr Corporation
1717 West Collins Avenue
Orange, CA  92867-5422
Telephone no.: 1-800-KERR-123

e-mail address of person responsible for this SDS : edwin.varela@kavokerrgroup.com

Emergency telephone number (with hours of operation) : CHEMTREC® (24 hours) U.S. : 1-800-424-9300     International: +1-703-527-3887

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
This product consists of a 2 part precapsulated system: mercury and a metal alloy powder. The health and physical hazards of this SDS are based on liquid elemental mercury.

Classification of the substance or mixture : CORROSIVE TO METALS - Category 1
ACUTE TOXICITY (inhalation) - Category 2
TOXIC TO REPRODUCTION (Unborn child) - Category 1B
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1

GHS label elements

Hazard pictograms : 

Signal word : Danger
Hazard statements : May be corrosive to metals.
      Fatal if inhaled.
      May damage the unborn child.
      Causes damage to organs through prolonged or repeated exposure.

Precautionary statements

Date of issue/Date of revision : 11/06/2014   Date of previous issue : No previous validation   Version : 1

United States
Section 2. Hazards identification

**Prevention**: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wear respiratory protection. Keep only in original container. Use only outdoors or in a well-ventilated area. Do not breathe dust. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.

**Response**: Absorb spillage to prevent material damage. Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or physician.

**Storage**: Store locked up. Store in corrosive resistant container with a resistant inner liner.

**Disposal**: Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Hazards not otherwise classified**: None known.

Section 3. Composition/information on ingredients

**Substance/mixture**: Mixture

**Other means of identification**: Not available.

**CAS number/other identifiers**

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Other names</th>
<th>%</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>mercury</td>
<td>mercury</td>
<td>30-60</td>
<td>7439-97-6</td>
</tr>
<tr>
<td>copper</td>
<td>copper</td>
<td>5-10</td>
<td>7440-50-8</td>
</tr>
</tbody>
</table>

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.

Section 4. First aid measures

**Description of necessary first aid measures**

**Eye contact**: Avoid contact with mercury. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if symptoms occur.

**Inhalation**: Avoid inhalation of mercury. If inhaled, remove to fresh air. Get medical attention if symptoms occur.

**Skin contact**: Avoid contact with mercury. Wash contaminated skin with soap and water. Get medical attention if symptoms occur.

**Ingestion**: Avoid ingestion of mercury. If swallowed, call a Poison Control Centre or doctor immediately.

**Most important symptoms/effects, acute and delayed**

**Potential acute health effects**

- **Eye contact**: No known significant effects or critical hazards.
- **Inhalation**: Fatal if inhaled.
- **Skin contact**: No known significant effects or critical hazards.
- **Ingestion**: No known significant effects or critical hazards.

**Over-exposure signs/symptoms**

- **Eye contact**: No specific data.
Section 4. First aid measures

Inhalation : Adverse symptoms may include the following:
- reduced fetal weight
- increase in fetal deaths
- skeletal malformations
- salivation
- metallic taste
- Eye irritation
- respiratory tract irritation
- coughing
- pulmonary edema
- wheezing and breathing difficulties
- headache
- fever
- nausea or vomiting
- diarrhea
- abdominal cramps and pain
- muscle weakness / pain
- mental confusion or disorientation

Skin contact : Adverse symptoms may include the following:
- reduced fetal weight
- increase in fetal deaths
- skeletal malformations

Ingestion : Adverse symptoms may include the following:
- reduced fetal weight
- increase in fetal deaths
- skeletal malformations

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : In case of major fire and large quantities: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : Do not use water jet.

Specific hazards arising from the chemical : No specific fire or explosion hazard.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
- metal oxide/oxides
- Mercuric oxide (HgO)
- Mercury (vapor)
Section 5. Fire-fighting measures

Special protective actions for fire-fighters: In case of major fire and large quantities: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: For professional use only. Handle with extreme care. Avoid contact with mercury. Avoid inhalation of mercury. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders: If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill: For professional use only. Handle with extreme care. Avoid contact with mercury. Avoid inhalation of mercury. Do not touch or walk through spilled material. Prompt cleanup and removal are necessary. Cover all liquid droplets with a commercially available mercury vapor suppressant such as HG-X or elemental sulfur.

Large spill: For professional use only. Handle with extreme care. Avoid contact with mercury. Avoid inhalation of mercury. Do not touch or walk through spilled material. Prompt cleanup and removal are necessary. Isolate the area. Do not attempt to clean up spill. Notify your manager for additional instructions. Never use a vacuum cleaner to clean up mercury. The vacuum will put mercury into the air and increase exposure. Collect the droplets using specialized mercury vacuum cleaners.

Section 7. Handling and storage

Precautions for safe handling

Protective measures: Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. Absorb spillage to prevent material damage.

Advice on general occupational hygiene: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities: Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store in corrosive resistant container with a resistant inner liner. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

United States
### Section 8. Exposure controls/personal protection

#### Control parameters

<table>
<thead>
<tr>
<th>Occupational exposure limits</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>mercury</td>
<td>OSHA PEL Z2 (United States, 2/2013).&lt;br&gt;CEIL: 1 mg/10m³&lt;br&gt;NIOSH REL (United States, 10/2013).&lt;br&gt;Adsorbed through skin.&lt;br&gt;TWA: 0.05 mg/m³, (as Hg) 10 hours. Form: Hg Vapor&lt;br&gt;CEIL: 0.1 mg/m², (as Hg) Form: Other than Hg Vapor&lt;br&gt;ACGIH TLV (United States, 6/2013).&lt;br&gt;Adsorbed through skin.&lt;br&gt;TWA: 0.025 mg/m³, (as Hg) 8 hours. Form: Inorganic&lt;br&gt;OSHA PEL 1989 (United States, 3/1989).&lt;br&gt;Adsorbed through skin.&lt;br&gt;TWA: 0.05 mg/m³, (as Hg) 8 hours. Form: Vapor&lt;br&gt;ACGIH TLV (United States, 6/2013).&lt;br&gt;TWA: 1 mg/m³, (as Cu) 8 hours. Form: Dust and mist&lt;br&gt;TWA: 0.2 mg/m³ 8 hours. Form: Fume&lt;br&gt;OSHA PEL 1989 (United States, 3/1989).&lt;br&gt;TWA: 1 mg/m³, (as Cu) 8 hours. Form: Dusts and Mists&lt;br&gt;TWA: 0.1 mg/m³, (as Cu) 8 hours. Form: Fume&lt;br&gt;NIOSH REL (United States, 10/2013).&lt;br&gt;TWA: 1 mg/m³, (as Cu) 10 hours. Form: Dusts and Mists&lt;br&gt;OSHA PEL (United States, 2/2013).&lt;br&gt;TWA: 1 mg/m³ 8 hours. Form: Dusts and Mists&lt;br&gt;TWA: 0.1 mg/m³ 8 hours. Form: Fume</td>
</tr>
<tr>
<td>copper</td>
<td>ACGIH TLV (United States, 6/2013).&lt;br&gt;TWA: 1 mg/m³, (as Cu) 8 hours. Form: Dust and mist&lt;br&gt;TWA: 0.2 mg/m³ 8 hours. Form: Fume&lt;br&gt;OSHA PEL 1989 (United States, 3/1989).&lt;br&gt;TWA: 1 mg/m³, (as Cu) 8 hours. Form: Dusts and Mists&lt;br&gt;TWA: 0.1 mg/m³, (as Cu) 8 hours. Form: Fume&lt;br&gt;NIOSH REL (United States, 10/2013).&lt;br&gt;TWA: 1 mg/m³, (as Cu) 10 hours. Form: Dusts and Mists&lt;br&gt;OSHA PEL (United States, 2/2013).&lt;br&gt;TWA: 1 mg/m³ 8 hours. Form: Dusts and Mists&lt;br&gt;TWA: 0.1 mg/m³ 8 hours. Form: Fume</td>
</tr>
</tbody>
</table>

#### Appropriate engineering controls

- Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

#### Environmental exposure controls

- Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

#### Individual protection measures

- **Hygiene measures**: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

- **Eye/face protection**: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

### United States
Section 8. Exposure controls/personal protection

Hand protection: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection: Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state: Solid. [Precapsulated dental amalgam: Metal alloy powder / Mercury (Mobile liquid.)]


Odor threshold: Not available.

pH: Not available.

Melting point: -38.889°C (-38°F) [Mercury]

Boiling point: 356.67°C (674°F) [Mercury]

Flash point: Not applicable.

Evaporation rate: Not available.

Flammability (solid, gas): Not applicable.

Lower and upper explosive (flammable) limits: Not available.

Vapor pressure: 0.00016 kPa (0.0012 mm Hg) [room temperature] [Mercury]

Vapor density: Not available.

Relative density: 13.35 [Water = 1 [Mercury]]

Solubility: Insoluble in the following materials: cold water and hot water.

Solubility in water: 0.00002 g/l [Mercury]

Partition coefficient: n-octanol/water: Not available.

Auto-ignition temperature: Not available.

Decomposition temperature: Not available.

SADT: Not available.

Viscosity: Not available.
Section 10. Stability and reactivity

Reactivity: No specific test data related to reactivity available for this product or its ingredients.

Chemical stability: The product is stable.

Possibility of hazardous reactions: Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid: Avoid high temperatures. Toxic mercury vapor concentration increases with temperature.

Incompatible materials: Reactive or incompatible with the following materials: Halogens. Ammonia. Strong oxidizing materials. Keep away from strong acids (HNO3, H2SO4, HCl) Corrosive to metal (Amalgam formation).

Hazardous decomposition products: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity
Not available.

Conclusion/Summary: Based on the criteria of the protocol, this product is considered non-cytotoxic per ISO 10993-5.

Irritation/Corrosion
Not available.

Conclusion/Summary
Skin: Corrosive to metal. Non-corrosive to skin.
Eyes: Corrosive to metal. Non-corrosive to the eyes. Over-exposure signs/symptoms: Vapor may be irritating to eyes and respiratory system.
Respiratory: May cause respiratory irritation. Over-exposure signs/symptoms: Inhalation of vapor/mist may result in lung edema.

Sensitization

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Route of exposure</th>
<th>Species</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tytin FC™</td>
<td>skin</td>
<td>Guinea pig</td>
<td>Not sensitizing</td>
</tr>
</tbody>
</table>

Mutagenicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Experiment</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tytin FC™</td>
<td>Ames Salmonella / Mammalian Microsome Mutagenicity Assay</td>
<td>Subject: Bacteria</td>
<td>Negative</td>
</tr>
</tbody>
</table>

Carcinogenicity
Not available.

Classification

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>OSHA</th>
<th>IARC</th>
<th>NTP</th>
</tr>
</thead>
<tbody>
<tr>
<td>mercury</td>
<td>-</td>
<td>3</td>
<td>-</td>
</tr>
</tbody>
</table>

Date of issue/Date of revision: 11/06/2014  Date of previous issue: No previous validation  Version: 1 7/14

United States
Section 11. Toxicological information

**Reproductive toxicity**
Not available.

**Teratogenicity**
Not available.

**Specific target organ toxicity (single exposure)**

<table>
<thead>
<tr>
<th>Name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>copper</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Respiratory tract irritation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>mercury</td>
<td>Category 1</td>
<td>Not determined</td>
<td>nervous system</td>
</tr>
</tbody>
</table>

**Aspiration hazard**
Not available.

**Information on the likely routes of exposure**

- Routes of entry anticipated: Oral, Dermal, Inhalation.

**Potential acute health effects**

- **Eye contact**: No known significant effects or critical hazards.
- **Inhalation**: Fatal if inhaled.
- **Skin contact**: No known significant effects or critical hazards.
- **Ingestion**: No known significant effects or critical hazards.

**Symptoms related to the physical, chemical and toxicological characteristics**

- **Eye contact**: No specific data.

- **Inhalation**: Adverse symptoms may include the following:
  - reduced fetal weight
  - increase in fetal deaths
  - skeletal malformations
  - salivation
  - metallic taste
  - Eye irritation
  - respiratory tract irritation
  - coughing
  - pulmonary edema
  - wheezing and breathing difficulties
  - headache
  - fever
  - nausea or vomiting
  - diarrhea
  - abdominal cramps and pain
  - muscle weakness / pain
  - mental confusion or disorientation

- **Skin contact**: Adverse symptoms may include the following:
  - reduced fetal weight
  - increase in fetal deaths
  - skeletal malformations
Section 11. Toxicological information

Ingestion: Adverse symptoms may include the following:
- reduced fetal weight
- increase in fetal deaths
- skeletal malformations

Delayed and immediate effects and also chronic effects from short and long term exposure

**Short term exposure**
- Potential immediate effects: Not available.
- Potential delayed effects: Not available.

**Long term exposure**
- Potential immediate effects: Not available.
- Potential delayed effects: Not available.

**Potential chronic health effects**
Not available.

Conclusion/Summary: Prolonged or repeated exposure to mercury vapor and/or particles may cause mercury poisoning (Mercurialism). Chronic inhalation of mercury affects the nervous system (central nervous system and peripheral nervous system) and leads to neuropsychiatric disturbances.

General: Causes damage to organs through prolonged or repeated exposure.

Carcinogenicity: No known significant effects or critical hazards.

Mutagenicity: May damage the unborn child.

Teratogenicity: No known significant effects or critical hazards.

Developmental effects: No known significant effects or critical hazards.

Fertility effects: No known significant effects or critical hazards.

Numerical measures of toxicity

**Acute toxicity estimates**

<table>
<thead>
<tr>
<th>Route</th>
<th>ATE value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation (dusts and mists)</td>
<td>0.05 mg/l</td>
</tr>
</tbody>
</table>

Section 12. Ecological information

**Toxicity**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>mercury</td>
<td>Acute EC50 2.5 ppb Marine water</td>
<td>Algae - Bacillariophyta</td>
<td>72 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 0.05 ppm Marine water</td>
<td>Algae - Macrocystis pyrifera - Young</td>
<td>4 days</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 0.002 mg/dm3 Marine water</td>
<td>Crustaceans - Fenneropenaeus penicillatus - Larvae</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 4 µg/l Marine water</td>
<td>Fish - Chrysophrys major - Larvae</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Chronic EC10 1 µg/l Fresh water</td>
<td>Algae - Pseudokirchneriella subcapitata - Exponential growth phase</td>
<td>72 hours</td>
</tr>
<tr>
<td>copper</td>
<td>Acute EC50 1100 µg/l Fresh water</td>
<td>Aquatic plants - Lemna minor</td>
<td>4 days</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 2.1 µg/l Fresh water</td>
<td>Daphnia - Daphnia longispina - Juvenile (Fledgling, Hatchling, Weanling)</td>
<td>48 hours</td>
</tr>
</tbody>
</table>

Date of issue/Date of revision: 11/06/2014
Date of previous issue: No previous validation
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United States
Section 12. Ecological information

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogP&lt;sub&gt;ow&lt;/sub&gt;</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>mercury</td>
<td>0.62</td>
<td>-</td>
<td>low</td>
</tr>
</tbody>
</table>

Persistence and degradability
Not available.

Bioaccumulative potential

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogP&lt;sub&gt;ow&lt;/sub&gt;</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>mercury</td>
<td>0.62</td>
<td>-</td>
<td>low</td>
</tr>
</tbody>
</table>

Mobility in soil
Soil/water partition coefficient (K<sub>OC</sub>): Not available.

Other adverse effects
No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods
The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

United States - RCRA Toxic hazardous waste "U" List

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS #</th>
<th>Status</th>
<th>Reference number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mercury</td>
<td>7439-97-6</td>
<td>Listed</td>
<td>U151</td>
</tr>
</tbody>
</table>

Section 14. Transport information

<table>
<thead>
<tr>
<th>UN number</th>
<th>DOT Classification</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN2922</td>
<td>Corrosive liquids, toxic, n.o.s. (mercury). Marine pollutant (mercury, silver, copper) RQ (mercury, silver)</td>
<td>UN2922</td>
<td>UN2922</td>
</tr>
</tbody>
</table>

United States
## Section 14. Transport information

<table>
<thead>
<tr>
<th>Transport hazard class(es)</th>
<th>8 (6.1)</th>
<th>8 (6.1)</th>
<th>8 (6.1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transport within user's premises:</td>
<td>Always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:</td>
<td>Not available.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental hazards</td>
<td>No.</td>
<td>Yes.</td>
<td>No.</td>
</tr>
<tr>
<td>Additional information</td>
<td>The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg or by road, rail, or inland air in non-bulk sizes.</td>
<td>The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.</td>
<td>The environmentally hazardous substance mark may appear if required by other transportation regulations.</td>
</tr>
<tr>
<td>Reportable quantity</td>
<td>2.2472 lbs / 1.0202 kg</td>
<td>The emergency schedules (EmS) are F-A, S-B.</td>
<td>The chemical is not subject to the RQ (reportable quantity) transportation requirements.</td>
</tr>
<tr>
<td>Limited quantity</td>
<td>Yes.</td>
<td>Yes.</td>
<td>Yes.</td>
</tr>
<tr>
<td></td>
<td>Cargo aircraft:</td>
<td>Quantity limitation: 60 L</td>
<td>Cargo Aircraft Only: Quantity limitation: 60 L.</td>
</tr>
<tr>
<td>Special provisions</td>
<td>IB3, T7, TP1, TP28</td>
<td>IMDG Code Segregation group 7 - Heavy metals and their salts (including their organometallic compounds) 11 - Mercury and mercury compounds.</td>
<td>Limited Quantities - Passenger Aircraft: Quantity limitation: 1 L.</td>
</tr>
<tr>
<td></td>
<td>Special provisions</td>
<td>A3, A803</td>
<td>Special provisions: Y841, A3.</td>
</tr>
</tbody>
</table>

### Special precautions for user

Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not available.

## Section 15. Regulatory information

### U.S. Federal regulations

- TSCA 5(a)2 final significant new use rules: mercury
- TSCA 12(b) one-time export: mercury
- United States inventory (TSCA 8b): All components are listed or exempted.
- Clean Water Act (CWA) 307: mercury; silver; copper

### Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)

Listed

Date of issue/Date of revision: 11/06/2014
Date of previous issue: No previous validation
Version: 1

United States
## Section 15. Regulatory information

### Clean Air Act Section 602 Substances
- **Class I Substances**: Not listed
- **Class II Substances**: Not listed

### DEA List I Chemicals (Precursor Chemicals)
- Not listed

### DEA List II Chemicals (Essential Chemicals)
- Not listed

### SARA 302/304
- **Composition/information on ingredients**
  No products were found.

### SARA 304 RQ
- Not applicable.

### SARA 311/312
- **Classification**
  - Immediate (acute) health hazard
  - Delayed (chronic) health hazard

### SARA 313
- **Form R - Reporting requirements**
<table>
<thead>
<tr>
<th>Name</th>
<th>%</th>
<th>Fire hazard</th>
<th>Sudden release of pressure</th>
<th>Reactive</th>
<th>Immediate (acute) health hazard</th>
<th>Delayed (chronic) health hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>copper</td>
<td>30-60</td>
<td>No.</td>
<td>No.</td>
<td>No.</td>
<td>Yes.</td>
<td>No.</td>
</tr>
<tr>
<td>silver</td>
<td>7439-97-6</td>
<td>30-60</td>
<td>7440-22-4</td>
<td>7440-50-8</td>
<td>5-10</td>
<td>5-10</td>
</tr>
<tr>
<td>copper</td>
<td>7439-97-6</td>
<td>30-60</td>
<td>7440-22-4</td>
<td>7440-50-8</td>
<td>5-10</td>
<td>5-10</td>
</tr>
</tbody>
</table>

**Supplier notification**
- mercury
- silver
- copper
- 7439-97-6
- 7440-22-4
- 7440-50-8
- 30-60
- 30-60
- 5-10
- 5-10

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

### State regulations
- **Massachusetts**: The following components are listed: MERCURY; SILVER; TIN; COPPER
- **New York**: The following components are listed: Mercury; Silver; Copper
- **New Jersey**: The following components are listed: MERCURY, ELEMENTAL and INORGANIC COMPOUNDS; SILVER; TIN; COPPER
- **Pennsylvania**: The following components are listed: MERCURY; SILVER; TIN; COPPER FUME
- **California Prop. 65**: WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

### Ingredient name

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Cancer</th>
<th>Reproductive</th>
<th>No significant risk level</th>
<th>Maximum acceptable dosage level</th>
</tr>
</thead>
<tbody>
<tr>
<td>mercury</td>
<td>No.</td>
<td>Yes.</td>
<td>No.</td>
<td>No.</td>
</tr>
</tbody>
</table>

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**Version**: 1
Section 16. Other information

Hazardous Material Information System (U.S.A.)

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Physical hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

Health 3 0 0 Flammability Instability/Reactivity Special

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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

History

Date of issue/Date of revision : 11/06/2014
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Version : 1
Prepared by : IHS
Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
UN = United Nations

References : HCS (U.S.A.)- Hazard Communication Standard
International transport regulations

Indicates information that has changed from previously issued version.

Notice to reader
Section 16. Other information

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.