SAFETY DATA SHEET

SECTION 1. IDENTIFICATION

Product Name: Tin Sulfate Solution

Product Number: All applicable American Elements product codes, e.g. SN-SAT-02-SOL , SN-SAT-03-SOL , SN-SAT-04-SOL , SN-SAT-05-SOL

CAS #: 7488-55-3

Relevant identified uses of the substance: Scientific research and development

Supplier details:
American Elements
10884 Weyburn Ave.
Los Angeles, CA 90024
Tel: +1 310-208-0551
Fax: +1 310-208-0351

Emergency telephone number:
+1 800-424-9300

SECTION 2. HAZARDS IDENTIFICATION

Classification (GHS-US)
Skin Corr. 1A H314
Carc. 1A H350

Signal word (GHS-US): Danger

Hazard statements (GHS-US):
H314 - Causes severe skin burns and eye damage
H350 - May cause cancer

Precautionary statements (GHS-US):
P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P260 - Do not breathe mist/vapors/spray
P264 - Wash hand and other exposed areas thoroughly after handling
P280 - Wear protective gloves/protective clothing/ eye protection/ face protection
P301+P330+P331 - IF SWALLOWED : rinse mouth. Do NOT induce vomiting
P303+P361+P353 - IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing.
Rinse skin with water/shower
P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position 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
P308+P313 - If exposed or concerned:Get medical advice/attention
P337+P313 - If eye irritation persists: Get medical advice/attention
P363 - Wash contaminated clothing before reuse
Other Hazards
Strong inorganic acid mists containing sulfuric acid are classified as a known human carcinogen. This classification does not apply to sulfuric acid solutions.
Unknown acute toxicity (GHS-US)
None of the ingredients in the mixture are of unknown toxicity

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Substance</th>
<th>N/A - product is a mixture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mixture</td>
<td></td>
</tr>
<tr>
<td>Sulfuric Acid</td>
<td>CAS: 7664-93-9</td>
</tr>
<tr>
<td>0-2%</td>
<td>GHS-US</td>
</tr>
<tr>
<td>Skin Corr. 1A, H314</td>
<td></td>
</tr>
<tr>
<td>Carc. 1A, H350</td>
<td></td>
</tr>
<tr>
<td>Sulfuric Acid, Tin(II) Salt</td>
<td>CAS: 7488-55-3</td>
</tr>
<tr>
<td>15-25%</td>
<td>GHS-US</td>
</tr>
<tr>
<td>Not classified</td>
<td></td>
</tr>
</tbody>
</table>

SECTION 4. FIRST AID MEASURES

Swallowing:
Do NOT induce vomiting. Give large quantities of water. Call a physician. Do NOT neutralize the acid. Never give anything by mouth to an unconscious person.
Inhalation:
If inhaled, remove to fresh air immediately and have patient lie down if breathing is difficult. Call a physician.
Eyes/Skin:
IMMEDIATELY (within seconds) flush eyes or skin with plenty of water. Promptly get medical help – apply compresses of iced water if there is a delay before medical treatment

SECTION 5. FIREFIGHTING MEASURES

Flashpoint (oF):
N/A
Flammable limits in air
LOWER: N/A UPPER: N/A
Extinguishing media:
Water, fog, foam
Special firefighting method:
Wear SCBA if fumes or mists are present
Unusual fire and explosion hazards:
Neutralize run-off with lime, soda ash, etc. Hydrogen gas formation is possible.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Steps to be taken if material is released or spilled:
Soak up small spills with sand, clay or distomoeous earth.
Neutralize large spills with lime or soda ash and transfer to a waste water treatment system.
Waste disposal method:
Cleaned-up material may be a RCRA hazardous waste on disposal. Do not flush to surface water or sanitary sewer system. Dispose of in accordance with all local, state, and federal regulations.

SECTION 7. HANDLING AND STORAGE

Precautions to be taken in handling and storage:
Keep out of sun and away from heat, sparks and flame.
Loosen closure carefully.
Other precautions:
Do not wash out container or use it for other purposes; replace closure after each withdrawal.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Sulfuric Acid, Tin(II) Salt
CAS: 7488-55-3
USA ACGIH
ACGIH TWA (mg/m3)
2mg/m3 (Tin)
USA OSHA
OSHA PEL (TWA) (mg/m3)
2mg/m3 (Tin)
Sulfuric Acid
CAS: 7664-93-9
USA ACGIH
ACGIH TWA (mg/m3)
0.2mg/m3
USA OSHA
OSHA PEL (TWA) (mg/m3)
1mg/m3

Appropriate Engineering Controls: Ensure that eyewash station and safety showers are close to the workstation location.
Personal Protective equipment: Avoid all unnecessary exposure.
Hand Protection: Wear protective gloves.
Eye Protection: Chemical goggles or face shield
Skin and body protection: Wear suitable protective clothing.
Respiratory Protection: Not typically required if exposures are below established limits. If needed, use NIOS approved respirator.
Other information: Do not eat, drink or smoke during use.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point (°F @ 760 mmHg): > 212
Specific gravity (H2O = 1 @ 72°F): 1.210
Solubility in water: Complete
Evaporation rate (butyl acetate = 1): > 1

SECTION 10. STABILITY AND REACTIVITY

Stability considerations/Conditions to avoid:
Stable / Water, organic materials (potential violent reaction, heat)
Hazardous polymerization/Conditions to avoid:
Will not occur / None
Incompatibility/Conditions to avoid:
Alkaline solutions, metals. Strong oxidizing, reducing or combustible organic materials.
Hazardous combustion or Decomposition products:
Hazardous gases may be generated on contact with cyanides, sulfides and carbides.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity: Not classified
Sulfuric Acid
CAS: 7664-93-9
LD50 oral rat: 2140 mg/kg
LC50 inhalation rat: 510 mg/m3 (Exposure time: 2 h)
Skin Corrosion/irritation: Causes severe skin burns and eye damage
Serious eye damage/irritation: Causes serious eye damage
Respiratory or Skin sensitization: Not Classified
Germ cell mutagenicity: Not Classified
Carcinogenicity: May cause cancer in mist form
Sulfuric Acid
CAS: 7664-93-9
IARC group
1 - Carcinogenic to humans (only "strong inorganic acid mists containing sulfuric acid")
Reproductive toxicity: Not Classified
Specific target organ toxicity (single exposure): Not classified
Specific target organ toxicity (repeated exposure): Not classified
Aspiration hazard: Not classified
Potential Adverse Human health effects and symptoms: No additional information available
Symptoms/injuries If inhaled: May cause cancer by Inhalation
Symptoms/injuries In case of eye contact: causes serious eye irritation

SECTION 12. ECOLOGICAL INFORMATION

Toxicity
Sulfuric Acid
CAS: 7664-93-9
LC50 fish 1 > 500mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static])
Persistence and degradability:
Not established
Bioaccumulative potential:
Stannous Sulfate Solution
Not established
Sulfuric Acid
BCF fish 1 (no bioaccumulation)
Mobility in soil:
No additional information available
Other adverse effects
Other information: Avoid release to the environment

SECTION 13. DISPOSAL CONSIDERATIONS
Waste disposal recommendations: Dispose in a safe manner in accordance with local, state, and federal regulations
Ecology - waste materials: Avoid release to the environment.

SECTION 14. TRANSPORT INFORMATION
Department of Transportation: Domestic Ground
Proper shipping name: Corrosive Liquid, N.O.S.
Hazard Class: 8
ID & Packing Group Number: UN 1760, PG III
ERG Guide Number: 154

SECTION 15. REGULATORY INFORMATION
SARA Title III Program Section 313 Supplier Notification. This product contains the following toxic chemicals:
Chemical Name CAS Number Concentration
Sulfuric Acid 7664-93-9 < 20%
State Right-to-Know Programs
Pennsylvania: This product contains the following chemicals listed in PA Code Title 34, Hazardous Substance List: Sulfuric Acid
California: This product contains the following compounds subject to the reporting and labeling requirements of Proposition 65: None

SECTION 16. OTHER INFORMATION
Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. American Elements shall not be held liable for any damage resulting from
handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. COPYRIGHT 1997-2019 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.