SAFETY DATA SHEET: SODIUM PERCHLORATE, Monohydrate

1. IDENTIFICATION

Product Name: SODIUM PERCHLORATE, Monohydrate
Synonyms: Perchloric acid sodium salt monohydrate
Formula and Formula Weight: NaClO₄ H₂O  140.46
Integra numbers beginning with: S512.10
Recommended Use: Commercial/industrial use
Restrictions on Use: No information available

INTEGRA Chemical Company
24 Hour Emergency Response: CHEMTREC 800-424-9300 (Outside USA 703-527-3887)
1216 6th Ave N
Kent WA  98032
Phone: 253-479-7000

2. HAZARDS IDENTIFICATION

<table>
<thead>
<tr>
<th>OSHA Classification</th>
<th>Hazard Category</th>
<th>Hazard Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Toxicity - Oral</td>
<td>4</td>
<td>Harmful if swallowed.</td>
</tr>
<tr>
<td>Skin Corrosion/Irritation</td>
<td>2</td>
<td>Causes skin irritation.</td>
</tr>
<tr>
<td>Eye Damage/Irritation</td>
<td>2A</td>
<td>Causes serious eye irritation.</td>
</tr>
<tr>
<td>Specific Target Organ Toxicity (single exposure)</td>
<td>3</td>
<td>May cause respiratory irritation.</td>
</tr>
<tr>
<td>Specific Target Organ Toxicity (repeated exposure)</td>
<td>2</td>
<td>May cause damage to organs (blood) through prolonged or repeated exposure.</td>
</tr>
<tr>
<td>Oxidizing Solids</td>
<td>1</td>
<td>May cause fire or explosion; strong oxidizer.</td>
</tr>
</tbody>
</table>

Signal Word: Danger

Precautionary Statements

Prevention:
- Keep away from heat.
- Keep away from clothing and other combustible materials.
- Take any precaution to avoid mixing with combustibles.
- Do not breathe dust, fume.
- Wash thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Use only outdoors or in a well-ventilated area.
- Wear protective gloves, eye protection, face protection.
- Wear fire, flame resistant, retardant clothing.

Response:
- If swallowed: Call a poison center, doctor if you feel unwell.
- If on skin: Wash with plenty of water.
- If inhaled: Remove person to fresh air and keep comfortable for breathing.
- If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- If on clothing: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.
- Call a poison center, doctor if you feel unwell.
- Specific treatment (see first aid section on this label)
- Rinse mouth.
- If skin irritation occurs: Get medical advice, attention.
- If eye irritation persists: Get medical advice, attention.
- Take off contaminated clothing and wash it before reuse.
- In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

Storage
- Store locked up in a well ventilated place. Keep container tightly closed.

Disposal
- Dispose of contents, container in accordance with all governmental regulations.

Hazards Not Otherwise Classified: No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>Synonyms</th>
<th>CAS #</th>
<th>% Weight</th>
</tr>
</thead>
</table>

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4. FIRST AID MEASURES

Inhalation: Remove person to fresh air.
Eye Contact: Flush eyes with water for at least 15 minutes. Seek immediate medical attention.
Skin Contact: Flush skin with plenty of water. Seek medical attention.
Ingestion: Do not induce vomiting. If victim is conscious, rinse mouth, give water. Never give anything by mouth to an unconscious person. Seek immediate medical attention.
Additional notes: Symptoms and effects include skin, eye, respiratory irritation.

5. FIRE-FIGHTING MEASURES

Extinguishing Media: Water.
Special Equipment and Precautions: Use water to cool nearby containers and structures. Wear full protective equipment, including suitable respiratory protection.
Specific Hazards: Strong oxidizer. Contact with combustible or flammable materials can cause fire or explosion.

6. ACCIDENTAL RELEASE MEASURES

Spill Procedures: Remove all potential ignition sources. Prevent spread of spill. Wear suitable protective equipment. Sweep or scoop into disposal container in a manner that minimizes dust dispersion. Do not use combustible materials.

7. HANDLING AND STORAGE

Storage and Handling: Store locked up in a cool, dry, well-ventilated area dedicated to the storage of oxidizers. Keep away from incompatible materials, especially flammable or combustible materials. Keep containers tightly closed and protect them from physical damage. Protect material from exposure to air and moisture. Deliquescent material.
Keep away from heat.
Keep away from clothing and other combustible materials.
Take any precaution to avoid mixing with combustibles.
Do not breathe dust, fume.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Wear protective gloves, eye protection, face protection.
Wear protective gloves, eye protection, face protection.
Wear fire, flame resistant, retardant clothing.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

OSHA & ACGIH Exposure Limits:
Sodium perchlorate, monohydrate None identified
Engineering Controls: Use adequate general or local exhaust ventilation to keep fume and/or dust levels as low as possible.
Respiratory Protection: If use generates annoying or irritating dusts, mists or vapors, use a NIOSH approved respirator with a particulate filter.
Skin/Eye Protective Equipment: Safety goggles, face shield, chemical-resistant gloves and protective clothing appropriate for the risk of exposure.
Facilities storing or utilizing this material should have readily accessible eyewash stations and safety showers.
Select respirators and other safety equipment in accordance with regulations and based upon the particular conditions of use and risk of exposure. Always use safe chemical-handling and good industrial hygiene practices.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: White crystalline powder or granules
Odor: No odor
Odor Threshold: Not available
pH: 6 - 8 (for a 5% solution)
Melting/Freezing Point: Not available
Initial Boiling Point and Boiling Range: Not available
Flash Point: Not available
Evaporation Rate: Not available
Flammability: Not available
Flammable or Explosive Limits (% by volume in air) Upper: Not available Lower: Not available
Vapor Pressure: Not available
Vapor Density: Not available
Relative Density: 2.02 g/cc
Solubility: Very soluble in water
Partition Coefficient: n-octanol/water Not available
Auto-Ignition Temperature: Not available
Decomposition Temperature: 130
10. STABILITY AND REACTIVITY

Viscosity: Not available
Reactivity: No information available
Stability: Stable
Possibility of Hazardous Reactions: Hazardous polymerization will not occur
Conditions to Avoid: Heat, sparks and open flame.
Incompatibles: Incompatible with strong acids. Reducing agents, organic or combustible materials, finely powdered metals, magnesium.

11. TOXICOLOGICAL INFORMATION

Effects of Over Exposure:
Inhalation: Inhalation may irritate the nose, throat and upper respiratory tract.
Skin Contact: Contact may cause skin irritation.
Eye Contact: Contact may be irritating to the eyes.
Ingestion: None identified
Chronic Effects: None identified
Target Organs: Blood
Additional Effects: None identified
Reproductive Effects: None identified
Carcinogenicity: None identified
Toxicity Data:

Sodium perchlorate, monohydrate

LD50 (oral, rat) - as sodium perchlorate anhydrous

2100 mg/kg

12. ECOLOGICAL INFORMATION

Aquatic Toxicity Data: No information available
Terrestrial Toxicity Data: No information available

Sodium perchlorate, monohydrate

Persistence and degradability: No information available
Bioaccumulative potential: No information available
Mobility in soil: No information available
Other adverse effects: No information available

13. DISPOSAL CONSIDERATIONS

Disposal Procedures: Dispose of material and containers in accordance with all local, state and federal regulations.

14. TRANSPORTATION INFORMATION

This product is a regulated material for domestic ground transporation, per CFR Title 49.

UN Number: UN1502
Proper Shipping Name: Sodium perchlorate
Packing Group: II
Hazard Class: 5.1
Environmental hazards: No information available
Special precautions: No information available
Bulk transport: No information available

15. REGULATORY INFORMATION

Sodium perchlorate, monohydrate is listed in the TSCA inventory.

16. OTHER INFORMATION


NE = Not established, NA = Not applicable or Not available

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***** END OF SDS *****