Material Safety Data Sheet

Section 1. Chemical Product and Company Identification

<table>
<thead>
<tr>
<th>NFPA</th>
<th>HMIS</th>
<th>Personal Protective Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>Not applicable.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>See Section 15.</td>
</tr>
</tbody>
</table>

Section 2. Composition and Information on Ingredients

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS #</th>
<th>TWA (mg/m³)</th>
<th>STEL (mg/m³)</th>
<th>CEIL (mg/m³)</th>
<th>% by Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Water</td>
<td>7732-18-5</td>
<td></td>
<td></td>
<td></td>
<td>98.7-98.7</td>
</tr>
<tr>
<td>2) Potassium Iodide</td>
<td>7681-11-0</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>3) Iodine</td>
<td>7553-56-2</td>
<td>1</td>
<td>0.1</td>
<td>1</td>
<td>0.317</td>
</tr>
<tr>
<td>4) Hydrogen chloride</td>
<td>7647-01-0</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>0.006-0.0114</td>
</tr>
</tbody>
</table>

Toxicological Data on Ingredients

- Iodine: ORAL (LD50): Acute: 14000 mg/kg [Rat].
- Potassium Iodide: LD50: Not available.
- LC50: Not available.
**Section 3. Hazards Identification**

**Potential Acute Health Effects**
Hazardous in case of skin contact (irritant), of eye contact (irritant). Slightly hazardous in case of ingestion, inhalation.

**Potential Chronic Health Effects**
- **CARCINOGENIC EFFECTS:** Not available.
- **MUTAGENIC EFFECTS:** Not available.
- **TERATOGENIC EFFECTS:** Not available.
- **DEVELOPMENTAL TOXICITY:** Not available.

The substance is toxic to thyroid.
The substance may be toxic to blood, kidneys, liver, cardiovascular system, upper respiratory tract, skin, eyes, central nervous system (CNS).
Repeated or prolonged exposure to the substance can produce target organs damage.

**Section 4. First Aid Measures**

**Eye Contact**
Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention.

**Skin Contact**
In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

**Serious Skin Contact**
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

**Inhalation**
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**Serious Inhalation**
Not available.

**Ingestion**
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

**Serious Ingestion**
Not available.

**Section 5. Fire and Explosion Data**

**Flammability of the Product**
Non-flammable.

**Auto-Ignition Temperature**
Not applicable.

**Flash Points**
Not applicable.

**Flammable Limits**
Not applicable.

**Products of Combustion**
Not available.

**Fire Hazards in Presence of Various Substances**
Not applicable.

**Explosion Hazards in Presence of Various Substances**
Risks of explosion of the product in presence of mechanical impact: Not available.
Risks of explosion of the product in presence of static discharge: Not available.

**Fire Fighting Media and Instructions**
Not applicable.

**Special Remarks on Fire Hazards**
Not available.

**Special Remarks on Explosion Hazards**
Not available.

Continued on Next Page
Section 6. Accidental Release Measures

**Small Spill**  Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

**Large Spill**  Absorb with an inert material and put the spilled material in an appropriate waste disposal. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7. Handling and Storage

**Precautions**  Do not breathe gas/fumes/vapor/spray. Wear suitable protective clothing. If you feel unwell, seek medical attention and show the label when possible. Avoid contact with skin and eyes.

**Storage**  Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8. Exposure Controls/Personal Protection

**Engineering Controls**  Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

**Personal Protection**  Safety glasses or Splash goggles. Synthetic apron. Gloves (impervious).

**Personal Protection in Case of a Large Spill**  Splash goggles. Full suit. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

**Exposure Limits**  
- Iodine  
  - STEL: 1 (mg/m³) from ACGIH (TLV) [United States]  
  - STEL: 0.1 (ppm) from ACGIH (TLV) [United States]  
  - TWA: 1 CEIL: 1 (mg/m³) from OSHA (PEL) [United States]  
  - TWA: 0.1 CEIL: 0.1 (ppm) from OSHA (PEL) [United States]  
  - STEL: 0.1 (ppm) [United Kingdom (UK)]  
  - STEL: 1.1 (mg/m³) [United Kingdom (UK)]

Consult local authorities for acceptable exposure limits.

Section 9. Physical and Chemical Properties

**Physical state and appearance**  Liquid.

**Molecular Weight**  Not applicable.

**pH (1% soln/water)**  Not available

**Boiling Point**  The lowest known value is 100°C (212°F) (Water).

**Melting Point**  Not available.

**Critical Temperature**  Not available.

**Specific Gravity**  Weighted average: 1.01 (Water = 1)

**Vapor Pressure**  The highest known value is 2.3 kPa (@20°C) (Water).

**Vapor Density**  The highest known value is 0.62 (Air = 1) (Water).

**Volatility**  Not available.

**Odor**  Not available.

**Taste**  Not available.

**Color**  Clear Brown. (Dark.)

**Odor Threshold**  Not available.

**Water/Oil Dist. Coeff.**  Not available.

**Ionicity (in Water)**  Not available.

**Dispersion Properties**  See solubility in water, methanol, diethyl ether, acetone.

Continued on Next Page
**Section 10. Stability and Reactivity Data**

<table>
<thead>
<tr>
<th><strong>Stability</strong></th>
<th>The product is stable.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Instability</strong></td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Temperature</strong></td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Conditions</strong></td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Incompatibility</strong></td>
<td>Slightly reactive to reactive with reducing agents, metals.</td>
</tr>
<tr>
<td></td>
<td>It may be reactive with oxidizing agents, organic materials, acids.</td>
</tr>
<tr>
<td><strong>Corrosivity</strong></td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Reactivity</strong></td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Polymerization</strong></td>
<td>Will not occur.</td>
</tr>
</tbody>
</table>

**Section 11. Toxicological Information**

<table>
<thead>
<tr>
<th><strong>Routes of Entry</strong></th>
<th>Absorbed through skin. Eye contact.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Toxicity to Animals</strong></td>
<td>LD50: Not available.</td>
</tr>
<tr>
<td></td>
<td>LC50: Not available.</td>
</tr>
<tr>
<td><strong>Chronic Effects on Humans</strong></td>
<td>Contains material which may cause damage to the following organs: blood, kidneys, liver, cardiovascular system, upper respiratory tract, skin, eyes, central nervous system (CNS).</td>
</tr>
<tr>
<td><strong>Other Toxic Effects on Humans</strong></td>
<td>Hazardous in case of skin contact (irritant).</td>
</tr>
<tr>
<td></td>
<td>Slightly hazardous in case of ingestion, of inhalation.</td>
</tr>
<tr>
<td><strong>Special Remarks on Toxicity to Animals</strong></td>
<td>Lowest Published Lethal Dose:</td>
</tr>
<tr>
<td></td>
<td>LDL [Mouse] - Route: Oral; Dose: 1862 mg/kg</td>
</tr>
<tr>
<td></td>
<td>LDL [Rabbit] - Route: Oral; Dose: 916 mg/kg (Potassium Iodide)</td>
</tr>
<tr>
<td><strong>Special Remarks on Chronic Effects on Humans</strong></td>
<td>May cause adverse reproductive effects and birth defects based on animal data. May affect genetic material based on animal data (Potassium iodide)</td>
</tr>
<tr>
<td><strong>Special Remarks on Other Toxic Effects on Humans</strong></td>
<td>Acute Potential Health Effects:</td>
</tr>
<tr>
<td></td>
<td>Skin: May cause skin irritation.</td>
</tr>
<tr>
<td></td>
<td>Eyes: May cause eye irritation.</td>
</tr>
<tr>
<td></td>
<td>Inhalation: May cause respiratory tract and mucous membrane irritation and a productive cough. May cause pulmonary edema and inflammation of the tonsils.</td>
</tr>
<tr>
<td></td>
<td>Ingestion: Causes gastrointestinal tract irritation with nausea, vomiting and diarrhea. May affect behavior (somnolence, muscle weakness), respiration (dyspnea). Serum-sickness type of hypersensitivity such as fever, arthralgia, lymph node enlargement, and eosinophilia may appear. Thrombotic thrombocytopenic purpura, and fatal periarteritis nodosa attributed to hypersensitivity to iodide has been described. Chronic Potential Health Effects: Can lead to iodism characterized by salivation, nasal discharge, sneezing, conjunctivitis, fever, headache, laryngitis, bronchitis, stomatitis, parotitis, anemia, and skin rashes. Chronic ingestion may also affect metabolism (anorexia), and thyroid gland (hypothyroidism, goiter). Furthermore, chronic ingestion of iodides (in animals) during pregnancy has resulted in fetal deaths, severe goiter and cretinoid appearance of the newborn. (Potassium iodide)</td>
</tr>
</tbody>
</table>
**Section 12. Ecological Information**

Ecotoxicity  
Not available.

**BOD5 and COD**  
Not available.

**Products of Biodegradation**  
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

**Toxicity of the Products of Biodegradation**  
Not available.

**Special Remarks on the Products of Biodegradation**  
Not available.

**Section 13. Disposal Considerations**

**Waste Disposal**  
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

**Section 14. Transport Information**

**DOT Classification**  
Not a DOT controlled material (United States).

**Identification**  
Not applicable.

**Special Provisions for Transport**  
Not applicable.

**DOT(Pictograms)**

![No Danger Pictogram]

**Section 15. Other Regulatory Information and Pictograms**

**Federal and State Regulations**

- Connecticut hazardous material survey: Hydrochloric acid
- Illinois toxic substances disclosure to employee act: Iodine; Hydrochloric acid
- Illinois chemical safety act: Hydrochloric acid
- New York release reporting list: Hydrochloric acid
- Rhode Island RTK hazardous substances: Iodine; Hydrochloric acid
- Pennsylvania RTK: Iodine; Hydrochloric acid
- Minnesota: Iodine; Hydrochloric acid
- Massachusetts RTK: Iodine; Hydrochloric acid
- Massachusetts spill list: Iodine; Hydrochloric acid
- New Jersey spill list: Iodine; Hydrochloric acid
- New Jersey spill list: Hydrochloric acid
- Louisiana RTK reporting list: Hydrochloric acid
- Louisiana spill reporting: Hydrochloric acid
- California Director's List of Hazardous Substances: Iodine; Hydrochloric acid
- TSCA 8(b) inventory: Iodine; Potassium Iodide; Hydrochloric acid; Water
- TSCA 4(a) proposed test rules: Hydrochloric acid
- SARA 302/304/311/312 extremely hazardous substances: Hydrochloric acid
- CERCLA: Hazardous substances: Hydrochloric acid: 5000 lbs. (2268 kg).

**California Proposition 65 Warnings**

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: No products were found.

California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: No products were found.

**Other Regulations**


**Other Classifications**

WHMIS (Canada)  
CLASS D2B: Material causing other toxic effects (TOXIC).
Iodine Solution, 0.025N

Page Number: 6

R36/38- Irritating to eyes and skin. S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S37- Wear suitable gloves.

HMIS (U.S.A.)

| Health Hazard | 2 |
| Fire Hazard   | 0 |
| Reactivity    | 0 |
| Personal Protection | C |

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

| Health | 1 |
| Reactivity | 0 |

WHMIS (Canada) (Pictograms)

DSCL (Europe) (Pictograms)

TDG (Canada) (Pictograms)

ADR (Europe) (Pictograms)

Protective Equipment

Gloves.

Synthetic apron.

Wear appropriate respirator when ventilation is inadequate.

Splash goggles.

Continued on Next Page
### Section 16. Other Information

<table>
<thead>
<tr>
<th>MSDS Code</th>
<th>I112S</th>
</tr>
</thead>
<tbody>
<tr>
<td>References</td>
<td>Not available.</td>
</tr>
<tr>
<td>Other Special Considerations</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

Validated by Sonia Owen on 2/24/2009.  
Verified by Sonia Owen.  

CALL (310) 516-8000

**Notice to Reader**

All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, Spectrum Quality Products, Inc. assumes no responsibility for the completeness or accuracy of the information contained herein.