1. IDENTIFICATION

Product identifier
Product Name
Pyridinium Tribromide

Other means of identification
Product Code
6950
UN/ID no.
UN3261
Synonyms
Pyridine perbromidehydrobromide, Pyridinium bromide perbromide, Pyridine hydrobromide

Recommended use of the chemical and restrictions on use
Recommended Use
Laboratory chemicals.
Uses advised against
No information available

Details of the supplier of the safety data sheet
Manufacturer Address
Harrell Industries, Inc.
2495 Commerce Drive
Rock Hill, SC 29730

www.harrellindustries.com

Emergency telephone number
Company Phone Number
803-327-6335
Fax Number
803-327-7808
24 Hour Emergency Phone Number
800 633-8253 (PERS)

2. HAZARDS IDENTIFICATION

Classification
OSHA Regulatory Status
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

<table>
<thead>
<tr>
<th>Risk Phrases</th>
<th>Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin corrosion/irritation</td>
<td>Category 1</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Category 1</td>
</tr>
</tbody>
</table>

Label elements

Emergency Overview

Danger

Hazard statements
Causes severe skin burns and eye damage
May cause respiratory irritation
Causes serious eye irritation
Harmful if swallowed
Harmful in contact with skin
Harmful if inhaled
Causes serious eye damage
Precautionary Statements - Prevention
Avoid breathing dust/fume/gas/mist/vapors/spray
Wash skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection

Corrosive. Redness, pain, blurred vision can occur. Can cause burns and permanent eye damage. May cause blindness. Rapidly absorbed through the skin with systematic poisoning effects to follow. This material is extremely destructive to tissue of the mucus membranes and upper respiratory tract, eyes, and skin. Inhalation may result in spasm, inflammation and edema of the larynx and bronchi as well as chemical pneumonitis and pulmonary edema. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.
Poison. Symptoms may include burning pain in mouth and throat, abdominal pain, nausea, vomiting, headache, dizziness, muscular weakness, central nervous system effects, increase in heart rate, irregular breathing, coma, and possibly death.

Hazards not otherwise classified (HNOC)
Not applicable

Other Information
Not applicable
Unknown acute toxicity No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Substance</th>
<th>Synonyms</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pyridine perbromidehydrobromide, Pyridinium bromide perbromide, Pyridine hydrobromide perbromide.</td>
</tr>
<tr>
<td>Formula</td>
<td>C5H5N.HBr.Br2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No.</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pyridinium tribromide</td>
<td>39416-48-3</td>
<td>98 min</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Description of first aid measures

Eye contact
Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention.

Skin contact
Immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician immediately. Discard contaminated shoes. Wash contaminated clothing before reuse.

Inhalation
Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
Ingestion
Wash out mouth with water given the person is conscious. Do NOT induce vomiting. Call a physician immediately.

Most important symptoms and effects, both acute and delayed
Symptoms
No information available.

Indication of any immediate medical attention and special treatment needed
Note to physicians
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use CO2, dry chemical, or foam.

Unsuitable extinguishing media
DO NOT USE WATER.

Specific hazards arising from the chemical
No information available.

Hazardous combustion products
Water reactive material. Reacts with water to liberate flammable and/or explosive gas.

Explosion data
Sensitivity to Mechanical Impact
None.

Sensitivity to Static Discharge
None.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Emits toxic fumes under fire conditions.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions
Evacuate area! Ventilate area of spill. Wear appropriate personal protective equipment. Cover with dry lime or soda ash, pick up, and keep in a closed container and hold for waste disposal. Wash spill site after material pickup is complete. Do not flush to sewer!

Environmental precautions
See Section 12 for additional ecological information.

Methods and material for containment and cleaning up

Methods for containment
Keep in suitable, closed containers for disposal.

Methods for cleaning up
Dry lime or soda ash may be used to neutralize spills.

7. HANDLING AND STORAGE

Precautions for safe handling
Advice on safe handling
DO NOT ALLOW CONTACT WITH WATER! Keep in a tightly closed container. Store under nitrogen. Store in a cool, dry, ventilated area away from sources of heat or ignition. Protect against physical damage. Store separately from reactive or combustible materials, and out of direct sunlight. Containers of this material may be hazardous when empty since they retain product residues; observe all warnings and precautions listed for the product. CORROSIVE. POISON.

Conditions for safe storage, including any incompatibilities
Storage Conditions
Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible materials

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines
This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Appropriate engineering controls

Engineering Controls
Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection
Use chemical safety goggles and/or full face shield. Maintain eye wash fountain and quick-drench facilities in work area.

Skin and body protection
Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact. Wear protective butyl rubber gloves. Wear protective Neoprene™ gloves.

Respiratory protection
If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations
Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Solid</td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>Form solid</td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Odor threshold</td>
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<td></td>
</tr>
<tr>
<td>pH</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Melting point / freezing point</td>
<td>130 °C / 266 °F</td>
<td></td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
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<td></td>
</tr>
<tr>
<td>Flash point</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Flammability Limit in Air</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Upper flammability limit:</td>
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<td></td>
</tr>
<tr>
<td>Lower flammability limit:</td>
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<td></td>
</tr>
<tr>
<td>Vapor pressure</td>
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<td></td>
</tr>
<tr>
<td>Vapor density</td>
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<td></td>
</tr>
<tr>
<td>Relative density</td>
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<td></td>
</tr>
<tr>
<td>Water solubility</td>
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<td></td>
</tr>
<tr>
<td>Solubility in other solvents</td>
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<td></td>
</tr>
<tr>
<td>Partition coefficient</td>
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<td></td>
</tr>
<tr>
<td>Autoignition temperature</td>
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<td></td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Kinematic viscosity</td>
<td>No information available</td>
<td></td>
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<tr>
<td>Dynamic viscosity</td>
<td>No information available</td>
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</tbody>
</table>
Explosive properties  No information available
Oxidizing properties No information available

Other Information
Softening point No information available
Molecular weight 319.82 g/mol
VOC Content (%) No information available
Density No information available
Bulk density No information available

10. STABILITY AND REACTIVITY

Reactivity
No data available

Chemical stability
Stable under ordinary conditions of use and storage.
Possibility of Hazardous Reactions
None under normal processing.
    Hazardous polymerization Will not occur.

Conditions to avoid
Incompatible materials
Hazardous Decomposition Products
Hydrogen bromide gas. phosphorus oxides. Phosphine.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information No data available
    Inhalation Harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
    Eye contact Causes eye burns.
    Skin contact Cause skin burns. Harmful if absorbed through the skin.
    Ingestion May be harmful if swallowed. Causes burns.

Information on toxicological effects

Symptoms Cough, shortness of breath, headache, nausea, vomiting.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available.
Germ cell mutagenicity No information available.
Carcinogenicity No information available.
Reproductive toxicity No information available.
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Aspiration hazard No information available.

Numerical measures of toxicity - Product Information
This material is not expected to be toxic to aquatic life.

**Ecotoxicity**

100% of the mixture consists of components(s) of unknown hazards to the aquatic environment

**Persistence and degradability**

No information available.

**Bioaccumulation**

No information available.

**Other adverse effects**

No information available

### 13. DISPOSAL CONSIDERATIONS

**Waste treatment methods**

**Disposal of wastes**

Disposal should be in accordance with applicable regional, national and local laws and regulations. Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility.

**Contaminated packaging**

Do not reuse container.

### 14. TRANSPORT INFORMATION

**DOT**

Regulated

<table>
<thead>
<tr>
<th>UN/ID no.</th>
<th>Proper shipping name</th>
<th>Hazard Class</th>
<th>Packing Group</th>
<th>Marine pollutant</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN3261</td>
<td>Corrosive Solid, Acidic, Organic, N.O.S., (Pyridinium Tribromide)</td>
<td>8</td>
<td>II</td>
<td>This material is not expected to be toxic to aquatic life.</td>
</tr>
</tbody>
</table>

**TDG**

Regulated

<table>
<thead>
<tr>
<th>UN/ID no.</th>
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<td>II</td>
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</table>

**MEX**

Regulated

<table>
<thead>
<tr>
<th>UN/ID no.</th>
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<th>Hazard Class</th>
<th>Packing Group</th>
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<tbody>
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<td>8</td>
<td>II</td>
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</tbody>
</table>

**ICAO (air)**

Regulated

<table>
<thead>
<tr>
<th>UN/ID no.</th>
<th>Proper shipping name</th>
<th>Hazard Class</th>
<th>Packing Group</th>
</tr>
</thead>
<tbody>
<tr>
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<td>8</td>
<td>II</td>
</tr>
</tbody>
</table>

**IATA**

Regulated

<table>
<thead>
<tr>
<th>UN/ID no.</th>
<th>Proper shipping name</th>
<th>Hazard Class</th>
<th>Packing Group</th>
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<tbody>
<tr>
<td>UN3261</td>
<td>Corrosive Solid, Acidic, Organic, N.O.S., (Pyridinium Tribromide)</td>
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</tr>
</tbody>
</table>

**IMDG**

Regulated

<table>
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<tr>
<th>UN/ID no.</th>
<th>Proper shipping name</th>
<th>Hazard Class</th>
<th>Packing Group</th>
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</thead>
<tbody>
<tr>
<td>UN3261</td>
<td>Corrosive Solid, Acidic, Organic, N.O.S., (Pyridinium Tribromide)</td>
<td>8</td>
<td>II</td>
</tr>
</tbody>
</table>
15. REGULATORY INFORMATION

International Inventories

<table>
<thead>
<tr>
<th>Legend:</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSCA - United States Toxic Substances Control Act Section 8(b) Inventory</td>
</tr>
<tr>
<td>DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List</td>
</tr>
<tr>
<td>EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances</td>
</tr>
<tr>
<td>ENCS - Japan Existing and New Chemical Substances</td>
</tr>
<tr>
<td>IECSC - China Inventory of Existing Chemical Substances</td>
</tr>
<tr>
<td>KECL - Korean Existing and Evaluated Chemical Substances</td>
</tr>
<tr>
<td>PICCS - Philippines Inventory of Chemicals and Chemical Substances</td>
</tr>
<tr>
<td>AICS - Australian Inventory of Chemical Substances</td>
</tr>
</tbody>
</table>

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Yes/No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute health hazard</td>
<td>Yes</td>
</tr>
<tr>
<td>Chronic Health Hazard</td>
<td>No</td>
</tr>
<tr>
<td>Fire hazard</td>
<td>No</td>
</tr>
<tr>
<td>Sudden release of pressure hazard</td>
<td>No</td>
</tr>
<tr>
<td>Reactive Hazard</td>
<td>No</td>
</tr>
</tbody>
</table>

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals

**U.S. State Right-to-Know Regulations**

**U.S. EPA Label Information**  
EPA Pesticide Registration Number  
Not applicable

### 16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health hazards</th>
<th>Flammability</th>
<th>Instability</th>
<th>Physical and Chemical Properties - Physical hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>HMIS</td>
<td>Health hazards</td>
<td>Flammability</td>
<td>Physical hazards</td>
<td>Personal protection</td>
</tr>
</tbody>
</table>

**Issue Date**  
17-Apr-2015

**Revision Date**  
03-Jun-2015

**Revision Note**  
No information available

**Disclaimer**  
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet