

Issue Date 17-Apr-2015

Revision Date 03-Jun-2015

Version 2

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 perbromide

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)

Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1

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



Danger! Corrosive! Causes severe skin and eye burns.

Appearance Form solid

Physical state Solid

Odor No information available

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

Substance

Synonyms

Pyridine perbromidehydrobromide, Pyridinium bromide perbromide, Pyridine hydrobromide perbromide.

Formula

C₅H₅N.HBr.Br₂

Chemical Name	CAS No.	Weight-%
Pyridinium tribromide	39416-48-3	98 min

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

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	Water spray. Strong bases. Potassium. Strong oxidizing agents. Alcohols. Acids.

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.
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Appropriate engineering controls

Engineering Controls	Showers Eyewash stations Ventilation systems.
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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.
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9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Solid	Odor	No information available
Appearance	Form solid	Odor threshold	No information available
Color	No information available		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No information available	
Melting point / freezing point	130 °C / 266 °F	
Boiling point / boiling range	No information available	
Flash point	No information available	
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Relative density	No information available	
Water solubility	No information available	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	

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.
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Conditions to avoid

moisture. Incompatible materials. Heat.

Incompatible materials

Water spray. Strong bases. Potassium. Strong oxidizing agents. Alcohols. Acids.

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.
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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

12. ECOLOGICAL INFORMATION

This material is not expected to be toxic to aquatic life.

Ecotoxicity

100% of the mixture consists of component(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
UN/ID no. UN3261
Proper shipping name Corrosive Solid, Acidic, Organic, N.O.S., (Pyridinium Tribromide)
Hazard Class 8
Packing Group II
Marine pollutant This material is not expected to be toxic to aquatic life.

TDG

Regulated
UN/ID no. UN3261
Proper shipping name Corrosive Solid, Acidic, Organic, N.O.S., (Pyridinium Tribromide)
Hazard Class 8
Packing Group II

MEX

Regulated
UN/ID no. UN3261
Proper shipping name Corrosive Solid, Acidic, Organic, N.O.S., (Pyridinium Tribromide)
Hazard Class 8
Packing Group II

ICAO (air)

Regulated
Proper shipping name Corrosive Solid, Acidic, Organic, N.O.S., (Pyridinium Tribromide)
Hazard Class 8

IATA

Regulated
UN/ID no. UN3261
Proper shipping name Corrosive Solid, Acidic, Organic, N.O.S., (Pyridinium Tribromide)
Hazard Class 8
Packing Group II

IMDG

Regulated
UN/ID no. UN3261
Proper shipping name Corrosive Solid, Acidic, Organic, N.O.S., (Pyridinium Tribromide)
Hazard Class 8
Packing Group II

RID	Regulated
UN/ID no.	UN3261
Proper shipping name	Corrosive Solid, Acidic, Organic, N.O.S., (Pyridinium Tribromide)
Hazard Class	8
Packing Group	II
ADR	Regulated
UN/ID no.	UN3261
Proper shipping name	Corrosive Solid, Acidic, Organic, N.O.S., (Pyridinium Tribromide)
Hazard Class	8
Packing Group	II
ADN	Regulated
UN Number	UN3261
Proper shipping name	Corrosive Solid, Acidic, Organic, N.O.S., (Pyridinium Tribromide)
Hazard Class	8
Packing Group	II

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Does not comply
IECSC	Complies
KECL	Does not comply
PICCS	Complies
AICS	Does not comply

Legend:

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

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

Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

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

<u>NFPA</u>	Health hazards 3	Flammability 0	Instability 0	Physical and Chemical Properties -
<u>HMIS</u>	Health hazards 3	Flammability 0	Physical hazards 0	Personal protection X

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