

# Safety Data Sheet

## Periodic Acid, 0.5% Aqueous

### Section 1 - Chemical Product and Company Identification

**SDS Name:** Periodic Acid, 0.5% Aqueous

**Catalog Numbers:** SO-391, A-117-1, E-312-3, F-355-4, F-356-3, F-396-1, K-672-3

**Company Identification:** Transene Company, Inc., DBA ROWLEY BIOCHEMICAL, Inc.  
10 ELECTRONICS AVENUE  
DANVERS, MA 01923

**For information, call:** 978-739-4883

**Emergency Number:** 800-424-9300

**For CHEMTREC assistance, call:** 800-424-9300

### Section 2 - Hazards Identification

#### GHS Classifications

H290-Corrosive to metals: 1

H314-Skin corrosion/irritation: 1A

H318-Serious eye damage/eye irritation: 1

#### Pictograms or Hazard symbols and Hazard statement(s):



Signal Word: Danger

#### Hazard Statements:

H290-May be corrosive to metals

H314-Causes severe skin burns and eye damage

H318-Causes serious eye damage

#### Precautionary Statements:

P234-Keep only in original packaging.

P260-Do not breathe dusts or mists.

P264-Wash 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): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P304+P340-If inhaled: Remove person to fresh air and keep 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.  
P310-Immediately call a Poison Center/doctor.  
P363-Wash contaminated clothing before reuse.  
P390-Absorb spillage to prevent material damage.  
P405-Store locked up.  
P406-Store in a corrosion resistant container with a resistant inner liner.  
P501-Dispose of contents/container in accordance with local/regional/national/international regulations.

### Section 3 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent
10450-60-9	Periodic Acid	0.5 w/v
7732-18-5	Water	Balance

### Section 4 - First Aid Measures

**Eye Exposure:** In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Get immediate medical attention.

**Dermal Exposure:** In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention.

**Oral Exposure:** If swallowed, get immediate medical advice. Do NOT induce vomiting. Rinse mouth.

**Inhalation Exposure:** If inhaled, remove to fresh air. If breathing becomes difficult, call a physician immediately.

### Section 5 - Fire Fighting Measures

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating gases may be generated by thermal decomposition or combustion.

**Extinguishing Media:** Use dry chemical, carbon dioxide, dry sand, water spray, or alcohol-resistant foam.

**Hazardous Combustion Products:** Hydrogen iodide, halogenated compounds, iodine, irritating and toxic fumes and gases.

**Flash Point:** Not available

**Auto ignition Temperature:** Not available

**Explosion Limits, Lower:** Not available

**Upper:** Not available

**NFPA Rating:** (estimated) Health: 2; Flammability: 0; Instability: 0

Note: Periodic Acid is an oxidizer. Contact with combustible/organic material may cause fire. May ignite combustibles (wood paper, oil, clothing, etc). Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air.

## Section 6 - Accidental Release Measures

### **Procedure(s) of Personal Precaution(s):**

Wear personal protective equipment. Do not ingest or inhale. Do not get on skin or clothing. Do not get in eyes. Ensure adequate ventilation.

**Methods for Cleaning up:** Absorb with sand, earth, or vermiculite. Carefully sweep up and containerize for proper disposal. Do not release to the environment. Do not release to drains.

## Section 7 - Handling and Storage

Use care when handling. Wear personal protective equipment. Wash thoroughly after handling. Ensure adequate ventilation. Do not ingest or inhale. Do not get on skin or clothing. Do not get in eyes. Keep in tightly closed and non-metal container. Store in a cool, dry, and well-ventilated area. Protect from direct sunlight. Keep away from combustible materials. Keep away from incompatible materials.

## Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:** Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

### **Personal Protective Equipment**

**Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin:** Wear appropriate protective gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Respirators:** A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever

workplace conditions warrant a respirator's use.

**Exposure Limits:**

Chemical Name	ACGIH - TLV	NIOSH - IDLH	OSHA - Final PELs
Periodic Acid CAS#10450-60-9	Not listed	Not listed	Not listed

Section 9 - Physical and Chemical Properties

**Physical State:** Liquid

**Appearance:** Clear, Colorless

**Odor:** Odorless

**Vapor Pressure:** Not available

**Odor Threshold:** Not available

**Vapor Density:** Not available

**pH:** 1.80-2.00

**Relative Density:** Not available

**Melting point/freezing point:** Not available

**Solubility:** Soluble in water

**Boiling Point:** Not available

**Flash Point:** Not available

**Evaporation Rate:** Not available

**Flammability (solid, gas):** Not available

**Partition coefficient: n-octanol/water:** Not available

**Autoignition Temperature:** Not available

**Decomposition Temperature:** Not available

**Viscosity:** Not available

**Specific Gravity/Density:** Not available

Section 10 - Stability and Reactivity

**Chemical Stability:** Stable under recommended conditions of use and storage. Oxidizer: contact with combustible/organic material may cause fire.

**Conditions to Avoid:** Incompatible materials, ignition sources, and excess heat. Direct sunlight.

**Incompatibilities with Other Materials:** Strong oxidizing agents, strong bases, strong reducing agents, organic materials, combustible materials, powdered metals, metals, alkalis, and dimethyl sulfoxide.

**Hazardous Decomposition Products:** Hydrogen iodide, halogenated compounds, iodine, irritating and toxic fumes and gases.

Note: Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air.

## Section 11 - Toxicological Information

**CAS#10450-60-9 Periodic Acid:**

LD50 Oral: Not available

LD50 Dermal: Not available

LC50 Inhalation: Not available

**Carcinogenicity:** Periodic Acid CAS#10450-60-9 is not listed by IARC, NTP, ACGIH, OSHA, or California Prop. 65.

**Information on the likely routes of exposure:** Routes of entry anticipated: oral, dermal, inhalation, and eye.

**Epidemiology:** Not available.

**Teratogenicity:** Not available.

**Reproductive Effects:** Not available.

**Developmental Effects:** Not available.

**Neurotoxicity:** Not available.

**Mutagenicity:** Not available.

**Specific Target Organ Toxicity, Single Exposure:** Not available.

**Specific Target Organ Toxicity, Repeated Exposure:** Not available.

**Symptoms associated with exposure:** Causes serious eye damage including pain, watering, and redness. Skin contact causes severe burns which may include pain, irritation, redness, and blistering. Ingestion causes burns to the digestive tract and may cause stomach pains, severe swelling, severe damage to the delicate tissue, and possible perforation. Destructive to mucous membranes and respiratory tract. May cause cough, shortness of breath, headache, and nausea.

**The toxicological properties of this material have not been thoroughly investigated.**

## Section 12 - Ecological Information

**Ecotoxicity:** Do not release to the environment. Do not release to drains. Very toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

**CAS#10450-60-9 Periodic Acid:**

LC50, freshwater fish: <0.17 mg/L 96h semi-static (oncorhynchus mykiss)(rainbow trout)

EC50, water flea: 0.18 mg/L 48h static (daphnia magna)

EC50, algae: 2.5 mg/L (pseudokirchneriella subcapitata)(green algae)

**Persistence and degradability:** Not available.

**Bio-accumulative potential:** Not available.

**Mobility:** Will likely be mobile in the environment due to its water solubility.

### Section 13 - Disposal Considerations

**DISPOSAL:** Dispose of in accordance with all federal, state, and local regulations.

### Section 14 – Transport Information

**DOT**

Corrosive Liquid, Acidic, Inorganic, N.O.S. (Periodic Acid)

UN3264

PG III

Hazard Class 8

### Section 15 - Regulatory Information

#### Canada Regulatory Information

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the SDS contains all the information required by the CPR.

### Section 16 - Additional Information

**SDS Creation Date:** 10/15/12

**Revision #1:** 8/19/13 CF

**Revision #2:** 8-12-19

**Revision #3:** 12-1-22

**Revision #4:** 3-3-25

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