



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name PERIODIC ACID, REAGENT (ACS)
Catalog # 74
Version # 02
Revision date 03-Jul-2008
CAS # 10450-60-9
Synonym(s) PARA-PERIODIC ACID
Manufacturer information GFS Chemicals, Inc.
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2. Hazards Identification

Emergency overview DANGER -- OXIDIZER
Contact with other combustible material can cause fire.

Harmful in contact with eyes. Irritating to skin. Irritating to respiratory system.

OSHA regulatory status This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).

Potential health effects

Routes of exposure Inhalation. Skin contact. Eye contact.

Eyes Contact may irritate or burn eyes. Eye contact may result in corneal injury. Do not get this material in contact with eyes.

Skin Irritating to skin.

Inhalation Irritating to respiratory system.

Ingestion Do not ingest.

Target organs Eyes.

Chronic effects Conjunctiva.

Signs and symptoms Corneal damage. Conjunctivitis.

Potential environmental effects Ecological injuries are not known or expected under normal use.

3. Composition / Information on Ingredients

Components	CAS #	Percent
PERIODIC ACID	10450-60-9	90 - 100

4. First Aid Measures

First aid procedures

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

Skin contact Wash off immediately with plenty of water. Remove and isolate contaminated clothing and shoes. If skin irritation persists, call a physician.

Inhalation Move to fresh air. If breathing is difficult, give oxygen. Call a physician if symptoms develop or persist.

Ingestion Have victim rinse mouth thoroughly with water. Do not induce vomiting without advice from poison control center.

Notes to physician Symptoms may be delayed.

General advice Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire Fighting Measures

Flammable properties May explode from heat or contamination. Containers may explode when heated. Some will react explosively with hydrocarbons (fuels). Some may decompose explosively when heated or involved in a fire. Runoff may create fire or explosion hazard. These substances will accelerate burning when involved in a fire. Contact with combustible material may cause fire.

Extinguishing media

Suitable extinguishing media Water. Water fog.

Protection of firefighters

Protective equipment and precautions for firefighters Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask. Do not move cargo or vehicle if cargo has been exposed to heat. If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also consider initial evacuation for 800 meters (1/2 mile) in all directions. ALWAYS stay away from tanks engulfed in flame. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Move containers from fire area if you can do it without risk. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn. Use water spray to cool unopened containers. Cool containers with flooding quantities of water until well after fire is out.

Specific methods In the event of fire, cool tanks with water spray. Use water spray to cool unopened containers.

6. Accidental Release Measures

Personal precautions Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering. Keep unnecessary personnel away. Isolate spill or leak area immediately for at least 50 to 100 meters (150 to 330 feet) in all directions. Stay upwind. Keep out of low areas.

Environmental precautions Runoff from fire control or dilution water may cause pollution.

Methods for containment Stop leak if you can do so without risk. Keep combustibles (wood, paper, oil, etc.) away from spilled material. Prevent entry into waterways, sewers, basements or confined areas.

Methods for cleaning up Sweep up or gather material and place in appropriate container for disposal. Avoid dust formation. After removal flush contaminated area thoroughly with water.

7. Handling and Storage

Handling Do not handle or store near an open flame, heat or other sources of ignition. Keep away from clothing and other combustible materials. Do not get this material in contact with eyes. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with skin. Use only with adequate ventilation. Wash thoroughly after handling.

Storage Keep container tightly closed. Do not store near combustible materials. Use care in handling/storage.

8. Exposure Controls / Personal Protection

Engineering controls Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Respiratory protection Do not breathe dust/fume/gas/mist/vapors/spray. Respirator must be worn if exposed to dust.

Hand protection Protective gloves.

Eye / face protection Do not get this material in contact with eyes. Wear chemical goggles.

Skin protection Avoid contact with the skin. Wear appropriate chemical resistant clothing. Protective gloves.

General hygiene considerations When using do not smoke. Avoid contact with eyes. Avoid contact with skin. Handle in accordance with good industrial hygiene and safety practice.

General Avoid contact with skin. Avoid contact with eyes.

9. Physical & Chemical Properties

Appearance Crystalline.

Color White to pale yellow.

Odor	Slight.
Odor threshold	Not available.
Physical state	Solid.
Form	Solid.
pH	Strongly acidic
Melting point	251.6 °F (122 °C)
Freezing point	Not available.
Boiling point	Not available.
Flash point	Not flammable
Evaporation rate	Not available.
Flammability	Not available.
Flammability limits in air, upper, % by volume	Not flammable
Flammability limits in air, lower, % by volume	Not flammable
Vapor pressure	Not available.
Vapor density	Not available.
Specific gravity	Not available.
Relative density	Not available.
Solubility (water)	Very soluble
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	> 284 °F (> 140 °C)
Molecular weight	227.9600
Molecular formula	H5IO6

10. Chemical Stability & Reactivity Information

Incompatible materials	Reducing agents
Hazardous decomposition products	Irritating and/or toxic fumes and gases may be emitted upon the products decomposition.
Possibility of hazardous reactions	Hazardous polymerization does not occur.

11. Toxicological Information

Local effects	Contact may irritate or burn eyes. Irritating to skin. Irritating to respiratory system.
Chronic effects	Hazardous by OSHA criteria. Hazardous by WHMIS criteria.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

12. Ecological Information

Ecotoxicity	This product has no known eco-toxicological effects.
Persistence and degradability	Not available.

13. Disposal Considerations

Disposal instructions	Solutions with low pH-value must be neutralized before discharge. This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste. Dispose in accordance with all applicable regulations.
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14. Transport Information

DOT

Basic shipping requirements:

Proper shipping name	Oxidizing solid, n.o.s.
Hazard class	5.1
UN number	UN1479
Packing group	II

Additional information:

Special provisions	IB8, IP2, IP4, T3, TP33
Packaging exceptions	152
Packaging non bulk	212
Packaging bulk	240
ERG number	140



15. Regulatory Information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

CERCLA/SARA Hazardous Substances - Not applicable.

CERCLA (Superfund) reportable quantity

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance No

Section 311 hazardous chemical Yes

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of New and Existing Chemicals (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

State regulations This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

16. Other Information

Further information HMIS® is a registered trade and service mark of the NPCA.

HMIS® ratings

Health: 2*
Flammability: 0
Physical hazard: 2

NFPA ratings

Health: 2
Flammability: 0
Instability: 0
Special hazards: OX

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.

Issue date

03-Jul-2008

This data sheet contains changes from the previous version in section(s):

This document has undergone significant changes and should be reviewed in its entirety.