



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name PERIODIC ACID, SOLUTION, 50%
Catalog # 7402
Version # 02
Revision date 03-Jul-2008
CAS # Mixture
Manufacturer information GFS Chemicals, Inc.
P.O. Box 245
Powell, OH 43065 US
www.gfschemicals.com
Fax 740-881-5989
Phone 740-881-5501
Toll Free 800-858-9682
Emergency Assistance Chemtrec 800-424-8300

2. Hazards Identification

Emergency overview DANGER
Corrosive. Causes skin and eye burns. 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. Ingestion. Skin contact. Eye contact.

Eyes This product causes eye burns. Risk of serious damage to eyes. Do not get this material in contact with eyes.

Skin Causes skin burns. Do not get this material in contact with skin.

Inhalation Causes burns. Irritating to respiratory system. Do not breathe dust/fume/gas/mist/vapors/spray.

Ingestion Ingestion may produce burns to the lips, oral cavity, upper airway, esophagus and possibly the digestive tract. Do not ingest.

Target organs Eyes.

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

3. Composition / Information on Ingredients

Hazardous components	CAS #	Percent
PERIODIC ACID	10450-60-9	40 - 60
Non-hazardous components	CAS #	Percent
WATER	7732-18-5	40 - 60

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 Immediately flush skin with plenty of water. Remove and isolate contaminated clothing and shoes. Get medical attention immediately. For minor skin contact, avoid spreading material on unaffected skin. Wash clothing separately before reuse.

Inhalation Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Get medical attention immediately.

Ingestion

If material is ingested, immediately contact a poison control center. Have victim rinse mouth thoroughly with water. Do not induce vomiting without advice from poison control center. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Notes to physician

In case of shortness of breath, give oxygen. Keep victim warm.

General advice

Immediate medical attention is required. In case of shortness of breath, give oxygen. Keep victim warm. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire Fighting Measures**Flammable properties**

Not a fire hazard. The product is not flammable.

Extinguishing media**Suitable extinguishing media**

Water. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂).

Protection of firefighters**Specific hazards arising from the chemical**

May decompose upon heating to produce corrosive and/or toxic fumes.

Protective equipment and precautions for firefighters

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**

Local authorities should be advised if significant spillages cannot be contained. 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. Stay upwind. Keep out of low areas.

Environmental precautions

Prevent further leakage or spillage if safe to do so.

Methods for containment

Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Prevent entry into waterways, sewers, basements or confined areas.

Methods for cleaning up

Large Spills: Dike far ahead of liquid spill for later disposal. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean contaminated surface thoroughly. After removal flush contaminated area thoroughly with water. Neutralize the spilled material before disposal.

Never return spills in original containers for re-use.

7. Handling and Storage**Handling**

Do not get this material in contact with eyes. Do not get this material in contact with skin. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get this material on clothing. Use only with adequate ventilation. Wash thoroughly after handling. Handle and open container with care.

Storage

Keep in a well-ventilated place. Keep container tightly closed. Do not store near combustible materials. Keep out of the reach of children. 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. Not normally needed.

Hand protection

Protective gloves.

Eye / face protection

Do not get this material in contact with eyes. Wear chemical goggles. Face-shield.

Skin protection	Do not get this material in contact with skin. Do not get this material on clothing. Wear appropriate chemical resistant gloves. Structural firefighters protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations. Use chemical splash goggles and face shield (ANSI Z87.1 or approved equivalent). Wear chemical protective equipment that is specifically recommended by the manufacturer. It may provide little or no thermal protection.
General hygiene considerations	Do not get this material in contact with eyes. Do not get this material in contact with skin. Do not get this material on clothing. When using, do not eat, drink or smoke. Keep away from food and drink. Handle in accordance with good industrial hygiene and safety practice.
General	Structural firefighters protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations.

9. Physical & Chemical Properties

Appearance	Clear.
Color	Colorless to pale yellow.
Odor	Odorless.
Odor threshold	Not available.
Physical state	Liquid.
Form	Aqueous solution.
pH	Strongly acidic
Melting point	Not available.
Freezing point	Not available.
Boiling point	> 212 °F (> 100 °C)
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	1.65
Relative density	1.65 g/cm ³
Solubility (water)	Completely miscible
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Percent volatile	50 % estimated
Molecular weight	227.9600
Molecular formula	H5IO6

10. Chemical Stability & Reactivity Information

Chemical stability	Stable at normal conditions.
Incompatible materials	Combustible material. Flammable 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

Acute effects	Causes burns.
Local effects	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.
Corrosivity Hazardous by OSHA criteria.

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.

Waste from residues / unused products Not applicable.

14. Transport Information

DOT

Basic shipping requirements:

Proper shipping name Corrosive liquid, acidic, inorganic, n.o.s.

Hazard class 8

UN number UN3264

Packing group II

Additional information:

Special provisions A6, B2, IB2, T11, TP2, TP27

Packaging exceptions 154

Packaging non bulk 202

Packaging bulk 242

ERG number 154



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 - No
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	No
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: 3*
Flammability: 0
Physical hazard: 1

NFPA ratings

Health: 3
Flammability: 0
Instability: 1

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.