

Precautionary Statements - Prevention

Avoid breathing dust/fume/gas/mist/vapors/spray
 Use only outdoors or in a well-ventilated area
 Wash face, hands and any exposed skin thoroughly after handling
 Wear eye/face protection

Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 If eye irritation persists: Get medical advice/attention
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 Call a poison center or doctor/physician if you feel unwell

Other Hazards

Harmful to aquatic life with long lasting effects

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name | CAS No | Weight-% |
|-----------------|-----------|----------|
| Phosphoric acid | 7664-38-2 | 16 |

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

First Aid Measures

| | |
|---------------------|--|
| Eye Contact | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician if irritation persists. |
| Skin Contact | Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing. Wash contaminated clothing before reuse. If skin irritation persists, call a physician. |
| Inhalation | Remove to fresh air. Call a physician if you feel unwell. |
| Ingestion | Drink 2-3 large glasses of water. Do not induce vomiting. Call a physician immediately. Never give anything by mouth to an unconscious person. |

Most important symptoms and effects

| | |
|-----------------|--|
| Symptoms | Contact will cause irritation and redness to exposed areas. Vapors may cause irritation to throat. |
|-----------------|--|

Indication of any immediate medical attention and special treatment needed

| | |
|---------------------------|------------------------|
| Notes to Physician | Treat symptomatically. |
|---------------------------|------------------------|

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical

Combustion products may be toxic.

Hazardous Combustion Products Carbon oxides. Phosphorus oxides. Oxides of sulfur. Nitrogen oxides (NOx).

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.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

- Personal Precautions** Use personal protection recommended in Section 8.
- Environmental Precautions** Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. See Section 13: DISPOSAL CONSIDERATIONS.

Methods and material for containment and cleaning up

- Methods for Containment** Prevent further leakage or spillage if safe to do so.
- Methods for Clean-Up** Dilute with large amounts of water. Pick up with mops into a plastic bucket. Wash area with an alkaline detergent, followed by a clear water rinse. Allow floor to dry before allowing traffic.

7. HANDLING AND STORAGE

Precautions for safe handling

- Advice on Safe Handling** Handle in accordance with good industrial hygiene and safety practice. Use personal protection recommended in Section 8. Avoid contact with skin, eyes or clothing. Wash face, hands, and any exposed skin thoroughly after handling. Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area.

Conditions for safe storage, including any incompatibilities

- Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Keep container closed when not in use. Store on low shelves. Store away from incompatible materials. Store at room temperature.
- Packaging Materials** Rinse container before discarding.
- Incompatible Materials** Chlorine bleach. Caustics. Alkalis.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

| Chemical Name | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|------------------------------|---|---|---|
| Phosphoric acid 7664-38-2 | STEL: 3 mg/m ³ TWA: 1 mg/m ³ | TWA: 1 mg/m ³ (vacated) TWA: 1 mg/m ³ (vacated) STEL: 3 mg/m ³ | IDLH: 1000 mg/m ³ TWA: 1 mg/m ³ STEL: 3 mg/m ³ |

Appropriate engineering controls

- Engineering Controls** Ensure adequate ventilation, especially in confined areas. Eyewash stations. Showers.

Individual protection measures, such as personal protective equipment

| | |
|---------------------------------|--|
| Eye/Face Protection | Splash goggles or safety glasses. |
| Skin and Body Protection | Wear suitable protective clothing. |
| Respiratory Protection | Ensure adequate ventilation, especially in confined areas. |

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice. Wash hands thoroughly after handling. Wash contaminated clothing before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES**Information on basic physical and chemical properties**

| | | | |
|-----------------------|--------------|-----------------------|---------------------|
| Physical State | Liquid | Odor | Sassafras fragrance |
| Appearance | Clear liquid | Odor Threshold | Not determined |
| Color | Clear | | |

| <u>Property</u> | <u>Values</u> | <u>Remarks • Method</u> |
|-------------------------------------|---|-------------------------------|
| pH | 1.0 ± 0.2 (conc) 1.9 ± 0.2 (1:10 dilution) | |
| Melting Point/Freezing Point | 0 °C / 32 °F | |
| Boiling Point/Boiling Range | 100 °C / 212 °F | |
| Flash Point | None | Tag Closed Cup (Water = 1) |
| Evaporation Rate | 1.0 | |
| Flammability (Solid, Gas) | Liquid-Not applicable | |
| Upper Flammability Limits | Not applicable | |
| Lower Flammability Limit | Not applicable | |
| Vapor Pressure | Not determined | |
| Vapor Density | Not determined | |
| Specific Gravity | 1.06 | (1=Water) |
| Water Solubility | Infinite | |
| Solubility in other solvents | Not determined | |
| Partition Coefficient | Not determined | |
| Auto-ignition Temperature | Not determined | |
| Decomposition Temperature | Not determined | |
| Kinematic Viscosity | Not determined | |
| Dynamic Viscosity | Not determined | |
| Explosive Properties | Not determined | |
| Oxidizing Properties | Not determined | |

10. STABILITY AND REACTIVITY**Reactivity**

Not reactive under normal conditions.

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Hazardous Polymerization Hazardous polymerization does not occur.

Conditions to Avoid

Keep separated from incompatible substances. Keep out of reach of children. Avoid contact with ferrous metals and Formica.

Incompatible Materials

Chlorine bleach. Caustics. Alkalis.

Hazardous Decomposition Products

Carbon oxides. Nitrogen oxides (NOx). Phosphorous oxides. Sulfur oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

| | |
|---------------------|--------------------------------|
| Eye Contact | Causes serious eye irritation. |
| Skin Contact | Avoid contact with skin. |
| Inhalation | Harmful if inhaled. |
| Ingestion | Do not ingest. |

Component Information

| Chemical Name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|------------------------------|----------------------|-------------------------|-------------------------------------|
| Phosphoric acid 7664-38-2 | = 1530 mg/kg (Rat) | = 2730 mg/kg (Rabbit) | > 850 mg/m ³ (Rat) 1 h |

Information on physical, chemical and toxicological effects

Symptoms Please see section 4 of this SDS for symptoms.

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

Carcinogenicity This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

Numerical measures of toxicity

Not determined

12. ECOLOGICAL INFORMATION

Ecotoxicity

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Component Information

| Chemical Name | Algae/aquatic plants | Fish | Toxicity to microorganisms | Crustacea |
|------------------------------|----------------------|--|----------------------------|-----------------------------------|
| Phosphoric acid 7664-38-2 | | 3 - 3.5: 96 h Gambusia affinis mg/L LC50 | | 4.6: 12 h Daphnia magna mg/L EC50 |

Persistence/Degradability

Not determined.

Bioaccumulation

Not determined.

Mobility

Not determined

Other Adverse Effects

Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

| | |
|-------------------------------|---|
| Disposal of Wastes | Disposal should be in accordance with applicable regional, national and local laws and regulations. |
| Contaminated Packaging | Disposal should be in accordance with applicable regional, national and local laws and regulations. |

California Hazardous Waste Status

| Chemical Name | California Hazardous Waste Status |
|------------------------------|-----------------------------------|
| Phosphoric acid 7664-38-2 | Corrosive |

14. TRANSPORT INFORMATION

Note Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT

| | |
|-----------------------------|--|
| UN/ID No | UN1760 |
| Proper Shipping Name | Corrosive liquid, n.o.s. (Phosphoric acid) |
| Hazard Class | 8 |
| Packing Group | III |

IATA

| | |
|-----------------------------|--|
| UN/ID No | UN1760 |
| Proper Shipping Name | Corrosive liquid, n.o.s. (Phosphoric acid) |
| Hazard Class | 8 |
| Packing Group | III |

IMDG

| | |
|-----------------------------|--|
| UN/ID No | UN1760 |
| Proper Shipping Name | Corrosive liquid, n.o.s. (Phosphoric acid) |
| Hazard Class | 8 |
| Packing Group | III |

15. REGULATORY INFORMATION

International Inventories

| Chemical Name | TSCA | DSL | NDSL | EINECS | ELINCS | ENCS | IECSC | KECL | PICCS | AICS |
|-----------------|---------|-----|------|---------|--------|---------|-------|---------|-------|------|
| Phosphoric acid | Present | X | | Present | | Present | X | Present | X | X |

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**CERCLA**

| Chemical Name | Hazardous Substances RQs | CERCLA/SARA RQ | Reportable Quantity (RQ) |
|------------------------------|--------------------------|----------------|--|
| Phosphoric acid 7664-38-2 | 5000 lb | | RQ 5000 lb final RQ RQ 2270 kg final RQ |

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

CWA (Clean Water Act)

| Chemical Name | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|-----------------|-----------------------------|------------------------|---------------------------|----------------------------|
| Phosphoric acid | 5000 lb | | | X |

US State Regulations**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

| Chemical Name | New Jersey | Massachusetts | Pennsylvania |
|------------------------------|------------|---------------|--------------|
| Phosphoric acid 7664-38-2 | X | X | X |

16. OTHER INFORMATION

| | | | | |
|--------------------|-----------------------|---------------------|-------------------------|----------------------------|
| <u>NFPA</u> | Health Hazards | Flammability | Instability | Special Hazards |
| | 2 | 0 | 0 | Not determined |
| <u>HMIS</u> | Health Hazards | Flammability | Physical Hazards | Personal Protection |
| | 2 | 0 | 0 | Not determined |

Issue Date: 27-Dec-2011
Revision Date: 26-Nov-2014
Revision Note: New format

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