SAFETY DATA SHEET
PERACETIC ACID 35% W/H2SO4

SDS # : 79-21-0--35-1
Revision date: 2019-08-08
Format: NA
Version 1.1

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier
Product Name PERACETIC ACID 35% W/H2SO4
CAS-No 79-21-0
Synonyms Peracetic Acid; Ethanepero xoic Acid; Peroxyacetic Acid; Acetyl Hydroperoxide.

Recommended use of the chemical and restrictions on use
Recommended Use: Oxidizing agent for a variety of organic reactions
Restrictions on Use Use as recommended by the label.

Manufacturer/Supplier PeroxyChem LLC
2005 Market Street
Suite 3200
Philadelphia, PA 19103
Phone: +1 267/ 422-2400 (General Information)
E-Mail: sdsinfo@peroxychem.com

Emergency telephone numbers For leak, fire, spill or accident emergencies, call:
1 800 / 424 9300 (CHEMTREC - U.S.A.)
1 703 / 527 3887 (CHEMTREC - Collect - All Other Countries)
1 303/ 389-1409 (Medical - U.S. - Call Collect)

2. HAZARDS IDENTIFICATION

Classification
OSHA Regulatory Status
This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

<table>
<thead>
<tr>
<th>Classification</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity - Oral</td>
<td>Category 3</td>
</tr>
<tr>
<td>Acute toxicity - Dermal</td>
<td>Category 4</td>
</tr>
<tr>
<td>Acute toxicity - Inhalation (Dusts/Mists)</td>
<td>Category 3</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Category 3 Sub-category A</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Category 1</td>
</tr>
<tr>
<td>Specific target organ toxicity (single exposure)</td>
<td>Category 3</td>
</tr>
<tr>
<td>Organic Peroxide</td>
<td>Type F</td>
</tr>
<tr>
<td>Flammable liquids</td>
<td>Category 3</td>
</tr>
<tr>
<td>Corrosive to Metals</td>
<td>Category 1</td>
</tr>
</tbody>
</table>
PERACETIC ACID 35% W/H2SO4

GHS Label elements, including precautionary statements

**EMERGENCY OVERVIEW**

**Danger**

**Hazard Statements**
- H301 - Toxic if swallowed
- H312 - Harmful in contact with skin
- H314 - Causes severe skin burns and eye damage
- H331 - Toxic if inhaled
- H335 - May cause respiratory irritation
- H242 - Heating may cause a fire
- H226 - Flammable liquid and vapor
- H290 - May be corrosive to metals

**Precautionary Statements - Prevention**
- P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection
- P260 - Do not breathe mist, vapours or spray.
- P220 - Keep/Store away from clothing/ combustible materials
- P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
- P234 - Keep only in original container
- P235 - Keep cool

**Precautionary Statements - Response**
- 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 or doctor
- P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower
- P363 - Wash contaminated clothing before reuse
- P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
- P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting
- P370 + P378 - In case of fire: Use water for extinction

**Precautionary Statements - Storage**
- P403 + P233 - Store in a well-ventilated place. Keep container tightly closed
- P411 + P235 - Store at temperatures not exceeding 50 °C/ 122 °F. Keep cool
- P410 - Protect from sunlight.

**Hazards not otherwise classified (HNOC)**
No hazards not otherwise classified were identified.

**Other Information**

**Supplemental Information**
Do not store on wooden pallets. Avoid damage to containers. In case of decomposition: isolate container, douse container with cool water and dilute with large volumes of water. In case of leak or spill: Stop leak if this can be done without risk. Flush area with large quantities of water. Undiluted material should not be allowed to enter confined spaces. Clean up spills promptly to prevent material damage. Risk of decomposition by heat or by contact with incompatible materials.
4. FIRST AID MEASURES

Eye Contact
In case of eye contact, remove contact lenses and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician immediately.

Skin Contact
Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Call a physician immediately.

Inhalation
Move to fresh air. If breathing difficulty or discomfort occurs and persists, obtain medical attention. If breathing is irregular or stopped, administer artificial respiration. Call a physician immediately.

Ingestion
Clean mouth with water and afterwards drink plenty of water. Do NOT induce vomiting. Call a physician or poison control center immediately.

Most important symptoms and effects, both acute and delayed
Liquid and mist are corrosive (causing burns); direct contact could cause irreversible damage to eyes including blindness and/or irreversible destruction of skin tissue. Vapor/mist will irritate nose, throat and lungs but will usually subside when exposure ceases.

Indication of immediate medical attention and special treatment needed, if necessary
This product can be corrosive to skin, eyes and mucous membranes. Consideration should be given to careful endoscopy as stomach or esophageal burns, perforations or strictures may occur. Careful gastric lavage with an endotracheal tube in place should be considered. Observation may be warranted. Treatment is controlled removal of exposure followed by symptomatic and supportive care.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Water. Cool containers with flooding quantities of water until well after fire is out.

Unsuitable extinguishing media
Chemical type extinguishers are not effective with peracetic acid or hydrogen peroxide.

Specific Hazards Arising from the Chemical
Decomposes under fire conditions to release oxygen that intensifies the fire.

Explosion data
Sensitivity to Mechanical Impact
Not Available.

Sensitivity to Static Discharge
Not Available.

Protective equipment and precautions for firefighters
Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Wear self-contained breathing apparatus and protective suit.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions
Isolate and post spill area. Remove all sources of ignition. Wear suitable protective clothing, gloves and eye/face protection. For personal protection see Section 8.
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Other
For further clean-up instructions, call PeroxyChem Emergency Hotline number listed in Section 1 “Product and Company Identification” above.

Environmental Precautions
Prevent material from entering into soil, ditches, sewers, waterways, and/or groundwater. See Section 12, Ecological Information for more detailed information.

Methods for Containment
Control runoff and isolate discharged material for proper disposal. Do not allow material to enter storm or sanitary sewer system.

Methods for cleaning up
Hydrogen peroxide is an ingredient in this product; completely submerge hydrogen peroxide contaminated clothing or other materials in water prior to drying. Residual hydrogen peroxide, if allowed to dry on combustible materials such as paper, fabrics, leather or wood can cause the material to ignite and result in a fire. Dispose of waste as indicated in Section 13.

7. HANDLING AND STORAGE

Handling
Handle product only in closed system or provide appropriate exhaust ventilation. Drums - Empty as thoroughly as possible. Triple rinse drums before disposal. Avoid contamination; impurities accelerate decomposition. Never return product to original container.

Storage
Store in original container. Do not store near reducing agents, fuels or other non-compatible materials. Keep in a dry, cool and well-ventilated place. Keep away from direct sunlight. Keep away from heat and sources of ignition i.e., steam pipes, radiant heaters, hot air vents or welding sparks. Storage temperatures must not exceed product SADT or 50 °C, whichever is lower. From a quality perspective, lower storage temperatures are recommended to maintain product assay. Use first in, first out storage system. Do not stack carboys more than two high, and NEVER double-stack pallets of carboys. Containers must be vented.

Packaging material
Do not store in metal containers.

Incompatible products
Oxidizing agents; Strong reducing agents; Combustible materials; Heavy metals

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters
Exposure Guidelines

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH</th>
<th>Mexico</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic Acid 64-19-7</td>
<td>STEL 15 ppm</td>
<td>TWA: 10 ppm TWA: 25 mg/m³</td>
<td>IDLH: 50 ppm TWA: 10 ppm TWA: 25 mg/m³ STEL: 15 ppm STEL: 37 mg/m³</td>
<td>Mexico: TWA 10 ppm Mexico: TWA 25 mg/m³</td>
</tr>
<tr>
<td>Peracetic Acid 79-21-0</td>
<td>STEL 0.4 ppm</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Hydrogen Peroxide 7722-84-1</td>
<td>TWA: 1 ppm</td>
<td>TWA: 1 ppm TWA: 1.4 mg/m³</td>
<td>IDLH: 75 ppm TWA: 1 ppm TWA: 1.4 mg/m³</td>
<td>Mexico: TWA 1 ppm Mexico: TWA 1.5 mg/m³</td>
</tr>
<tr>
<td>Sulfuric Acid 7664-93-9</td>
<td>TWA: 0.2 mg/m³</td>
<td>TWA: 1 mg/m³</td>
<td>IDLH: 15 mg/m³ TWA: 1 mg/m³</td>
<td>Mexico: TWA 1 mg/m³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>British Columbia</th>
<th>Quebec</th>
<th>Ontario TWAEV</th>
<th>Alberta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic Acid 64-19-7</td>
<td>TWA: 10 ppm STEL: 15 ppm</td>
<td>TWA: 10 ppm TWA: 25 mg/m³ STEL: 15 ppm STEL: 37 mg/m³</td>
<td>TWA: 10 ppm TWA: 25 mg/m³ STEL: 15 ppm STEL: 37 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>
Appropriate engineering controls

Engineering measures
Apply technical measures to comply with the occupational exposure limits. When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment.

Individual protection measures, such as personal protective equipment

Eye/Face Protection
Tightly fitting safety goggles. Face-shield.

Skin and Body Protection
Rubber or neoprene footwear. Impervious clothing materials such as rubber, neoprene, nitrile or polyvinyl chloride. Wear liquid proof rubber or neoprene gloves. Hydrogen peroxide is an ingredient in this product; completely submerge hydrogen peroxide contaminated clothing or other materials in water prior to drying. Residual hydrogen peroxide, if allowed to dry on combustible materials such as paper, fabrics, leather or wood can cause the material to ignite and result in a fire.

Hand Protection
Rubber/latex/neoprene or other suitable chemical resistant gloves. Wash the outside of gloves with soap and water prior to removal. Inspect regularly for leaks.

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.

Hygiene measures
Clean water should be available for washing in case of eye or skin contamination. Remove and wash contaminated clothing before re-use. Do not eat, drink or smoke when using this product.

General information
Protective engineering solutions should be implemented and in use before personal protective equipment is considered.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Clear, colorless liquid</td>
</tr>
<tr>
<td>Physical State</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Colorless</td>
</tr>
<tr>
<td>Odor</td>
<td>Stinging, Pungent, vinegar-like</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No information available</td>
</tr>
<tr>
<td>pH</td>
<td>&lt; 1.0 @ 20 °C</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>-44 °C / -47 °F</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>~ 107 °C / 225 °F (with decomposition)</td>
</tr>
<tr>
<td>Flash point</td>
<td>Closed cup: 46 °C / 115 °F</td>
</tr>
<tr>
<td>Evaporation Rate (solid, gas)</td>
<td>&lt; 1.0 (n-butyl acetate=1)</td>
</tr>
<tr>
<td>Flammability Limit in Air</td>
<td>Substance does not burn but will support combustion</td>
</tr>
<tr>
<td>Upper flammability limit</td>
<td>No information available</td>
</tr>
<tr>
<td>Lower flammability limit</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>20 mm Hg at 25°C</td>
</tr>
<tr>
<td>Vapor density</td>
<td>No information available</td>
</tr>
<tr>
<td>Density</td>
<td>No information available</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>1.13 @ 20 °C</td>
</tr>
<tr>
<td>Water solubility</td>
<td>Completely soluble</td>
</tr>
</tbody>
</table>
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Solubility in other solvents
No information available

Partition coefficient
log Pow = -0.52  @  25 °C

Autoignition temperature
218 °C

Decomposition temperature
> 55 °C (SADT)

Viscosity, kinematic
No information available

Viscosity, dynamic
No information available

Explosive properties
No information available

Oxidizing properties
Strong oxidizer

Molecular weight
No information available

Bulk density
Not applicable

10. STABILITY AND REACTIVITY

Reactivity
Reactive and oxidizing agent. Organic peroxide.

Chemical Stability
Stable under recommended storage conditions. Contamination or heat could initiate decomposition.

Possibility of Hazardous Reactions
May produce explosive reactions with Acetic Anhydride.

Hazardous polymerization
Hazardous polymerization does not occur.

Conditions to avoid
Heat, flames and sparks. Temperatures above 50°C or SADT, whichever is lower.

Incompatible materials
Strong reducing agents; Combustible materials; Heavy metals.

Oxidizing agents;

Hazardous Decomposition Products
Acetic acid and oxygen that supports combustion.

11. TOXICOLOGICAL INFORMATION

Product Information

LD50 Oral
LD50 Rat = 50 -500 mg/kg/bw (35% Peracetic acid)
LD50 rat = 1026-1780 mg/kg/bw (15% Peracetic acid)
LD50 rat = 185-3622 mg/kg/bw (2.6-6.11% Peracetic acid)

LD50 Dermal
LD50 Rat = 1957 mg/kg/bw (15% Peracetic acid)
LD50 rat = 1147 mg/kg/bw (5% Peracetic acid)
LD50 rat = >2000 mg/kg/bw (Peracetic acid 0.15%-0.89%)

LC50 Inhalation
LC50 (4-hr) Rat = 4080 mg/m³ (5% Peracetic acid) (aerosol)

Serious eye damage/eye irritation
Corrosive. Risk of serious damage to eyes.

Skin corrosion/irritation
Corrosive to skin. Severely irritating (rabbit).

Sensitization
Did not cause sensitization on laboratory animals.

Information on toxicological effects

Symptoms
Liquid and mist are corrosive and can cause burns, direct contact could cause irreversible damage to eyes including blindness and/or irreversible destruction of skin tissue. Vapor/mist will irritate the nose, throat and lungs, but will usually subside when exposure ceases. The severity of the effects depends in the concentration and dose.

Delayed and immediate effects as well as chronic effects from short and long-term exposure
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### Chronic toxicity
Repeated inhalation of the mist may cause inflammation of the upper respiratory tract, chronic bronchitis and etching of the dental enamel.

### Carcinogenicity
Did not show carcinogenic effects in animal experiments. Topical applications do not produce skin tumors. Not recognized as carcinogenic by Research Agencies (IARC, NTP, OSHA, ACGIH).

### Mutagenicity
This product is not recognized as mutagenic by Research Agencies. Did not show mutagenic effects in animal experiments.

### Reproductive toxicity
This product is not recognized as reprotox by Research Agencies. No toxicity to reproduction in animal studies.

### Aspiration hazard
No information available.

### 12. ECOLOGICAL INFORMATION

#### Ecotoxicity

**Ecotoxicity effects**
Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

<table>
<thead>
<tr>
<th>Peracetic Acid (79-21-0)</th>
<th>Duration</th>
<th>Species</th>
<th>Value</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peracetic Acid 15%</td>
<td>96 h LC50</td>
<td>Oncorhynchus mykiss (rainbow trout)</td>
<td>0.53</td>
<td>mg/L</td>
</tr>
<tr>
<td>Peracetic Acid 5%</td>
<td>96 h LC50</td>
<td>Bluegill sunfish</td>
<td>1.1</td>
<td>mg/L</td>
</tr>
<tr>
<td>Peracetic Acid</td>
<td>33 d NOEC</td>
<td>Brachydanio rerio</td>
<td>0.00225</td>
<td>mg/L</td>
</tr>
<tr>
<td>Peracetic Acid 5%</td>
<td>96 h LC50</td>
<td>Oncorhynchus mykiss (rainbow trout)</td>
<td>1.6</td>
<td>mg/L</td>
</tr>
<tr>
<td>Peracetic Acid 5%</td>
<td>48 h EC50</td>
<td>Daphnia magna</td>
<td>0.73</td>
<td>mg/L</td>
</tr>
<tr>
<td>Peracetic Acid 12.5%</td>
<td>48 h EC50</td>
<td>Mytilus edulis</td>
<td>0.27</td>
<td>mg/L</td>
</tr>
<tr>
<td>Peracetic Acid 15%</td>
<td>21 d NOEC</td>
<td>Daphnia magna</td>
<td>0.05</td>
<td>mg/L</td>
</tr>
<tr>
<td>Peracetic Acid 5%</td>
<td>72 h EC50</td>
<td>Selenastrum capricornutum</td>
<td>0.16</td>
<td>mg/L</td>
</tr>
<tr>
<td>Peracetic Acid 5%</td>
<td>120 h EC50</td>
<td>Selenastrum capricornutum</td>
<td>0.18</td>
<td>mg/L</td>
</tr>
<tr>
<td>Peracetic Acid 5%</td>
<td>72 h NOEC</td>
<td>Selenastrum capricornutum</td>
<td>0.061</td>
<td>mg/L</td>
</tr>
<tr>
<td>Peracetic Acid</td>
<td>3 h EC50</td>
<td>Respiration inhibition test (OECD 209)</td>
<td>5.1</td>
<td>mg/L</td>
</tr>
</tbody>
</table>

#### Persistence and degradability
Peracetic acid is completely miscible with water. Aqueous solutions of peracetic acid hydrolyze to acetic acid and hydrogen peroxide. Product is biodegradable.

#### Bioaccumulation
Based on its low octanol-water partition coefficient and its rapid degradation in the environment, this product is not bioaccumulable.

#### Mobility
Peracetic acid released in the environment will partition almost exclusively (>99%) to the water compartment. Only a minor part (<1%) will remain in the atmosphere, where it is expected to undergo rapid decomposition with a half life of 22 minutes. The fate of...
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peracetic acid in the environment is mainly determined by its degradation.

Other Adverse Effects None known.

### 13. DISPOSAL CONSIDERATIONS

**Waste disposal methods**
This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261). If these wastes cannot be disposed of by use according to label instructions, contact appropriate disposal authorities for guidance.

**US EPA Waste Number**
D001; D002.

**Contaminated Packaging**
Do not rinse returnable containers or recepticles not intended for other uses. Non-returnable containers that held this material should be cleaned by triple-rinsing prior to recycle or disposal. Dispose of in accordance with local regulations. Empty remaining contents. Clean container with water.

### 14. TRANSPORT INFORMATION

**DOT**
- **UN/ID no**: UN3109
- **Proper Shipping Name**: ORGANIC PEROXIDE TYPE F, LIQUID (≤ 37% peroxyacetic Acid and ≤ 7.5% Hydrogen Peroxide, Stabilized)
- **Hazard class**: 5.2
- **Subsidiary class**: 8 and 3
- **Reportable Quantity (RQ)**: Hazardous Substance/RQ: Not applicable

**TDG**
- **UN/ID no**: UN3109
- **Proper Shipping Name**: ORGANIC PEROXIDE TYPE F, LIQUID (≤ 37% peroxyacetic Acid and ≤ 7.5% Hydrogen Peroxide, Stabilized)
- **Hazard class**: 5.2
- **Subsidiary class**: 8 and 3
- **Packing Group**: II

**ICAO/IATA**
Air regulation permit shipment of peracetic acid in non-vented containers for Air Cargo Only aircraft, as well as for Passenger and Cargo aircraft. HOWEVER, all peracetic acid containers are vented and therefore, air shipments of peracetic acid are not permitted. IATA air regulations state that venting of packages containing oxidizing substances is not permitted for air transport.

**IMDG/IMO**
- **UN/ID no**: UN3109
- **Proper Shipping Name**: ORGANIC PEROXIDE TYPE F, LIQUID (≤ 37% peroxyacetic Acid and ≤ 7.5% Hydrogen Peroxide, Stabilized)
- **Hazard class**: 5.2
- **Subsidiary Hazard Class**: 8 and 3
- **Marine Pollutant**: When shipped by vessel, this material meets the definition of an environmentally hazardous substance.

**OTHER INFORMATION**
Protect from physical damage. Material is shipped in 5 gal. (45 lb.), 30 gal. (250 lb.) and 55 gal. (495 lb.) vented linear (not cross-linked) polyethylene containers, as well as linear (not cross-linked) polyethylene IBO’s (330 gal.). Do not ship on wooden pallets.

### 15. REGULATORY INFORMATION

**U.S. Federal Regulations**

Clean Air Act (CAA) - Accidental Release Prevention
Peracetic acid is listed as a Regulated Toxic Substance at 40 CFR 68.130. Pursuant to the threshold determination provisions for mixtures at 40 CFR 68.155(b)(1), the partial pressure of peracetic acid in VigorOx products (up to 35% solutions) are less than 10 mm Hg at 25°C, and thus the product, as sold, is not subject to the threshold determination under the Risk Management Planning regulations.

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric Acid</td>
<td>7664-93-9</td>
<td>1</td>
<td>1.0</td>
</tr>
<tr>
<td>Peracetic Acid</td>
<td>79-21-0</td>
<td>35.5</td>
<td>1.0</td>
</tr>
</tbody>
</table>

SARA 311/312 Hazard Categories
This product has the following hazards that are reportable under The Emergency Planning and Community Right-to-Know rule (EPCRA Tier II):
- Organic Peroxide
- Flammable/combustible material
- Corrosive to Metals
- Acute toxicity
- Serious eye damage/eye irritation
- Skin corrosion/irritation
- Specific Target Organ Toxicity (STOT) - Single Exposure

Clean Water Act
This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CWA - Reportable Quantities</th>
<th>CWA - Toxic Pollutants</th>
<th>CWA - Priority Pollutants</th>
<th>CWA - Hazardous Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric Acid</td>
<td>1000 lb</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>7664-93-9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acetic Acid</td>
<td>5000 lb</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>64-19-7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CERCLA/EPCRA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Response Compensation and Liability Act (CERCLA) or as an extremely hazardous substance (EHS) under the Emergency Planning and Community Right to Know Act (EPCRA) / Superfund Amendments and Reauthorization Act (SARA).

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CERCLA Hazardous Substances RQs (40 CFR 302.4)</th>
<th>SARA Sec 304 Extremely Hazardous Substance RQ (40 CFR 355 Appendix A)</th>
<th>SARA Section 302 EHS Threshold Planning Quantity (40 CFR 355)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic Acid</td>
<td>5000 lb</td>
<td></td>
<td></td>
</tr>
<tr>
<td>64-19-7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peracetic Acid</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>79-21-0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hydrogen Peroxide</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>7722-84-1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfuric Acid</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7664-93-9</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Hydrogen Peroxide RQ is for concentrations of > 52% only

US State Regulations
U.S. State Right-to-Know Regulations
This product contains the following substances regulated under state Right-to-Know laws:

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Massachusetts</th>
<th>New Jersey</th>
<th>Pennsylvania</th>
<th>Illinois</th>
<th>Rhode Island</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic Acid</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Peracetic Acid</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Hydrogen Peroxide</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Sulfuric Acid</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

California Proposition 65
This product does not contain any Proposition 65 chemicals

CANADA

Environmental Emergencies

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic Acid 64-19-7</td>
<td>6.80 tonnes Minimum quantity</td>
<td>95</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peracetic Acid 79-21-0</td>
<td>4.50 tonnes Minimum quantity</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hydrogen Peroxide 7722-84-1</td>
<td>3.40 tonnes Minimum quantity</td>
<td>52</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Peracetic acid is exempt from Environmental Emergency Regulations SOR/2003-307 requirements per List of Substances Section 2(b) as it is a component of a mixture and its partial pressure in the mixture is less than 10 mm Hg. In addition the concentrations of the Hydrogen Peroxide and Acetic Acid in the mixture are below their minimum concentrations.

Canadian National Pollutant Release Inventory

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Canada - 2017 NPRI (National Pollutant Release Inventory)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic Acid 64-19-7</td>
<td>Part 4 Substance</td>
</tr>
<tr>
<td>Peracetic Acid 79-21-0</td>
<td>Part 1, Group A Substance</td>
</tr>
<tr>
<td>Sulfuric Acid 7664-93-9</td>
<td>Part 1, Group A Substance</td>
</tr>
</tbody>
</table>

International Inventories

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>TSCA (United States)</th>
<th>DSL (Canada)</th>
<th>EINECS/EL ICNS (Europe)</th>
<th>ENCS (Japan)</th>
<th>China (IECSC)</th>
<th>KECL (Korea)</th>
<th>PICCS (Philippines)</th>
<th>AICS (Australia)</th>
<th>NZIoC (New Zealand)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic Acid 64-19-7</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Peracetic Acid 79-21-0</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Hydrogen Peroxide 7722-84-1</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Sulfuric Acid 7664-93-9</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

All ingredients are directly listed on the active TSCA Inventory

Mexico

Mexico - Grade Moderate risk, Grade 2
PERACETIC ACID 35% W/H2SO4

16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health Hazards</th>
<th>Flammability</th>
<th>Stability</th>
<th>Special Hazards</th>
<th>Special precautions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>OX</td>
<td>H</td>
</tr>
</tbody>
</table>

NFPA/HMIS Ratings Legend

Severe = 4; Serious = 3; Moderate = 2; Slight = 1; Minimal = 0

Special Hazards: OX = Oxidizer. Protection = H (Safety goggles, gloves, apron, the use of supplied air or SCBA respirator is required in lieu of a vapor cartridge respirator)

Uniform Fire Code

Organic Peroxide: Class 3--Liquid

Revision date: 2019-08-08
Revision note

SDS sections updated: 2.

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Prepared By:

PeroxyChem

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End of Safety Data Sheet