1. Identification

Product Name
Peroxyacetic acid, ca. 35 wt.% solution in diluted acetic acid, stabilized

Cat No.: AC257750000; AC257750250; AC257751000; AC257755000

Synonyms
Peracetic acid

Recommended Use
Laboratory chemicals.

Uses advised against
Not for food, drug, pesticide or biocidal product use

Details of the supplier of the safety data sheet

Company
Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

Emergency Telephone Number
For information US call: 001-800-ACROS-01 / Europe call: +32 14 57 52 11
Emergency Number US: 001-201-796-7100 / Europe: +32 14 57 52 99
CHEMTREC Tel. No.US: 001-800-424-9300 / Europe: 001-703-527-3887

2. Hazard(s) identification

Classification
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Oxidizing liquids
Category 1

Organic peroxides
Type F

Corrosive to metals
Category 1

Acute oral toxicity
Category 3

Acute dermal toxicity
Category 4

Acute Inhalation Toxicity - Vapors
Category 3

Skin Corrosion/irritation
Category 1 A

Serious Eye Damage/ Eye Irritation
Category 1

Specific target organ toxicity (single exposure)
Target Organs - Respiratory system.
Category 3

Label Elements

Signal Word
Danger

Hazard Statements
Heating may cause a fire
May cause fire or explosion; strong oxidizer
May be corrosive to metals
Toxic if swallowed
Causes severe skin burns and eye damage
May cause respiratory irritation
Peroxyacetic acid, ca. 35 wt.% solution in diluted acetic acid, stabilized

Toxic if inhaled
Harmful in contact with skin

Precautionary Statements
Prevention
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Use only outdoors or in a well-ventilated area
Do not breathe dust/fume/gas/mist/vapors/spray
Wear protective gloves/protective clothing/eye protection/face protection
Keep away from heat/sparks/open flames/hot surfaces. - No smoking
Keep/Store away from clothing/ other combustible materials
Keep only in original container
Response
Immediately call a POISON CENTER or doctor/physician

Inhalation
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Skin
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse

Eyes
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

Ingestion
Rinse mouth
Do NOT induce vomiting

Spills
Absorb spillage to prevent material damage

Storage
Store locked up
Store in a well-ventilated place. Keep container tightly closed
Store at temperatures not exceeding 50 °C/ 122 °F. Keep cool
Protect from sunlight
Store away from other materials
Store in corrosive resistant polypropylene container with a resistant inliner
Store in a dry place

Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Very toxic to aquatic life with long lasting effects

3. Composition / information on ingredients

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid</td>
<td>64-19-7</td>
<td>35-45</td>
</tr>
<tr>
<td>Peroxyacetic acid</td>
<td>79-21-0</td>
<td>34-38</td>
</tr>
<tr>
<td>Hydrogen peroxide</td>
<td>7722-84-1</td>
<td>7-10</td>
</tr>
</tbody>
</table>
4. First-aid measures

General Advice
Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

Eye Contact
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Skin Contact
Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.

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

Ingestion
Do not induce vomiting. Call a physician or Poison Control Center immediately.

Most important symptoms/effects
Causes burns by all exposure routes. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting

Notes to Physician
Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Cool closed containers exposed to fire with water spray.

Unsuitable Extinguishing Media
No information available

Flash Point
62 °C / 143.6 °F

Method -
No information available

Autoignition Temperature
No information available

Explosion Limits
Upper
No data available
Lower
No data available

Oxidizing Properties
Oxidizer

Sensitivity to Mechanical Impact
No information available

Sensitivity to Static Discharge
No information available

Specific Hazards Arising from the Chemical
Thermal decomposition can lead to release of irritating gases and vapors. The product causes burns of eyes, skin and mucous membranes. Oxidizer: Contact with combustible/organic material may cause fire. May ignite combustibles (wood paper, oil, clothing, etc.). Combustible material. Containers may explode when heated. Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous Combustion Products
Carbon monoxide (CO) Carbon dioxide (CO₂) Sulfur oxides

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. Thermal decomposition can lead to release of irritating gases and vapors.

NFPA
Peroxyacetic acid, ca. 35 wt.% solution in diluted acetic acid, stabilized

6. Accidental release measures

Personal Precautions
Ensure adequate ventilation. Use personal protective equipment. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Remove all sources of ignition. Take precautionary measures against static discharges.

Environmental Precautions
Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

Methods for Containment and Clean Up
Keep in suitable, closed containers for disposal. Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal. Remove all sources of ignition.

7. Handling and storage

Handling
Wear personal protective equipment. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not breathe vapors or spray mist. Do not ingest. Keep away from clothing and other combustible materials. Keep away from open flames, hot surfaces and sources of ignition.

Storage

8. Exposure controls / personal protection

Exposure Guidelines

<table>
<thead>
<tr>
<th>Component</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
<th>Mexico OEL (TWA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid</td>
<td>TWA: 10 ppm</td>
<td>(Vacated) TWA: 10 ppm</td>
<td>IDLH: 50 ppm</td>
<td>TWA: 10 ppm</td>
</tr>
<tr>
<td></td>
<td>STEL: 15 ppm</td>
<td>(Vacated) TWA: 25 mg/m³</td>
<td>TWA: 10 ppm</td>
<td>TWA: 25 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA: 10 ppm</td>
<td>TWA: 15 ppm</td>
<td>TWA: 25 mg/m³</td>
</tr>
<tr>
<td>Peroxyacetic acid</td>
<td>STEL: 0.4 ppm</td>
<td></td>
<td>STEL: 37 mg/m³</td>
<td>STEL: 37 mg/m³</td>
</tr>
<tr>
<td>Hydrogen peroxide</td>
<td>TWA: 1 ppm</td>
<td>(Vacated) TWA: 1 ppm</td>
<td>IDLH: 75 ppm</td>
<td>TWA: 1 ppm</td>
</tr>
<tr>
<td></td>
<td>(Vacated) TWA: 1.4 mg/m³</td>
<td>TWA: 1 ppm</td>
<td>TWA: 1.5 mg/m³</td>
<td>TWA: 1.5 mg/m³</td>
</tr>
<tr>
<td></td>
<td>TWA: 1 ppm</td>
<td>TWA: 1.4 mg/m³</td>
<td>STEL: 2 ppm</td>
<td>STEL: 3 mg/m³</td>
</tr>
</tbody>
</table>

Legend

ACGIH - American Conference of Governmental Industrial Hygienists
OSHA - Occupational Safety and Health Administration
NIOSH IDLH: The National Institute for Occupational Safety and Health Immediately Dangerous to Life or Health

Engineering Measures
Use only under a chemical fume hood. Use explosion-proof electrical/ventilating/lighting/equipment. Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment

Eye/face Protection
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 and body protection
Long sleeved clothing.
Peroxyacetic acid, ca. 35 wt.% solution in diluted acetic acid, stabilized

Revision Date 26-May-2017

9. Physical and chemical properties

| Physical State | Liquid |
| Appearance | Clear Colorless |
| Odor | Strong pungent |
| Odor Threshold | No information available |
| pH | No information available -1.2 |
| Melting Point/Range | -44 °C / -47.2 °F |
| Boiling Point/Range | 105 °C / 221 °F @ 760 mmHg |
| Flash Point | 62 °C / 143.6 °F |
| Evaporation Rate | No information available |
| Flammability (solid,gas) | Not applicable |
| Flammability or explosive limits |
| Upper | No data available |
| Lower | No data available |
| Vapor Pressure | 20 hPa @ 20 °C |
| Vapor Density | 1.130 |
| Specific Gravity | Soluble in water |
| Solubility | No data available |
| Partition coefficient; n-octanol/water | No data available |
| Autoignition Temperature | No information available |
| Decomposition Temperature | No information available |
| Viscosity | No information available |
| Molecular Formula | C2 H4 O3 |
| Molecular Weight | 76.05 |

10. Stability and reactivity

Reactive Hazard | Yes
Stability | Stable under normal conditions. Oxidizer: Contact with combustible/organic material may cause fire.
Incompatible Materials | Strong oxidizing agents, Powdered metal salts, Organic materials, Metals, Reducing agents, Strong reducing agents, Combustible material
Hazardous Decomposition Products | Carbon monoxide (CO), Carbon dioxide (CO2), Sulfur oxides
Hazardous Polymerization | Hazardous polymerization does not occur.
Hazardous Reactions | None under normal processing.

11. Toxicological information

Acute Toxicity

Product Information
Oral LD50 | Category 3. ATE = 50 - 300 mg/kg.
Dermal LD50 | Category 4. ATE = 1000 - 2000 mg/kg. Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg.
Peroxyacetic acid, ca. 35 wt.% solution in diluted acetic acid, stabilized

Revision Date 26-May-2017

Vapor LC50

Component Information

<table>
<thead>
<tr>
<th>Component</th>
<th>LD50 Oral (Rat) (mg/kg)</th>
<th>LD50 Dermal (Rabbit) (µL/kg)</th>
<th>LC50 Inhalation (mg/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid</td>
<td>3310</td>
<td>-</td>
<td>&gt; 40 mg/L (Rat) 4 h</td>
</tr>
<tr>
<td>Peroxyacetic acid</td>
<td>1540</td>
<td>1410</td>
<td>Not listed</td>
</tr>
<tr>
<td>Hydrogen peroxide</td>
<td>376 (90%) 910 (20-60%) 1518 (8-20%)</td>
<td>&gt;2000 (Rabbit)</td>
<td>LC50 = 2 g/m³ (Rat) 4 h</td>
</tr>
</tbody>
</table>

Toxicologically Synergistic Products

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

Irritation

Causes severe burns by all exposure routes

Sensitization

No information available

Carcinogenicity

The table below indicates whether each agency has listed any ingredient as a carcinogen.

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>IARC</th>
<th>NTP</th>
<th>ACGIH</th>
<th>OSHA</th>
<th>Mexico</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid</td>
<td>64-19-7</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
<tr>
<td>Peroxyacetic acid</td>
<td>79-21-0</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
<tr>
<td>Hydrogen peroxide</td>
<td>7722-84-1</td>
<td>Not listed</td>
<td>Not listed</td>
<td>A3</td>
<td>Not listed</td>
<td>A3</td>
</tr>
</tbody>
</table>

ACGIH: (American Conference of Governmental Industrial Hygienists)

A1 - Known Human Carcinogen
A2 - Suspected Human Carcinogen
A3 - Animal Carcinogen

Mexico - Occupational Exposure Limits - Carcinogens

A1 - Confirmed Human Carcinogen
A2 - Suspected Human Carcinogen
A3 - Confirmed Animal Carcinogen
A4 - Not Classifiable as a Human Carcinogen
A5 - Not Suspected as a Human Carcinogen

Mutagenic Effects

No information available

Reproductive Effects

No information available.

Developmental Effects

No information available.

Teratogenicity

No information available.

STOT - single exposure

Respiratory system

STOT - repeated exposure

None known

Aspiration hazard

No information available

Symptoms / effects, both acute and delayed

Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting

Endocrine Disruptor Information

No information available

Other Adverse Effects

The toxicological properties have not been fully investigated.

12. Ecological information

Ecotoxicity

The product contains following substances which are hazardous for the environment. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

<table>
<thead>
<tr>
<th>Component</th>
<th>Freshwater Algae</th>
<th>Freshwater Fish</th>
<th>Microtox</th>
<th>Water Flea</th>
</tr>
</thead>
</table>

Page 6 / 9
Peroxyacetic acid, ca. 35 wt.% solution in diluted acetic acid, stabilized

<table>
<thead>
<tr>
<th>Component</th>
<th>log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid</td>
<td>-0.2</td>
</tr>
<tr>
<td>Hydrogen peroxide</td>
<td>-1.1</td>
</tr>
</tbody>
</table>

### 13. Disposal considerations

**Waste Disposal Methods**

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

### 14. Transport information

**DOT**
- UN-No: UN3109
- Proper Shipping Name: ORGANIC PEROXIDE TYPE F, LIQUID
- Proper technical name: (PEROXYACETIC ACID)
- Hazard Class: 5.2
- Subsidiary Hazard Class: 8

**TDG**
- UN-No: UN3109
- Proper Shipping Name: ORGANIC PEROXIDE TYPE F, LIQUID
- Hazard Class: 5.2
- Subsidiary Hazard Class: 8

**IATA** FORBIDDEN FOR IATA TRANSPORT

**IMDG/IMO**
- UN-No: UN3109
- Proper Shipping Name: ORGANIC PEROXIDE TYPE F, LIQUID (PEROXYACETIC ACID, TYPE F)
- Hazard Class: 5.2
- Subsidiary Hazard Class: 8

### 15. Regulatory information

All of the components in the product are on the following Inventory lists: X = listed

**International Inventories**

<table>
<thead>
<tr>
<th>Component</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>NLP</th>
<th>PICCS</th>
<th>ENCS</th>
<th>AICS</th>
<th>IECSC</th>
<th>KECL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>200-580-7</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Peroxyacetic acid</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>201-186-8</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Hydrogen peroxide</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>231-765-0</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

Legend:
- X - Listed
- E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.
- F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
- N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated...
Peroxyacetic acid, ca. 35 wt.% solution in diluted acetic acid, stabilized

polymer made with any free-radical initiator regardless of the amount used.
P - Indicates a commenced PMN substance
R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
S - Indicates a substance that is identified in a proposed or final Significant New Use Rule
T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.
XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B).
Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.
Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b) Not applicable

SARA 313

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peroxyacetic acid</td>
<td>79-21-0</td>
<td>34-38</td>
<td>1.0</td>
</tr>
</tbody>
</table>

SARA 311/312 Hazard Categories

- Acute Health Hazard: Yes
- Chronic Health Hazard: No
- Fire Hazard: Yes
- Sudden Release of Pressure Hazard: No
- Reactive Hazard: Yes

CWA (Clean Water Act)

<table>
<thead>
<tr>
<th>Component</th>
<th>CWA - Hazardous Substances</th>
<th>CWA - Reportable Quantities</th>
<th>CWA - Toxic Pollutants</th>
<th>CWA - Priority Pollutants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid</td>
<td>X</td>
<td>5000 lb</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Clean Air Act Not applicable

OSHA Occupational Safety and Health Administration

OSHA - United States Occupational Safety and Health Administration

<table>
<thead>
<tr>
<th>Component</th>
<th>Specifically Regulated Chemicals</th>
<th>Highly Hazardous Chemicals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peroxyacetic acid</td>
<td>-</td>
<td>TO: 1000 lb</td>
</tr>
<tr>
<td>Hydrogen peroxide</td>
<td>-</td>
<td>TO: 7500 lb</td>
</tr>
</tbody>
</table>

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

<table>
<thead>
<tr>
<th>Component</th>
<th>Hazardous Substances RQs</th>
<th>CERCLA EHS RQs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid</td>
<td>5000 lb</td>
<td>-</td>
</tr>
<tr>
<td>Peroxyacetic acid</td>
<td>-</td>
<td>500 lb</td>
</tr>
<tr>
<td>Hydrogen peroxide</td>
<td>-</td>
<td>1000 lb</td>
</tr>
</tbody>
</table>

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

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Component</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>-</td>
<td>X</td>
</tr>
<tr>
<td>Peroxyacetic 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>-</td>
<td>X</td>
</tr>
</tbody>
</table>

U.S. Department of Transportation

Reportable Quantity (RQ): N
Peroxyacetic acid, ca. 35 wt.% solution in diluted acetic acid, stabilized

DOT Marine Pollutant N
DOT Severe Marine Pollutant N

U.S. Department of Homeland Security
This product contains the following DHS chemicals:

<table>
<thead>
<tr>
<th>Component</th>
<th>DHS Chemical Facility Anti-Terrorism Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peroxyacetic acid</td>
<td>7500 lb STQ</td>
</tr>
<tr>
<td>Hydrogen peroxide</td>
<td>2000 lb STQ (concentration of at least 30%)</td>
</tr>
</tbody>
</table>

Other International Regulations
Mexico - Grade No information available

16. Other information

Prepared By Regulatory Affairs
Thermo Fisher Scientific
Email: EMSDS.RA@thermofisher.com

Creation Date 21-May-2012
Revision Date 26-May-2017
Print Date 26-May-2017
Revision Summary This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

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 SDS