



Health	3
Fire	2
Reactivity	4
Personal Protection	H

Material Safety Data Sheet

Peracetic Acid, 35% MSDS

Section 1: Chemical Product and Company Identification

Product Name: Peracetic Acid, 35%

Catalog Codes: SLP5503

CAS#: Mixture.

RTECS: Not applicable.

TSCA: TSCA 8(b) inventory: Peracetic acid; Hydrogen Peroxide; Acetic acid; Sulfuric acid; Water

CI#: Not applicable.

Synonym: Peracetic Acid solution; Peroxyacetic Acid solution; Acetyl Hydroperoxide solution

Chemical Name: Not applicable.

Chemical Formula: Not applicable.

Contact Information:

Sciencelab.com, Inc.

14025 Smith Rd.

Houston, Texas 77396

US Sales: **1-800-901-7247**

International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:

1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Peracetic acid	79-21-0	35.5
Hydrogen Peroxide	7722-84-1	
		6.5
Acetic acid	64-19-7	40
Sulfuric acid	7664-93-9	1
Water	7732-18-5	17

Toxicological Data on Ingredients: Peracetic acid: ORAL (LD50): Acute: 210 mg/kg [Mouse]. 1894 mg/kg [Rat]. DERMAL (LD50): Acute: 1734 mg/kg [Rabbit]. Hydrogen Peroxide: ORAL (LD50): Acute: 2000 mg/kg [Mouse]. DERMAL (LD50): Acute: 4060 mg/kg [Rat]. 2000 mg/kg [pig]. VAPOR (LC50): Acute: 2000 mg/m 4 hours [Rat]. Acetic acid: ORAL (LD50): Acute: 3310 mg/kg [Rat]. 4960 mg/kg [Mouse]. 3530 mg/kg [Rat]. DERMAL (LD50): Acute: 1060 mg/kg [Rabbit]. VAPOR (LC50): Acute: 5620 ppm 1 hours [Mouse]. Sulfuric acid: ORAL (LD50): Acute: 2140 mg/kg [Rat.]. VAPOR (LC50): Acute: 510 mg/m 2 hours [Rat]. 320 mg/m 2 hours [Mouse].

Section 3: Hazards Identification

Potential Acute Health Effects:

Very hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, . Hazardous in case of skin contact (corrosive, sensitizer, permeator), of eye contact (corrosive). Slightly hazardous in case of inhalation (lung sensitizer). Non-corrosive for lungs. Prolonged exposure may result in skin burns and ulcerations. Over-exposure by inhalation may cause respiratory irritation. Severe over-exposure can result in death. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Potential Chronic Health Effects:

Hazardous in case of skin contact (irritant), of ingestion, . Slightly hazardous in case of skin contact (sensitizer).
CARCINOGENIC EFFECTS: Classified A3 (Proven for animal.) by ACGIH [Hydrogen Peroxide]. Classified 3 (Not classifiable for human.) by IARC [Hydrogen Peroxide]. Classified 1 (Proven for human.) by IARC, + (Proven.) by OSHA [Sulfuric acid]. Classified A2 (Suspected for human.) by ACGIH [Sulfuric acid]. MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. [Hydrogen Peroxide]. Mutagenic for bacteria and/or yeast. [Hydrogen Peroxide]. Mutagenic for mammalian somatic cells. [Acetic acid]. Mutagenic for bacteria and/or yeast. [Acetic acid]. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to blood, kidneys, lungs, liver, mucous membranes, heart, cardiovascular system, upper respiratory tract, skin, eyes, central nervous system (CNS), teeth. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Section 4: First Aid Measures

Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

Skin Contact:

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

Serious Skin Contact:

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Serious Inhalation:

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. **WARNING:** It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.

Ingestion:

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Flammable.

Auto-Ignition Temperature: The lowest known value is 200°C (392°F) (Peracetic acid).

Flash Points: CLOSED CUP: 46°C (114.8°F).

Flammable Limits: The greatest known range is LOWER: 4% UPPER: 19.9% (Acetic acid)

Products of Combustion: These products are carbon oxides (CO, CO2).

Fire Hazards in Presence of Various Substances:

Flammable in presence of open flames and sparks, of heat. Slightly flammable to flammable in presence of combustible materials, of metals. Non-flammable in presence of shocks.

Explosion Hazards in Presence of Various Substances:

Explosive in presence of reducing materials, of organic materials. Slightly explosive in presence of metals, of acids. Non-explosive in presence of shocks.

Fire Fighting Media and Instructions:

Flammable liquid, soluble or dispersed in water. Oxidizing material. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use alcohol foam, water spray or fog. Do not use water jet. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion. Use flooding quantities of water. Avoid contact with organic materials.

Special Remarks on Fire Hazards:

Reacts with metals to produces flammable hydrogen gas. It will ignite on contact with potassium-tert-butoxide. A mixture of ammonium nitrate and acetic acid ignites when warmed, especially if warmed. (Acetic acid)

Special Remarks on Explosion Hazards:

Acetic acid vapors may form explosive mixtures with air. Reactions between acetic acid and the following materials are potentially explosive: 5-azidotetrazole, bromine pentafluoride, chromium trioxide, hydrogen peroxide, potassium permanganate, sodium peroxide, and phosphorus trichloride. Dilute acetic acid and dilute hydrogen can undergo an exothermic reaction if heated, forming peracetic acid which is explosive at 110 degrees C. Reaction between chlorine trifluoride and acetic acid is very violent, sometimes explosive. (Acetic acid) Explodes at 110 deg. C. Explosive reaction with acetic anhydride, and 5-p-chlorophenyl-2,2-dimethyl-3-hexanone. Upon contact with reducing materials such as organic matter and thiocyanates an explosion can occur (Peracetic Acid)

Section 6: Accidental Release Measures**Small Spill:**

Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. If necessary: Neutralize the residue with a dilute solution of sodium carbonate.

Large Spill:

Flammable liquid. Oxidizing material. Organic peroxide. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Avoid contact with a combustible material (wood, paper, oil, clothing...). Keep substance damp using water spray. Do not use metal tools or equipment. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Neutralize the residue with a dilute solution of sodium carbonate. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage**Precautions:**

Keep locked up.. Keep container dry. Keep away from heat. Keep away from sources of ignition. Keep away from combustible material.. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Never add water to this product. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, reducing agents, organic materials, metals, acids, alkalis.

Storage:

Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Separate from acids, alkalies, reducing agents and combustibles. See NFPA 43A, Code for the Storage of Liquid and Solid Oxidizers. Avoid all possible sources of ignition (spark or flame). Do not store above 8°C (46.4°F).

Section 8: Exposure Controls/Personal Protection**Engineering Controls:**

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:

Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid.

Odor: Pungent. Sharp. Vinegar-like

Taste: Not available.

Molecular Weight: Not applicable.

Color: Colorless.

pH (1% soln/water): 2.5 [Acidic.]

Boiling Point: 107.22°C (225°F)

Melting Point: Not Available

Critical Temperature: The lowest known value is 321.67°C (611°F) (Acetic acid).

Specific Gravity: 1.13 (Water = 1)

Vapor Pressure: 2.7 kPa (@ 25°C)

Vapor Density: The highest known value is 3.4 (Air = 1) (Sulfuric acid). Weighted average: 1.93 (Air = 1)

Volatility: Not available.

Odor Threshold: The highest known value is 0.48 ppm (Acetic acid)

Water/Oil Dist. Coeff.: The product is more soluble in water.

Ionicity (in Water): Not available.

Dispersion Properties:

Partially dispersed in methanol, diethyl ether, n-octanol. See solubility in water, methanol, diethyl ether, n-octanol, acetone.

Solubility:

Easily soluble in cold water, hot water, diethyl ether. Partially soluble in methanol, n-octanol, acetone.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Heat, ignition sources, incompatible materials.

Incompatibility with various substances:

Highly reactive with organic materials. Reactive with reducing agents, metals, acids, alkalis. Slightly reactive to reactive with combustible materials.

Corrosivity:

Highly corrosive in presence of stainless steel(304). Corrosive in presence of aluminum, of copper, of stainless steel(316). Non-corrosive in presence of glass.

Special Remarks on Reactivity:

It is an organic peroxide and is an oxidizing material. It is dangerous in contact with organic materials. Incompatible with other solvents (e.g. tetrahydrofuran, diethyl ether; metal chloride solutions (e.g. Calcium chloride, potassium chloride, sodium chloride); olfeins. Also incompatible with dirt, metals such as iron, copper, chromium , aluminum, cobalt, and heavy metal salts.

Special Remarks on Corrosivity: Corrosive to most metals, including aluminum.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion.

Toxicity to Animals:

Acute oral toxicity (LD50): 210 mg/kg [Mouse]. (Peracetic acid). Acute dermal toxicity (LD50): 1060 mg/kg [Rabbit]. (Acetic acid).

Chronic Effects on Humans:

CARCINOGENIC EFFECTS: Classified A3 (Proven for animal.) by ACGIH [Hydrogen Peroxide]. Classified 3 (Not classifiable for human.) by IARC [Hydrogen Peroxide]. Classified 1 (Proven for human.) by IARC, + (Proven.) by OSHA [Sulfuric acid]. Classified A2 (Suspected for human.) by ACGIH [Sulfuric acid]. MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. [Hydrogen Peroxide]. Mutagenic for bacteria and/or yeast. [Hydrogen Peroxide]. Mutagenic for mammalian somatic cells. [Acetic acid]. Mutagenic for bacteria and/or yeast. [Acetic acid]. Contains material which may cause damage to the following organs: blood, kidneys, lungs, liver, mucous membranes, heart, cardiovascular system, upper respiratory tract, skin, eyes, central nervous system (CNS), teeth.

Other Toxic Effects on Humans:

Extremely hazardous in case of inhalation (lung corrosive). Very hazardous in case of skin contact (irritant), of ingestion, . Hazardous in case of skin contact (corrosive, sensitizer, permeator), of eye contact (corrosive).

Special Remarks on Toxicity to Animals:

LD50 [Rat] - Route: Oral; Dose 1540 ul/kg LD50 [Rabbit] - Route: Skin; Dose; 1410 ul/kg (Peracetic acid)

Special Remarks on Chronic Effects on Humans:

May affect genetic material (mutagenic). May cause adverse reproductive effects based on animal test data. May cause cancer based on animal test data

Special Remarks on other Toxic Effects on Humans:

Acute Potential Health Effects: Skin: Causes severe skin irritation and burns/ulceration. Absorption into skin may affect behavior, brain. Eyes: Extremely irritating and corrosive. Causes severe eye irritation and burns/ulceration, lacrimation, redness, and pain. May cause blurred vision, conjunctivitis, conjunctival and corneal destruction and permanent injury. Inhalation: Causes severe respiratory and mucous membrane irritation and possible chemical burns with inflammation and edema of the larynx and bronchi, chemical pneumonitis, pulmonary edema, burning sensation, coughing, sneezing, rhinitis, wheezing, dyspnea, shortness of breath. May cause ulceration of nasal tissue, chemical pneumonia, unconsciousness, and possible death. At high concentrations, respiratory effects may include acute lung damage, and delayed pulmonary edema. May affect blood, behavior/central nervous system (insomnia, nervous tremors with numb extremities, convulsions, giddines, muscular weakness), liver, urinary system (kidneys). Ingestion: Harmful if swallowed. Causes severe digestive tract irritation and burns with corrosion of the mucous membranes of the mouth , throat and esophagus with immediate epigastric pain and dysphagia in nectrotic areas, nausea, vomiting, diarrhea, gastric hemorrhage, hematemesis, and peritonitous. May also affect cardiovascular system (circulatory collapse, weak and rapid pulse, circulatory shock, bradycardia, hypotension, decreased

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations**Waste Disposal:**

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: CLASS 5.2: Organic peroxide.

Identification: : Organic peroxide, type E, liquid (Peroxyacetic acid, stabilized) (Peracetic acid) UNNA: 3107 PG: II

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information**Federal and State Regulations:**

Connecticut hazardous material survey.: Peracetic acid Illinois toxic substances disclosure to employee act: Peracetic acid; Sulfuric acid New York release reporting list: Peracetic acid; Acetic acid; Sulfuric acid New York acutely hazardous substances: Hydrogen Peroxide Rhode Island RTK hazardous substances: Peracetic acid; Hydrogen Peroxide; Acetic acid; Sulfuric acid Pennsylvania RTK: Peracetic acid; Hydrogen Peroxide; Acetic acid; Sulfuric acid Florida: Hydrogen Peroxide; Acetic acid Minnesota: Hydrogen Peroxide; Acetic acid; Sulfuric acid Massachusetts RTK: Peracetic acid; Hydrogen Peroxide; Acetic acid; Sulfuric acid Massachusetts spill list: Peracetic acid New Jersey: Peracetic acid; Hydrogen Peroxide; Acetic acid; Sulfuric acid New Jersey spill list: Peracetic acid New Jersey toxic catastrophe prevention act: Peracetic acid Louisiana RTK reporting list: Peracetic acid TSCA 8(b) inventory: Peracetic acid; Hydrogen Peroxide; Acetic acid; Sulfuric acid; Water

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:**WHMIS (Canada):**

CLASS B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F). CLASS C: Oxidizing material. CLASS D-1A: Material causing immediate and serious toxic effects (VERY TOXIC). CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC):

R7- May cause fire. R10- Flammable. R20/21/22- Harmful by inhalation, in contact with skin and if swallowed. R34- Causes burns. R43- May cause sensitization by skin contact. S7- Keep container tightly closed. S24/25- Avoid contact with skin and eyes. S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S28- After contact with skin, wash immediately with plenty of water S36/37/39- Wear suitable protective clothing, gloves and eye/face protection. S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). S46- If swallowed, seek medical advice immediately and show this container or label.

HMIS (U.S.A.):

Health Hazard: 3

Fire Hazard: 2

Reactivity: 4

Personal Protection: h

National Fire Protection Association (U.S.A.):

Health: 3

Flammability: 2

Reactivity: 4

Specific hazard:

Protective Equipment:

Gloves. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

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