



MATERIAL SAFETY DATA SHEET

PRODUCT NAME: LERASEPT™ SPECIAL R-5

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SECTION 01 - MATERIAL IDENTIFICATION

PRODUCT NAME: LERASEPT™ SPECIAL R-5
CAS CHEMICAL NAME: Peracetic Acid
SYNONYMS: Peroxyacetic Acid, Peroxyethanoic Acid
INTENDED USAGE: Sanitizer, Disinfectant
EPA REGISTRATION NO.: 68660-4-68256
DATE PREPARED: November 21, 2006
LAST REVISION: January 22, 2004

CHEMICAL EMERGENCY RESPONSE NUMBER:
SPILL, LEAK, FIRE, EXPOSURE, OR ACCIDENT
CALL CHEMTREC (24 hr): 1-800-424-9300

SECTION 02 - HAZARDOUS INGREDIENTS

CAS NUMBER AND CHEMICAL NAME	%	ACGIH TWA PPM	ACGIH TWA MG/M ³	ACGIH STEL PPM	ACGIH STEL MG/M ³
7722-84-1 Hydrogen Peroxide	<25	1	1.4	N/E	N/E
79-21-0 Peracetic Acid	<5.4	N/E	N/E	N/E	N/E
64-19-7 Acetic Acid	12	10	25	15	37

N/E = Not established <> S = Skin <> N/A = Not applicable <> C = Ceiling

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SECTION 03 - HEALTH HAZARDS

EMERGENCY OVERVIEW NFPA RATING

HEALTH – 3

**FLAMMABILITY – 2
OX**

REACTIVITY – 4

Personnel Protective Equipment (see Section 13): D

Strong Oxidizer, Corrosive. Liquid and vapors cause severe irritation or chemical burns to eyes and skin. Harmful if inhaled. May be fatal if ingested.

ROUTES OF EXPOSURE:

Ingestion
Eyes
Skin Absorption
Inhalation

HEALTH HAZARDS:

Causes severe irritation or burns on contact with eyes and skin. Harmful when ingested or inhaled. Overexposure by ingestion may be fatal.

SIGNS AND SYMPTOMS OF EXPOSURE (ACUTE EFFECTS):

Eye contact: Contact with eyes may result in eye corrosion with corneal or conjunctival ulceration with possible irreversible eye damage, including loss of vision. Symptoms may include stinging, severe pain, redness, tearing, and bleaching. Vapors may cause severe irritation or possible burns to the eyes with possible irreversible eye damage.

Skin contact: Contact with skin causes severe chemical burns indicated by symptoms such as bleaching, itching, pain, or developing rash. Higher or prolonged exposure may result in severe skin burns or ulceration.

Inhalation: Overexposure by inhalation may cause breathing difficulties, severe irritation and possible chemical burns to the upper and lower respiratory tract, including pneumonitis and pulmonary edema. Other symptoms may include coughing, choking, and nausea.

Ingestion: Ingestion may cause immediate pain and severe burns to the mouth, throat, esophagus, and the gastrointestinal tract. Symptoms may include upper abdominal pain, "heartburn", nausea, vomiting, and diarrhea. "Coffee grounds" vomits and black tarry stools may occur as a result of gastrointestinal tract bleeding. Perforation of the gastrointestinal tract is possible, accompanied by shock. Excessive fluid in the mouth and nose may pose the risk of suffocation. Risk of throat edema and suffocation. Risk of chemical pneumonitis and pulmonary edema. Additional effects from overexposure include red blood cell destruction or gas embolism. Gross overexposure by ingestion may be fatal.

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SIGNS AND SYMPTOMS OF EXPOSURE (LONG TERM EFFECTS):

Repeated or prolonged inhalation of vapors may cause severe, long-lasting irritation or burns to the upper and lower respiratory tract with risk of sore throat, nose bleeding and chronic bronchitis. Pulmonary edema may develop. Repeated ingestion causes severe, long-lasting burns to the mucous membranes and all contacted tissue with possible discoloration of the tissue and may be fatal. Swallowing and speech may be difficult and then almost impossible. Repeated or prolonged eye contact may cause loss of vision with symptoms including strong pain, tearing, and redness. Repeated or prolonged skin contact may destroy the tissue with symptoms including bleaching, strong pain, and itching.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

Individuals with preexisting skin, eye, and/or respiratory diseases may have increased susceptibility to the effects of product exposure.

CARCINOGENICITY:

None of the components in this material are listed by the IARC, NTP, OSHA, or ACGIH as a carcinogen.

ACUTE TOXICITY DATA:

Inhalation LC₅₀: 4 hrs, rat, 4080 mg/m³ (5% Peracetic Acid solution)

Dermal LD₅₀: rat, >12,000 mg/kg (7% Peracetic Acid solution)

Oral LD₅₀: rat, 330 mg/kg (7% Peracetic Acid solution)

Irritation: Rabbit, serious damage (eyes) (4% Peracetic Acid solution)
Rabbit, corrosive (skin) (5% Peracetic Acid solution)
Inhalation, rat, respiratory irritation (RD₅₀), 22 – 24 mg/m³

CHRONIC TOXICITY DATA:

Mutagenic in vitro, but not in vivo. Oral route, after repeated exposure, rat, no systemic effect. Dermal route, after repeated exposure, guinea pig, ≥ 0.12% solution, irritating effect. Inhalation, after single exposure, rat, 5 mg/m³, irritating effect. No carcinogenic effect.

AQUATIC TOXICITY:

96 hr LC₅₀ (Salmo gairdneri): 36mg/l

Conditions: Fresh water, 15% Peracetic acid solution

Additional data available upon request

SECTION 04 – FIRST AID

EYE CONTACT: Immediately flush eyes with a 2% Sodium Carbonate solution for at least 15 minutes, lifting lower and upper eyelids occasionally. Continue flushing with water for additional 15 minutes, lifting lower and upper eyelids occasionally. If Sodium Carbonate solution is not available, flush eyes with plenty of water for at least 20 minutes. Get medical attention, preferred eye specialist, immediately.

SKIN CONTACT: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Discard clothing. Get medical attention.

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INHALATION: Immediately remove victim to fresh air. If victim is not breathing, give artificial respiration. If breathing is difficult, give Oxygen. Get medical attention immediately.

INGESTION: Give victim large quantities of water, but do not induce vomiting. If vomiting occurs, administer additional water. Do not attempt to induce vomiting or give anything by mouth to an unconscious person. Get medical attention immediately.

NOTES TO PHYSICIAN: If swallowed, large amounts of Oxygen may be released rapidly. Consider placement of gastric catheter to release stomach gas. Administer Oxygen therapy via intra-tracheal intubation. If necessary, tracheotomy. Avoid gastric lavage (risk of perforation). In case of intense pain, inject an I.M. morphomimetic analgesic drug (e.g piritramide) before taking to hospital. Prevention or treatment of shock and pulmonary edema. Urgent digestive edoscopy with aspiration of the product. The distention of the stomach or the esophagus may be injurious.

SECTION 05 – FIRE AND EXPLOSION DATA

CHARACTERISTICS:

Flash Point: >212° F (100° C)
Upper Explosion Limit (UEL): N/A
Lower Explosion Limit (LEL): N/A
Autoignition Temperature: N/A
Flash Point Method(s): Setaflash, CC-None
Vigorous Decomposition only
Fire Hazard Classification: 2
(OSHA/NFPA)

EXTINGUISHING MEDIA:

If involved in a fire, use water from safe distance. Cool exposed containers with water spray.

SPECIAL FIRE FIGHTING PROCEDURES:

For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self contained breathing apparatus and full protective clothing. See Section 6 "REACTIVITY HAZARD DATA" for unusual decomposition products.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

When heated, the liquid decomposes and releases rapidly oxygen which, when mixed with air, may burn or be explosive. Fine mists or sprays of this material may be flammable below the normal flash point. Oxygen released from Peracetic Acid and Hydrogen Peroxide may force organic or Hydrogen vapors into an explosive range. Follow appropriate NFPA codes.

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SECTION 06 – REACTIVITY DATA

CHEMICAL STABILITY:

Stable [X] Unstable [X*]

Stable under normal use conditions with slow gas release.

*SADT: Passes 49° C (120° F); fails 55° C (131° F)

CONDITIONS TO AVOID (If unstable):

Unstable with heat or contamination; rapid liberation of Oxygen gas may result in dangerous pressures (See “Decomposition” below).

MAJOR CONTAMINANTS CONTRIBUTING TO INSTABILITY:

Dirt, organic materials, bases, heavy metals such as iron, copper, chromium and cobalt, reducing agents and flammable substances.

INCOMPATIBILITY (Materials to avoid):

Acetic anhydrides, reducing agents, dirt, organic materials, bases, heavy metals such as iron, copper, chromium and cobalt and flammable substances.

HAZARDOUS DECOMPOSITION PRODUCTS (from burning, heating, or reaction with other materials):

Acetic Acid, Methane, and Oxygen, which supports combustion. Contamination or heat may cause self-accelerating exothermic decomposition with rapid release of Oxygen gas and steam release that can cause dangerous pressure. May react dangerously with rust, dust, dirt, iron, copper, heavy metals, or their salts (such as Mercuric oxide or chloride), alkalis, and with organic materials (especially Vinyl monomers).

HAZARDOUS POLYMERIZATION:

Will not occur.

CONDITIONS TO AVOID (if may occur):

N/A

NFPA REACTIVITY RATING: 3

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SECTION 07 – SPILL, LEAK AND DISPOSAL INFORMATION

CLEAN UP PROCEDURES:

SMALL SPILLS:

LARGE SPILLS:

Confine spill area. Stop leak if this can be done without danger. Contain liquid spills using a barrier of non-flammable inert materials such as chemical absorbent, sand, or by diking the area. Undiluted material must not enter confined spaces or drains. Spilled material should be picked up with non-flammable chemical absorbent. Transfer absorbed material into a properly marked and closed container. If non-flammable absorbent is not available, flood spill area with excess water and drain to a self-contained chemical sewer or waste water treatment system. Prevent spilled product or contaminated wash water from entering drinking water supplies or streams. Undiluted material must not enter city sewer, streams, or waterways. Peracetic Acid will decompose to Oxygen, water, and Acetic Acid. After decomposition, adjust pH value to accepted values prior to disposal. Contact local regulatory authorities before discharge as laws may vary upon locations.

OTHER EMERGENCY ADVICE:

Isolate or enclose the area of spill or leak. Shut off ignition sources including flames, smoking, flares, or spark producing tools. Keep combustible and organic materials away. Review FIRE AND EXPLOSION HAZARDS and PROTECTIVE MEASURES before proceeding with clean up. All clean up personnel should wear recommended PERSONAL PROTECTIVE EQUIPMENT during clean up.

WASTE/CONTAINER DISPOSALS:

Pesticide Disposal: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide spray mixture or rinsate is a violation of Federal Law. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, or public waters unless the components of this product are specifically identified and addressed in a NPDES permit. Do not discharge effluent containing this product into sewer systems without previously notifying the sewage plant authority. Care must be taken when using or disposing of chemical materials and/or their containers to prevent environmental contamination. It is the users duty to dispose of the chemical materials and/or their containers in compliance with the Clean Air Act, the Clean Water Act, the Resource Conservation And Recovery Act, as well as any other relevant federal, state, or local laws/regulations regarding disposal.

Container Disposal: Triple rinse (or equivalent). Then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill or incinerator or, if allowed by state and local authorities, by burning. If burned, stay out of smoke. To avoid waste generation, as much as possible, use dedicated containers. Empty containers are a source of hazard until they have been effectively cleaned. They must be handled and stored accordingly. The empty and clean containers are to be reused in conformity with regulations. Containers that cannot be cleaned must be treated as waste.

REPORTABLE QUANTITY (RQ) (49CFR) (CWA/CERCLA):

100 lbs

SECTION 08 – PROTECTIVE MEASURES

EYE PROTECTION:

Wear chemical splash goggles or full-face shield. In addition, wear chemical splash goggles/full-length face shield combination, where the possibility of eye and face contact due to splashing or spraying of material exists. Contact lenses should not be worn when working with hazardous materials.

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SKIN PROTECTION:

Wear impervious protective clothing, including boots, gloves, apron, or coveralls to prevent skin contact.

RESPIRATORY PROTECTION:

Avoid breathing vapors and/or mists. Make sure there is adequate ventilation. Where adequate ventilation can not be provided, wear NIOSH/MSHA approved respiratory protection.

WORKING AND HYGIENIC PRACTICES:

Provide readily accessible showers and eye wash stations. Wash at the end of each working and before eating, smoking, or using the toilet.

SECTION 09 – STORAGE AND HANDLING

STORAGE:

Store product only in properly vented shipping containers in a cool, dry, and well ventilated area. Do not block vent. Do not replace original ventilation cap with substitute. Do not store on wooden pallets. Do not store where contact with incompatible materials could occur, including during a spill. Do not add any other product to container. Never return unused product into container, instead dilute with plenty of water and discard. Protect container from physical damage and from direct sunlight. **Avoid storage temperatures exceeding 30° C (88° F).** Keep container tightly closed when not in use. **KEEP OUT OF REACH OF CHILDREN!**

HANDLING:

When handling, wear appropriate protective clothing (See PROTECTIVE MEASURES). Never touch eyes and/or face with hands or gloves that may be contaminated with product. Do not eat, drink, or smoke during handling.

OTHER PRECAUTIONS:

Carefully read all instructions on product label and Technical Data Sheet before handling or using this product. Make sure that all engineering and personal protective equipment is in working order.

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SECTION 10 – PHYSICAL PROPERTIES

FORM, COLOR, AND APPEARANCE:

PHYSICAL FORM: Liquid
COLOR: Clear, colorless
ODOR: Pungent

TYPICAL PHYSICAL DATA:

pH (Concentrate): < 1
VAPOR PRESSURE @ 25° C (mm Hg): N/D
VAPOR DENSITY (Air = 1): N/D
BOILING POINT: Decomposes
FREEZING/MELTING POINT: ~18° F (-28° C)
SOLUBILITY IN WATER: Complete
SPECIFIC GRAVITY (g/cm³): 1.10
DENSITY (lb/gal): 9.17
EVAPORATION RATE (Butylacetate = 1): < 1

SECTION 11– TRANSPORT INFORMATION

UN No.: 3149
PRIMARY HAZARD CLASS: OXIDIZER (5.1)
SECONDARY HAZARD CLASS: CORROSIVE (8)
PACKAGING GROUP: II
FREIGHT CLASS: 55
DOT SHIPPING NAME: Hydrogen Peroxide and Peroxyacetic Acid mixtures, stabilized (with acids, water and not more than 6% Peroxyacetic Acid).
IATA SHIPPING NAME: ---
SPECIAL PRECAUTIONS: Always load last.

SECTION 12 – FEDERAL REGULATIONS

TSCA Inventory List:

Yes.

CERCLA Hazardous Substance (40 CFR § 302):

Listed Substance: Yes (acetic acid).
Unlisted Substance: Yes.
Characteristic: Ignitability, corrosivity.
RCRA Waste Number: D001, D002.
Reportable Quantity: 100 pounds; 5,000 pounds (acetic acid).

SARA Title III, Sections 311/312 (40 CFR § 370):

Hazard Category: Fire Hazard
Immediate Health Hazard
Reactive
Planning Threshold: 500 pounds

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SARA Title III, Section 313 (40 CFR § 372):

Listed Toxic Chemical: Yes.

SARA Title III, Sections 302/303 (40 CFR § 355)

Listed Substance: Yes.

Reportable Quantity: 500 pounds.

Planning Threshold: 500 pounds.

Canadian WHMIS Classification

C - Oxidizing

E - Corrosive

F - Dangerously Reactive

Canadian Domestic Substances List (DSL)

Listed Substance: Yes.

Occupational Safety and Health Administration (OSHA) requirements for process safety management must be followed anytime at least 1,000 lbs. of Peracetic or (> 60% acetic acid) is used or stored. Refer to 29CFR1910.119 for specific details.

Environmental Protection Agency (EPA) requirements for a Risk Management Plan (RMP) must be followed anytime at least 10,000 lbs. of Peracetic acid are used or stored. Refer to 40CFR68.150 for specific details.

Loeffler Chemical Corporation Peracetic Acid formulations as packaged have a partial pressure of Peracetic Acid less than 10 mm of mercury (mmHg) up to 60° C (140° F) and therefore need not be considered when determining threshold quantities for RMP. Refer to 40CFR68.115 (b) (1) for details.

SECTION 13 - LETTER DESIGNATION OF PERSONAL PROTECTIVE EQUIPMENT

Safety Glasses	A
Safety Glasses, Gloves	B
Safety Glasses, Gloves, Synthetic Apron	C
Face Shield, Gloves, Synthetic Apron	D
Safety Glasses, Gloves, Dust Respirator	E
Safety Glasses, Gloves, Synthetic Apron, Dust Respirator	F
Safety Glasses, Gloves, Vapor Respirator	G
Splash Goggles, Gloves, Synthetic Apron, Vapor Respirator	H
Safety Glasses, Gloves, Combination Dust and Vapor Respirator	I
Safety Glasses, Gloves, Synthetic Apron, Combination Dust and Vapor Respirator	J
Airline Hood or Mask, Gloves, Full Protective Suit, Boots	K
Situations Requiring Specialized Handling	X

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