Enviro Tech Chemical Services, Inc. 500 Winmoore Way Modesto, CA 95358

SDS ID: FP0481 NAME: REFLEX

SAFETY DATA SHEET

SECTION 1 - IDENTIFICATION

Product Identifier: REFLEX **Product Code:** 37

Product Use: Acid sanitizer.

Chemical Family: Oxidizer

Registration Number: 63838-12

Dilution Information: 0.13%-0.39% (v/v)

Enviro Tech Chemical Services, Inc.
500 Winmoore Way Modesto, CA 95358
(209) 581-9576 (7 AM to 5 PM, PST, Monday to Friday)

24 Hr. Emergency Tel.#: 800-255-3924

SECTION 2 - HAZARDS IDENTIFICATION

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), These requirements differ from the classification criteria and hazard information required for safety data sheets of non-pesticide chemicals. Please see Section 15 for FIFRA labeling information.

Classification of the Product AS SOLD:

Skin Corrosion - Category 1
Serious Eye Damage - Category 1
Oxidizing Liquids - Category 2
Corrosive to Metals - Category 1
Organic Peroxides - Type G
Acute Toxicity - Oral Category 4
Acute Toxicity - Dermal Category 5
Hazardous to the Aquatic Environment, Acute Toxicity Category 2

Classification of the Product AT USE DILUTION:

Acute Toxicity - Oral Category 5

Signal Word: DANGER

Hazard Statements:

Causes severe skin burns and eye damage
May intensify fire; oxidizer
May be corrosive to metals
Harmful if swallowed
May be harmful in contact with skin
Toxic to aquatic life

Precautionary Statements:

Prevention

Wear protective gloves/protective clothing/eye protection/face protection.
Wash hands thoroughly after handling
Keep away from heat/sparks/open flames/hot surfaces - No smoking.
Keep/Store away from clothing/combustible materials.
Do not eat, drink or smoke when using this product.
Keep only in original container.
Take any precaution to avoid mixing with combustibles.

Response

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER or doctor/physician if you feel unwell.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor/physician.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

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For specific treatment see Section 4 First Aid.
Wash contaminated clothing before reuse.
In case of fire: Use water for extinction.
Absorb spillage to prevent material damage.

Storage
It is recommended to store this product at temperatures where the bulk liquid will not exceed 86°F / 30°C. Keep cool.
Store locked up.
Store in a corrosive resistant container with a resistant inner liner.

Disposal
Dispose of contents/container in accordance with local regulations.

Hazards not Otherwise Classified:
No other hazards classified.

GHS label elements for Product AT USE DILUTION

Signal Word: NONE

Hazard Pictograms: NONE

Hazard Statements:
May be harmful if swallowed

Precautionary Statements:
Prevention
Wash hands thoroughly after handling
Do not eat, drink or smoke when using this product.

Response
IF SWALLOWED: Rinse mouth. Immediately call a POISON CENTER or doctor/physician.

Disposal
Dispose of contents/container in accordance with local regulations.

Hazards not Otherwise Classified:
No other hazards classified.

SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

Product AS SOLD

Ingredient	Synonym	CAS Number	Concentration
HYDROGEN PEROXIDE	H2O2	7722-84-1	22.0-24.4%
ACETIC ACID	NONE	64-19-7	1-5%
SULFURIC ACID	NONE	7664-93-9	1-2%
NITRIC ACID	NONE	7697-37-2	8-10%
PEROXYACETIC ACID	PAA	79-21-0	6.0-6.6%

Product AT USE DILUTION

Ingredient	Synonym	CAS Number	Concentration
HYDROGEN PEROXIDE	H2O2	7722-84-1	0.03-0.10%
PEROXYACETIC ACID	PAA	79-21-0	0.009-0.026%
NITRIC ACID	NONE	7697-37-2	0.013-0.039%

SECTION 4 - FIRST-AID MEASURES

Product AS SOLD:

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Inhalation: Remove source of exposure or move person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. If breathing is difficult, trained personnel should administer emergency oxygen if advised to do so by the POISON CENTER/doctor. Symptoms of pulmonary edema can be delayed up to 48 hours after exposure. If direct contact during rescue breathing poses a threat to the first aid provider, "Avoid mouth-to-mouth contact by using a barrier device."
Skin Contact: Take off immediately contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Rinse skin with lukewarm, gently flowing water/shower with a flushing duration of 30 minutes. Immediately call POISON CENTER/doctor. Wash contaminated clothing before re-use.
Eye Contact: Remove source of exposure or move person to fresh air. Rinse eyes cautiously with lukewarm, gently flowing water for several minutes, while holding the eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing for 30 minutes. Take care not to rinse contaminated water into the unaffected eye or into the face. Immediately call a POISON CENTER/doctor.
Ingestion: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor. If vomiting occurs naturally, lie on your side, in the recovery position.
Most Important Symptoms and Effects, both Acute and Delayed: Causes severe skin burns and eye damage, burning of the mouth, throat, and esophagus.
Indication of any Immediate Medical Attention and Special Treatment Needed: Treat symptomatically

Product AT USE DILUTION:

Inhalation: Seek medical attention if symptoms occur.
Skin Contact: Rinse with plenty of water.
Eye Contact: Rinse with plenty of water.
Ingestion: Rinse mouth. Immediately call a poison center/doctor if symptoms occur.
Most Important Symptoms and Effects, both Acute and Delayed: Irritation of the gastrointestinal tract.
Indication of any Immediate Medical Attention and Special Treatment Needed: Treat symptomatically

SECTION 5 - FIRE-FIGHTING MEASURES

Product AS SOLD:

Extinguishing Media: Use water spray, powder, foam, carbon dioxide.

Special hazards arising from the substance or mixture: Non combustible. May give off irritating or toxic fumes (or gases) in a fire.

Flammability classification (OSHA 29 CFR 1910.106) (Hazcom 2012): Non flammable

Hazardous Combustion Products: May cause fire and explosions when in contact with incompatible materials.

Special protective equipment and precautions for firefighters: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus.

Product AT USE DILUTION:

Extinguishing Media: Material is not flammable.

Special hazards arising from the substance or mixture: No special hazards known.

Flammability classification (OSHA 29 CFR 1910.106) (Hazcom 2012): Non flammable

Hazardous Combustion Products: None known.

Special protective equipment and precautions for firefighters: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Product AS SOLD:

Personal precautions, protective equipment and emergency procedures: Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering.
Methods and materials for containment and cleaning up: SMALL SPILLS (less than 1 gallon): Neutralize with soda ash or cover with dry earth, sand or other non-combustible material, place into loosely covered plastic containers for later disposal. If neutralized, material can be diluted into drain. LARGE SPILL: Restrict access to area until completion of clean up. Prevent liquid from entering sewers or waterways. Stop or reduce leak if safe to do so. Dike with inert material (sand, earth, etc.). Collect into plastic containers for disposal. Ensure adequate decontamination of tools and equipment following clean up.
Special spill response procedures: Collect spills in plastic containers only. Prevent from entering sewers, waterways, or low areas.

Product AT USE DILUTION:

Personal precautions, protective equipment and emergency procedures: Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering.
Methods and materials for containment and cleaning up: SMALL SPILLS (less than 1 gallon): Dike small spills with inert material (sand, earth, etc.). Collect in plastic containers only. Wash area and let dry. LARGE SPILL: Should be diked with sand ahead of spill. Collect in plastic containers only. Ensure adequate decontamination of tools and equipment following clean up.
Special spill response procedures: Collect spills in plastic containers only. Prevent from entering sewers, waterways, or low areas.

SECTION 7 - HANDLING AND STORAGE

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Product AS SOLD:

Precautions for Safe Handling: Wear at least chemical resistant gloves and eye protection, face shield, and chemical resistant garments when handling, moving or using this product. Do not contaminate water, food, or feed by storage or disposal.
Conditions for Safe Storage: It is recommended to store this product at temperatures where the bulk liquid will not exceed 86°F / 30°C. Store in a cool, dry, well ventilated place away from direct sunlight. Keep container closed when not in use.
Incompatible Materials: Avoid strong reducing agents, soft metals, heat and bases (unless product has been diluted to less than 1000 ppm, then bases may be used to gradually adjust to a pH of less then 9).

Product AT USE DILUTION:

Precautions for Safe Handling: Do not swallow or ingest. Wash hands thoroughly after handling.
Conditions for Safe Storage: Store in a cool, dry, well ventilated place away from direct sunlight. Keep container closed when not in use.
Incompatible Materials: Avoid strong reducing agents, soft metals, heat and bases.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Product AS SOLD:

EXPOSURE LIMITS:			OSHA PEL	ACGIH TLV	
CHEMICAL NAME	CAS NO.	TWA	STEL/CEILING	TWA	STEL
ACETIC ACID	64-19-7	10 ppm	15 ppm/40 ppm (CalOSHA)	10 ppm	15 ppm
HYDROGEN PEROXIDE	7722-84-1	1 ppm	1 ppm/N/A (CalOSHA)	1 ppm	N/A
PERACETIC ACID	79-21-1	N/A	N/A	N/A	0.4 ppm

Ventilation and engineering measures: Forced air, local exhaust, or open air is adequate.

Respiratory Protection: In case of confined spaces or high levels encountered in the air, wear self-contained breathing apparatus.

Skin Protection: Wear chemical resistant gloves and chemical resistant garments when handling, wash garments before re-use.

Eye/Face Protection: Wear chemical goggles; also wear a face shield if splashing hazard exists.

Other Protective Equipment: Eye wash facility and emergency shower should be in close proximity.

General Hygiene Conditions: Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Remove and wash contaminated clothing before re-use. Handle in accordance with good industry hygiene and safety practice.

Product AT USE DILUTION:

Ventilation and engineering measures: No special equipment needed.

Respiratory Protection: No respiratory personal protective equipment (PPE) required.

Skin Protection: No personal protective equipment (PPE) required.

Eye/Face Protection: No personal protective equipment (PPE) required.

Other Protective Equipment: No special protective equipment required.

General Hygiene Conditions: Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Product AS SOLD:

Appearance: Clear colorless liquid
Odor: Vinegar odor
pH: <2.0 (1:100)
Melting/Freezing point: < 10° F / <-12 ° C
Initial boiling point and boiling range: No information available
Flash Point: >207° F / >98 ° C
Flammability (solid, gas): Non-flammable
Vapor Pressure (mm Hg): 22
Specific gravity: 1.18 g/mL
Solubility in water: Complete
Auto ignition temperature: >518° F/ >270° C
Decomposition temperature: No information available
Viscosity: 5-15 cSt at 20°C / 68°F
Volatiles (% by weight): >99
Volatile Organic Compounds (VOC's): No information available

Product AT USE DILUTION:

Appearance: Clear colorless liquid
Odor: Slight vinegar odor
pH: 2.0-3.0

SECTION 10 - STABILITY AND REACTIVITY

Product AS SOLD:

Reactivity: Reactive with bases, metals, reducing agents and combustible materials
Chemical Stability: Stable for up to 1 year when stored under normal conditions.
Possibility of Hazardous Reactions: May react with incompatible materials
Conditions to Avoid: Incompatible materials and high temperatures
Incompatible Materials: Reactive with bases, metals, reducing agents and combustible materials
Hazardous Decomposition Products: Carbon oxides and nitrogen oxides. Oxygen which supports combustion.

Product AT USE DILUTION:

Reactivity: Reactive with bases, metals, reducing agents and combustible materials
Chemical Stability: Stable for up to 8-24 hours in distilled water. Chemical stability may be drastically reduced if hard water is used.
Possibility of Hazardous Reactions: May react with incompatible materials
Conditions to Avoid: Incompatible materials and high temperatures
Incompatible Materials: Reactive with bases, metals, reducing agents and combustible materials
Hazardous Decomposition Products: None known.

SECTION 11 - TOXICOLOGICAL INFORMATION

Product AS SOLD:

Information on likely routes of exposure:

Routes of entry - inhalation: YES

Routes of entry - skin & eye: YES

Routes of entry - ingestion: YES

Routes of entry - skin absorption: YES

Potential Health Effects:

Signs and symptoms of short term (acute) exposure:

Inhalation: Inhalation of the mist may produce severe irritation of respiratory tract, characterized by coughing, choking, shortness of breath, headaches, dizziness, nausea, weakness and/or drowsiness.

Ingestion: Corrosive! Swallowing causes severe burns of mouth, throat, and stomach. Severe scarring of tissue, corrosion, permanent tissue destruction and death may result. Symptoms may include severe pain, nausea, vomiting, diarrhea, shock, hemorrhaging and/or fall in blood pressure. Damage may appear days after exposure.

Skin: Corrosive! Contact with skin causes irritation or severe burns and scarring with greater exposures. Concentrated nitric acid dyes human skin yellow on contact.

Eye: Corrosive! Causes irritation of eyes, and with greater exposures it can cause burns that may result in permanent impairment of vision, even blindness.

Potential Chronic Health Effects:

Mutagenicity: Not known to have mutagenic effects in humans or animals.

Carcinogenicity: No components are listed as carcinogens by ACGIH, IARC, OSHA, or NTP.

Reproductive effects: No known reproductive effects in humans or animals.

Sensitization to material: Not a known sensitizer in humans or animals.

Specific target organ effects: No information available

Medical conditions aggravated by overexposure: No information available

Toxicological data: The calculated ATE values for this mixture are:

ATE oral = 589 mg/kg

ATE dermal = 4592 mg/kg

ATE inhalation = >20 mg/L or >20,000 ppm

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Product AT USE DILUTION:

Information on likely routes of exposure:

Routes of entry - inhalation: NO

Routes of entry - skin & eye: NO

Routes of entry - ingestion: YES

Routes of entry - skin absorption: NO

Potential Health Effects:

Signs and symptoms of short term (acute) exposure:

Inhalation: Not a respiratory irritant.
Ingestion: May cause irritation to the digestive system.
Skin: Not a skin irritant but may cause skin irritation on some individuals if not washed from skin. Rinse hands thoroughly if exposed.

Eye: Not an eye irritant.

Potential Chronic Health Effects:

Mutagenicity: No known mutagenic effects.

Carcinogenicity: No components are listed as carcinogens by ACGIH, IARC, OSHA, or NTP.

Reproductive effects: No known reproductive effects.

Sensitization to material: No expected to cause sensitization.

Specific target organ effects: No information available

Medical conditions aggravated by overexposure: No information available.

Toxicological data: The calculated ATE values for this mixture are:

ATE oral = 4521 mg/kg

ATE dermal = >10,000 mg/kg

ATE inhalation = >20 mg/L or >20,000 ppm

SECTION 12 - ECOLOGICAL INFORMATION

Product AS SOLD:

Ecotoxicity: May harmful to aquatic life.
Persistence and degradability: Not expected to persist. Expected to readily biodegrade.
Bioaccumulation potential: Not expected to bio accumulate.
Mobility in soil: No information available

Product AT USE DILUTION

Ecotoxicity: No information available.
Persistence and degradability: No information available.
Bioaccumulation potential: No information available.
Mobility in soil: No information available.

SECTION 13 - DISPOSAL CONSIDERATIONS

Product AS SOLD:

Handling for disposal: Do not contaminate water, food, or feed by storage and/or disposal. When handling refer to protective measures listed in sections 7 and 8. Empty residue from containers, rinse container well.
Method of disposal: Dispose of in accordance with all applicable federal, state, provincial and local regulations. Contact your local, state, provincial or federal environmental agency for specific rules.
RCRA: If product becomes a waste, it does meet the criteria of a hazardous waste as defined by the US EPA, because of: Corrosivity D002

Product AT USE DILUTION:

Handling for disposal: Do not contaminate water, food, or feed by storage and/or disposal. When handling refer to protective measures listed in sections 7 and 8. Empty residue from containers, rinse container well.
Method of disposal: Dispose of in accordance with all applicable federal, state, provincial and local regulations. Contact your local, state, provincial or federal environmental agency for specific rules.

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SECTION 14 - TRANSPORTATION INFORMATION

Certain shipping modes or package sizes may have exceptions from the transport regulations. The classification provided may not reflect those exceptions and may not apply to all shipping modes or package sizes.

Please note the GHS and DOT Standards are NOT identical and therefore can have varying classifications

Product AS SOLD:

US 49 CFR/DOT/IATA/IMDG Information:
UN No.: 3098
UN Proper Shipping Name: Oxidizing liquid, corrosive, n.o.s. (contains hydrogen peroxide and peroxyacetic acid mixture, stabilized)
Transportation hazard class(es): 5.1 (8)
Packing Group: II

Environmental hazards: No hazards identified.

SECTION 15 - REGULATORY INFORMATION

Product AS SOLD:

FIFRA Classification/Typical Hazard Labeling, as outlined in EPA Label Review Manual

Hazard Data

Signal Word	DANGER
Acute Toxicity, oral	Category II: May be fatal if swallowed
Acute Toxicity, dermal	Category III: Harmful if absorbed through skin
Skin irritation/corrosion	Category I: Corrosive. Causes skin burns
Serious eye damage	Category I: Corrosive, Causes irreversible eye damage
Sensitization	Not Classified (NC)
Environmental (aquatic) toxicity	This pesticide is toxic to fish and other aquatic organisms.

US Federal Information:

TSCA information: All components are listed on the TSCA inventory.
US CERCLA Reportable quantity (Hazardous substance RQ): Acetic acid has a RQ of approximately 98000 lbs. of as is chemical. Nitric acid has a RQ of approximately 10000 lbs. of as is chemical.
US EPCRA Reportable quantity (Extremely hazardous substance RQ): Peracetic acid has a RQ of approximately 7600 lbs. of as is chemical. Nitric acid has a RQ of approximately 100000 lbs. of as is chemical.
Clean Air Act Section 112(r) Threshold Quantity (TQ): Peracetic acid has a TQ of approximately 150000 lbs. of as is chemical.
CalARP State Treshold Quantity (TQ): Nitric acid has a TQ of approximately 10000 lbs. of as is chemical.
SARA Title III: Reactivity Hazard, Acute Health Hazard
International Information: WHMIS: Class C: Oxidizing material. Class E: Corrosive material
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations.

SECTION 16 - OTHER INFORMATION

Product AS SOLD:

NFPA	**Health Hazards 3**	**Flammability 1**	**Stability 1**	**Special Hazards OX, COR**
HMIS	**Health Hazards 3**	**Flammability 1**	**Physical Hazard 1**	**Personal Protection C**
NFPA/HMIS Ratings Legend		Severe = 4; Serious = 3; Moderate = 2; Slight = 1; Minimal = 0 Special hazards: OX = Oxidizer; COR = Corrosive Personal Protection = C (safety glasses, gloves, protective apron)		

Product AT USE DILUTION:

NFPA	**Health Hazards 2**	**Flammability 0**	**Stability 0**	**Special Hazards NONE**
HMIS	**Health Hazards 2**	**Flammability 0**	**Physical Hazard 0**	**Personal Protection 0**
NFPA/HMIS Ratings Legend		Severe = 4; Serious = 3; Moderate = 2; Slight = 1; Minimal = 0 Personal Protection = 0 (none)		

Legend:

SARA: The Superfund Amendments and Reauthorization Act
TSCA: Toxic Substances Control Act
DOT: Department of Transportation
RCRA: Resource Conservation and Recovery Act
CFR: Code of Federal Regulations
ATE: Acute Toxicity Estimate

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