Section 1 Identification		
Product Name/Part Number	**Supplier**	**Emergency Contact**
Micro-X® Disinfectant / Sterilant P/N: MX-30004	**Reprocessing Products Corporation (RPC) 6901 E Fish Lake Rd Maple Grove, MN 55369 USA 800-647-3873**	**Spill, Leak, Fire, or Accident Call CHEMTREC Day or Night Within USA and Canada: 800-424-9300**
Recommended Use: Disinfection of hemodialysis water purification systems and sterilizing hollow fiber dialyzers.		

Section 2 Hazard(s) Identification		
Globally Harmonized System (GHS) Hazard Communication Standard (HCS)		
Physical	**Health**	**Environmental**
Oxidizer Category 2	**Acute Toxicity Category 4 (oral, dermal and inhalation) Eye Corrosion Category 1 Skin Irritation Category 2 Specific Target Organ Toxicity, Single Exposure Category 3 (respiratory irritant)**	**Aquatic Acute Toxicity Category 2 Aquatic Chronic Toxicity Category 3**

GHS / HCS Label Elements:

Signal word: Danger! Contains hydrogen peroxide, acetic acid, and peracetic acid.

Hazard statements:

Statements of Hazard
H272 May intensify fire; oxidizer
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H401 Toxic to aquatic life.
H412 Harmful to aquatic life with long lasting effects.

Prevention
P210 Keep away from heat.
P220 Keep away from clothing and all combustible materials.
P221 Take any precaution to avoid mixing with combustibles and organic solvents.
P261 Avoid breathing mist, vapor, or spray.
P264 Wash thoroughly after handling.

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.
P302+P352 IF ON SKIN: Wash with plenty of water.
P312 Call a POISON CENTER or doctor if you feel unwell.
P362+P364 Take off contaminated clothing and wash it before reuse.
P304+P340 IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
P312 Call a POISON CENTER or doctor if you feel unwell.
P301+P312 IF SWALLOWED: Call a POISON CENTER if you feel unwell.
P330 Rinse mouth.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.
P280 Wear protective gloves, protective clothing, eye protection and face protection.

Disposal
P501 Dispose of contents and container in accordance with local and national regulations.

Storage
P405 Store locked up.

Other Hazards:

International Fire Code (IFC)
Appendix E – Hazard Categories
E102.1.7.1
Class 1

Section 3 Composition / Information on Ingredients		
Component	**Component CAS Number**	**Component Amount**
Hydrogen Peroxide	7722-84-1	27%
Acetic Acid	64-19-7	6.7%
Peracetic Acid (Peroxyacetic Acid)	79-21-0	4.5%
Water	7732-18-5	61.8%

Section 4 First Aid Measures

Eye Contact: Immediately flush with large amounts of water for at least 15 minutes while holding eyelids apart. Remove contact lenses, if present. Then continue flushing. Get immediate medical attention.

Skin Contact: Immediately flush with large amounts of water for at least 15 minutes. If clothing is contaminated, remove clothing, wash skin and wash clothing before reusing.

Ingestion: Do not induce vomiting. Rinse mouth with a small amount of water. Never give anything by mouth to an unconscious person. Get immediate medical attention.

Inhalation: If inhaled, remove to fresh air. Give artificial respiration if needed. If breathing, oxygen should be administered by a qualified person. Get immediate medical attention.

Most important symptoms/effects, acute and delayed: May cause severe eye irritation and burns. Causes skin irritation. Inhalation of vapor or mist may cause severe irritation of the upper respiratory tract. If swallowed, may cause intestinal irritation and discomfort. May be harmful if swallowed, inhaled or absorbed through the skin.

Indication of immediate medical attention/special treatment needed: Immediate medical attention is required for all routes of contact.

Section 5: Fire-fighting Measures

Suitable Extinguishing Media:

Use large quantities of water, water spray, dry chemical, or carbon dioxide.

Unsuitable Extinguishing Media:

Do not use water jet.

Specific Hazards Arising from the Chemical:

Contains hydrogen peroxide which is a strong oxidizer and may increase the flammability of combustible or flammable materials powdered metals. If allowed to dry, solid residue may present a fire hazard. Hydrogen peroxide will not burn but decomposes to release oxygen which supports combustion.

Explosion Hazard:

Contamination can cause rapid decomposition and an explosive rupture of the container if not properly vented.

Special Protective Equipment and Precautions for Fire-Fighters:

Firefighters should wear full protective gear and respiratory protection. Use water spray to cool exposed surfaces.

Section 6: Accidental Release Measures

Personal Precautions, Protective Equipment, and Emergency Procedures:

Use personal protective equipment. Refer to section 8. Evacuate personnel to safe areas.

Environmental Precautions:

If allowed by federal, state or local regulatory authority, flush spill to the sewer. Neutralize with sodium bicarbonate or sodium carbonate.

Methods and Materials for Containment and Cleaning Up:

Prevent further leakage or spillage if safe to do so. Soak up spill with mops, towels or similar materials. Rinse items used for soaking up spill with copious amounts of water.

Section 7: Handling and Storage

Precautions for Safe Handling:

Do not get in eyes, on skin or clothing. Do not breathe vapors. Open container with care in a well-ventilated area. Do not return unused material to original container.

Conditions for Safe Storage, Including any Incompatibilities:

Store between temperatures range 32°F (0°C) to 86°F. Not exceeding 86°F (30°C). Store in cool dry area. Protect from sunlight. Store locked up. Never tamper with the vented cap. The cap on each container is vented to prevent excessive pressure buildup within the container during shipping and storage.

Section 8: Exposure Controls / Personal Protection

Exposure Guidelines

Hydrogen Peroxide	1 ppm TWA ACGIH TLV 1 ppm TWA OSHA PEL
Acetic Acid	10 ppm OSHA PEL 10 ppm TWA, 15 ppm STEL ACGIH TLV
Peracetic Acid	0.4 ppm TWA (inhalable fraction and vapor) proposed ACGIH TLV

Appropriate Engineering Controls:

Use with adequate ventilation to keep exposure levels below recommended exposure limits.

Individual Protection Measures and Personal Protective Equipment:

Skin Protection: Wear chemically resistant protective gloves. Wear suitable protective clothing. Wear an apron if splashes are likely and rubber boots for spill response.

Eye Protection: Wear ANSI approved safety glasses or goggles and face shield if splashes are likely.

Respiratory Protection: If air contamination is above the permitted levels, use an approved respirator with appropriate cartridges or supplied air respirator. Respirator selection and use should be based on contaminate type, form and concentration. Follow applicable regulations and good Industrial Hygrine practice.

Section 9: Physical and Chemical Properties

Appearance / Physical State:	Liquid
Odor:	Acidic, sharp / pungent
Odor Threshold:	Not available
pH:	0.5 – 2.5 (1% solution)
Melting point/freezing point:	Not available
Initial boiling point / range:	200°F (93.2°C)
Autoignition Temperature	Not applicable
Flash Point:	None
Evaporation Rate:	Not available
Flammability (solid gas):	Not flammable
Upper/lower Flammability / Explosive Limits:	Not available
Vapor Pressure:	Not available
Vapor Density at 20°C:	Not applicable
VOC Content	12-13%
Relative Density:	1.12
Solubility in Water:	Soluble
Partition Coefficient: n-octanol/water:	Not available
Auto-Ignition Temperature:	Not available
Decomposition Temperature:	Not available
Viscosity:	Not available

Section 10: Stability and Reactivity

Reactivity:	Decomposition of hydrogen peroxide liberates heat and oxygen. Do not mix with anything but water.
Chemical Stability:	Stable under normal storing and handling conditions. Unstable when exposed to heat and contaminants. Strong oxidizers, reacts violently with many other materials, particularly flammable and combustible organic materials.
Possibility of Hazardous Reactions:	Oxidizers may react with many other materials, particularly flammable and combustible organic materials. Elevated temperatures can increase the decomposition of the product. Contact with organic substance may cause fire or explosion of the product. Contact with metals, metallic ions, alkalis, reducing agents and organic matter (such as alcohols or terpenes) may produce self-accelerated thermal decomposition.
Conditions to Avoid:	Keep away from flames and high temperatures. Avoid light and heat and keep in a closed but vented container to prevent evaporation (concentration) and contamination. Explosive pressure rupture of the container can occur if not properly vented.
Incompatible Materials:	Acids, bases, heat, reducing agents, organic materials, dirt, alcohols and glycols, aldehydes, amides, amines, azo, diazo and hydrazines, carbonates, cyanides, dithiocarbamates, esters, ethers, hydrocarbons, halogenated organics, rust, and many metals.
Hazardous Decomposition Products:	Decomposition of hydrogen peroxide liberates heat and oxygen. High temperatures and the presence of contamination increases the rate of decomposition. Explosive pressure rupture of the container can occur if not properly vented. Decomposition of acetic acid and peracetic acid will release oxides of carbon.

Section 11: Toxicological Information

Health Hazards

Eyes:	Causes severe irritation with redness, tearing and possible burns. Permanent eye damage can occur.
Skin:	May cause moderate to severe irritation with whitening of the skin. Peracetic acid may be harmful if absorbed through the skin.
Ingestion:	Swallowing may cause pain, vomiting, diarrhea, distention of the stomach (due to rapid liberation of oxygen), and possible perforation of the stomach. Peracetic acid may be harmful if swallowed.
Inhalation:	Inhalation of vapors or mists may cause severe irritation of the nose, throat and upper respiratory tract. Peracetic acid may be harmful if inhaled.
Chronic:	None known.
Sensitization:	This material is not known to cause sensitization.
Carcinogenicity:	None of the components present are listed as a carcinogen or suspected carcinogen by IARC, NTP, ACGIH or OSHA.
Germ Cell Mutagenicity:	Hydrogen peroxide has tested positive for mutagenicity in some test systems. Acetic acid was found to be negative in the AMES test for mutagenicity. Peracetic acid tested negative in in-vitro and in-vivo assays.
Reproductive Toxicity:	In a 90-day reproductive oral study with mice, hydrogen peroxide showed no effects in the reproductive organs in both male and female mice. It was presumed that the rapid degeneration of hydrogen peroxide on absorption and due to local effects, studies would be unlikely to reveal any specific development effects. Acetic acid: Suckling rats were exposed to one of three solutions, 2.6 x 10-3 M lead acetate, 5 x 10-3 M acetic acid or water, from parturition until the pups were 18 days old. Pups demonstrated above normal preweaning body weights and were significantly less active than normal in an open field by day 44.

Numerical Measure of Toxicity:

Hydrogen Peroxide	
LD50 Oral Rat	1193-1270 mg/kg (35%)
LD50 Skin rabbit	>2000 mg/kg (35%)
Acetic Acid	
LD50 Oral Rat	3310 mg/kg (5%)
Peracetic Acid	
LD50 Oral rat	1910 mg/kg
LD50 Skin rabbit	1147 mg/kg
LC50 Inhalation rat	4.1 mg/L/4 hr, (as aerosol)

Section 12: Ecological Information

Ecotoxicity:	This product is toxic to birds, fish and aquatic invertebrates.
Persistence and Degradability:	Hydrogen peroxide, acetic acid, and peracetic acid rapidly degrade in the environment.
Bioaccumulative Potential:	Hydrogen peroxide is decomposed by enzymatic action and does not accumulate in cell systems. Acetic acid and peracetic acid are expected to have a low potential to bioaccumulate.
Mobility in Soil:	Hydrogen peroxide degrades in soil to form oxygen in water.
Other Adverse Effects:	No data available.

Section 13: Waste Disposal Considerations

Dispose of this product in accordance with all applicable Federal, State, and local environmental regulations.

Section 14: Transport Information

UN Number:	UN3149
DOT, IMDG, IATA Shipping Name:	Hydrogen peroxide and Peroxyacetic acid mixtures, stabilized
Hazard Class / Packing Group	5.1 (8), PG II
Hazard Labels	

Other Information:	No supplementary information available
Special Transport Precautions:	Do not handle until all safety precautions have been read and understood.

Section 15: Regulatory Information

International Inventory Status

Ingredient	CAS #	EC	Japan	Australia	Korea	Canada:DSL	Canada: NDSL
Hydrogen Peroxide	7722-84-1	YES	YES	YES	YES	YES	NO
Peracetic Acid	79-21-0	YES	YES	YES	YES	YES	NO
Acetic Acid	64-19-7	YES	YES	YES	YES	YES	NO
Water	7732-18-5	YES	YES	YES	YES	YES	NO

United States

Ingredient	CAS #	OSHA	CAA	CWA	RCRA	SARA 302	SARA 313	TSCA
Hydrogen Peroxide	7722-84-1	YES	NO	NO	NO	NO	NO	NO
Peracetic Acid	79-21-0	YES	YES	NO	NO	YES	YES	NO
Acetic Acid	64-19-7	YES	NO	YES	NO	NO	NO	NO
Water	7732-18-5	YES	NO	NO	NO	NO	NO	NO

Section 16: Other Information

NFPA Ratings:

Health:	3
Flammability:	0
Instability:	1
Specific Hazard:	OX

HMIS Ratings:

Health:	3
Flammability:	0
Reactivity:	1
PPE:	B

SDS Origination Date:	4 July 2007
SDS Rev:	H
SDS Prepared By:	RPC

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