

MATERIAL SAFETY DATA SHEET**2366****SECTION 1 CHEMICAL PRODUCT AND COMPANY INFORMATION**

MSDS REC'D by Trane April 30, 2001

Product Name: ServiceFirst Scale Remover, Open Recirculating Water Systems
 Product Number(s): CHM00024, CHM00182
 Product Use: Scale remover

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Company Name: North American Research Corporation
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 Emergencies: Infotrac (800) 535-5053 (24 hours, everyday)

SECTION 2 COMPOSITION / INFORMATION ON INGREDIENTS

OSHA Hazardous Components (29 CFR 1910.1200):

	CAS Registry No.	OSHA PEL	ACGIH TLV	Other Limits	% (Optional)
Phosphoric Acid	7664-38-2	1 mg/m ³	1 mg/m ³	(STEL) 3 mg/m ³	40-70

SECTION 3 HAZARDS IDENTIFICATION**POTENTIAL HEALTH EFFECTS****EYE CONTACT:**

Corrosive. May cause redness, pain, blurred vision, eye burns, and permanent eye damage.

SKIN CONTACT:

Corrosive. May cause redness, pain, and severe skin burns.

INHALATION:

Inhalation is not an expected hazard unless misted or heated to high temperatures. Mist or vapor inhalation can cause irritation to the nose, throat, and upper respiratory tract. Severe exposures can lead to a chemical pneumonitis.

INGESTION:

Corrosive. May cause sore throat, abdominal pain, nausea, and severe burns of the mouth, throat, and stomach. Severe exposures can lead to shock, circulatory collapse, and death.

CARCINOGENICITY: NTP? No IARC Monographs? No OSHA Regulated? No

SECTION 4 FIRST-AID MEASURES**EYE CONTACT:**

Immediately flush eyes with gentle but large stream of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Call a physician immediately.

SKIN CONTACT:

Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician immediately. Wash clothing before reuse.

INHALATION:

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician immediately.

INGESTION:

If swallowed, DO NOT induce vomiting. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.

SECTION 5 FIRE-FIGHTING MEASURES

FLASHPOINT: Not flammable METHOD: Not applicable

FLAMMABLE LIMITS: LEL: Not applicable UEL: Not applicable

AUTOIGNITION TEMP: Not applicable

GENERAL HAZARD:

Not considered to be a fire hazard. Contact with most metals causes formation of flammable and explosive hydrogen gas. Not considered to be an explosion hazard.

FIRE EXTINGUISHING MEDIA:

Use any means suitable for extinguishing surrounding fire. Water spray may be used to keep fire-exposed containers cool. If water is used, use in abundance to control heat and acid buildup.

SPECIAL INFORMATION:

In the event of a fire, wear full protective clothing and NIOSH approved, self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

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SECTION 6 ACCIDENTAL RELEASE MEASURES

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. Contain and recover liquid when possible. Neutralize with alkaline material (soda ash, lime), then absorb with an inert material (e.g., vermiculate, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer!

SECTION 7 STORAGE AND HANDLING

Keep in a tightly closed container. Protect from physical damage. Store in a cool, dry, ventilated area away from sources of heat, moisture, incompatibilities, and direct sunlight. Corrosive to mild steel. Store in original containers. Do not wash out container and use it for other purposes. When diluting, acid should always be added slowly to water and in small amounts. Protect from freezing. Containers of this material may be hazardous when empty since they retain product residue; observe all warnings and precautions listed for the product.

STORAGE TEMPERATURE:

Ambient

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS:

Use in a well ventilated area. Use NIOSH / MSHA approved respirator if concentrations are above exposure limits.

PERSONAL PROTECTION:

Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eyewash fountain and quick-drench facilities in the work area. Wear impervious protective clothing, including boots, gloves, apron, or coveralls, as appropriate to prevent skin contact.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: Blue liquid. Odorless.

SPECIFIC GRAVITY: 1.34

VAPOR PRESSURE: Less than 0.1 @ 68°F

VAPOR DENSITY: Not determined

SOLUBILITY IN WATER: Complete

pH: 1

BOILING POINT: 265°F

FREEZING / MELTING POINT: Not applicable

EVAPORATION RATE (Butyl Acetate = 1): Not determined

SECTION 10 STABILITY AND REACTIVITY

STABILITY: Stable under ordinary conditions of use and storage.

HAZARDOUS POLYMERIZATION: Will not occur.

INCOMPATIBILITY (Materials to Avoid): Contact with strong caustics can cause liberation of much heat and violent spattering. Contact with most metals causes formation of flammable and explosive hydrogen gas. Avoid contact with materials such as sulfides and sulfites which could release toxic gases.

HAZARDOUS DECOMPOSITION PRODUCTS: Phosphorus oxides may form when heated to decomposition.

SECTION 11 TOXICOLOGICAL INFORMATION

Phosphoric Acid (7664-38-2): LD50 – lethal dose 50% of test species, 1530 mg/kg, rat.

SECTION 12 ECOLOGICAL INFORMATION

When released into the soil, this material may leach into groundwater. When released to water, acidity may be readily reduced by natural water hardness minerals. The phosphate, however, may persist indefinitely.

SECTION 13 DISPOSAL CONSIDERATIONS

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to an RCRA approved incinerator or disposed in an RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

SECTION 14 TRANSPORT INFORMATION

U.S. Department of Transportation:

Phosphoric Acid Solution, 8, UN1805, PGIII

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SECTION 15 REGULATORY INFORMATION

TSCA: All components of this product are listed on the TSCA inventory.

CERCLA: Phosphoric Acid (7664-38-2); 5000 lbs.

SARA TITLE III:

Section 311/312 Hazard Category: Acute: Yes Chronic: No Fire: No Pressure: No Reactive Hazard: No

Section 313 Reportable Ingredients: None

SECTION 16 OTHER INFORMATION

NFPA RATING: Health – 2, Flammability – 0, Reactivity – 0

HMIS[®] RATING: Health – 3, Flammability – 0, Reactivity – 0

HMIS[®] ratings are to be used with a fully implemented HMIS[®] program. HMIS[®] is a registered mark of the National Paint and Coatings Association (NPCA). HMIS[®] materials may be purchased exclusively from Labelmaster, 1-800-621-5808.

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