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MSDS0240
Ver. No.1
Ver. Date June 26, 2000

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Scalomatic™
PRODUCT CODES: 80912, 80914
CHEMICAL FAMILY: Inorganic Acids
USE: Scale Remover
MANUFACTURER / SUPPLIER:
RectorSeal
2601 Spenwick
Houston, Texas 77055 USA

EMERGENCY TELEPHONE NUMBERS:
Chemtrec 24 hours: (800) 424-9300
RectorSeal: (713) 263-8001

NON EMERGENCY TELEPHONE NUMBERS:
Technical Service: (800) 231-3345

SECTION 2 COMPOSITION / INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENTS	APPROX		OSHA PEL	ACGIH TLV	OTHER LIMITS	HMIS	NFPA
	CAS NO.	%					
Sulfamic Acid	5329-14-6	89	N/D	N/D	N/D	H3,F1,R0	N/D
Sodium Borate	1303-96-4	2	10 mg/m3	1 mg/m3	N/D	N/D	N/D

SECTION 3 HAZARDS IDENTIFICATION

SUMMARY OF ACUTE HAZARDS: Exposure to human tissue will result in irritation and subsequent chemical burns, bronchitis, pulmonary edema and chemical pneumonitis; possible death.

ROUTE OF EXPOSURE	SIGNS AND SYMPTOMS	PRIMARY ROUTE(S)
INHALATION:	Respiratory and mucous membrane irritation, coughing, difficulty breathing.	Yes
EYE CONTACT:	Corrosive, causes eye burns.	Yes
SKIN CONTACT:	Causes skin irritation. Prolonged contact may cause skin burns.	Yes
INGESTION:	Burns on mouth and lips, sour acid taste, severe gastrointestinal irritation, nausea, vomiting, bloody diarrhea, difficult swallowing, severe abdominal pains, thirst, acidemia, difficult breathing, convulsions, collapse, shock, possible death.	No

SUMMARY OF CHRONIC HAZARDS: Bronchitis, pulmonary edema and chemical burns, bronchitis and chemical pneumonitis; possible death.
MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Skin disorders, eye problems, impaired liver and kidney, or respiratory function.

SECTION 4 FIRST AID MEASURES

INHALATION: Remove to fresh air. Administer oxygen or artificial respiration if needed. Seek immediate medical attention.
EYE CONTACT: Immediately flush with large amounts of water for at least 15 minutes. Seek immediate medical attention.
SKIN CONTACT: Immediately flush with large amounts of water; use soap if available. Remove contaminated clothing.
INGESTION: If swallowed, DO NOT induce vomiting. Give large amounts of water only if conscious. Seek immediate medical attention.

SECTION 5 FIRE FIGHTING MEASURES

FLASH POINT: None
EXTINGUISHING MEDIA: Foam, dry chemicals, CO₂, or water fog.
SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained full-face breathing apparatus and other protective clothing. Hazardous decomposition products possible (see Section 10). Evacuate immediate area.
UNUSUAL FIRE AND EXPLOSION HAZARDS: May release sulfur dioxide (SO₂), sulfur trioxide (SO₃), and ammonia gas (NH₃) if involved in a fire.

SECTION 6 ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Sweep up spillage and flush the area with large quantities of water to waste water treatment area. May be neutralized with alkalis.

SECTION 7 STORAGE AND HANDLING

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Prevent from absorption of moisture and possible caking. Should be stored in a cool and dry place. Do not store with cyanides, sulfides, chlorine, hypochlorous acid, or hypochlorites.
OTHER PRECAUTIONS: Empty containers may contain residues, do not reuse. **KEEP OUT OF REACH OF CHILDREN.**

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION (SPECIFY TYPE): In confined, poorly ventilated areas, use NIOSH/MSHA approved air purifying or supplied air respirators.
VENTILATION - LOCAL EXHAUST: Acceptable
MECHANICAL (GENERAL): Acceptable
SPECIAL: N/A
OTHER: N/A
PROTECTIVE GLOVES: Wear acid resistant gloves (neoprene, PVC, butyl rubber).
EYE PROTECTION: Chemical splash goggles (ANSI Z-87.1 or equivalent).
OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Acid resistant coveralls or apron and sleeves.
8. EXPOSURE CONTROLS/PERSONAL PROTECTION (Cont'd)
WORK/HYGIENIC PRACTICES: Where use can result in skin contact, wash exposed areas thoroughly before eating, drinking, smoking, or leaving work area. Launder contaminated clothing before reuse.

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MATERIAL SAFETY DATA SHEET - SCALOMATIC™

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SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT: 275°F (135°C) @ 760mm Hg
VAPOR PRESSURE (mm Hg): Not volatile
VAPOR DENSITY (AIR = 1): N/A
SOLUBILITY IN WATER: Soluble
SPECIFIC GRAVITY (H₂O = 1): 2.126
MELTING POINT: 408°F (209°C)
EVAPORATION RATE (ETHYL ACETATE = 1): Not volatile
APPEARANCE/ODOR: Redish or Yellow Powder / No Odor

SECTION 10 STABILITY AND REACTIVITY

STABILITY: Stable
CONDITIONS TO AVOID: None
INCOMPATIBILITY (MATERIALS TO AVOID): Hazardous reaction in aqueous solution may occur with chlorine, hypochlorous acid, hypochlorites, cyanides, nitric acid, or sulfides. An explosion occurred when chlorine was being passed at room temperature into a reaction mixture which included sulfamic acid and water. It is suspected that nitrogen trichloride, a very sensitive explosive, was formed. Fuming nitric acid combined with sulfamic acid causes violent releases of nitrous oxide.
HAZARDOUS DECOMPOSITION PRODUCTS: Decomposes with heat (209°C) to release sulfur dioxide (SO₂), sulfur trioxide (SO₃), nitrogen (N₂), water (H₂O), and ammonia gas (NH₃).
HAZARDOUS POLYMERIZATION: Will not occur.

SECTION 11 TOXICOLOGY INFORMATION

CARCINOGENICITY: NTP: No IARC MONOGRAPHS: No OSHA REGULATED: No

<u>SUBSTANCE</u>	<u>LD50</u>	<u>LC50</u>
Sufamic Acid	Oral-Rat LD50:3160 mg/kg	N/D
Sodium Borate	Oral-Rat TDLo:16,750 mg/kg (30D male)	N/D

SECTION 12 ECOLOGICAL INFORMATION

<u>SUBSTANCE</u>	<u>FOOD CHAIN</u>	<u>CON POTENTIAL</u>	<u>WATERFOWL TOXICITY</u>	<u>BOD</u>	<u>AQUATIC TOXICITY</u>
Sufamic Acid		N/D	N/D	N/D	N/D
Sodium Borate		None	N/A	None	3,000-3,300 ppm/time period not specified/minnow/minutes lethal dose/fresh water; 8200 ppm/48 hr/mosquito fish/TLm/fresh water

SECTION 13 DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Dispose of absorbed materials and waste in accordance with all local, state and federal regulations.

SECTION 14 TRANSPORTATION INFORMATION

DOT: Corrosive solid, acidic, inorganic, n.o.s., Class 8, UN3260, ERG#154
OCEAN (IMDG): Corrosive solid, acidic, inorganic, n.o.s., Class 8, UN3260, IMDG#8150-1, EmS#8-15, MFAG#760
AIR (IATA): Corrosive solid, acidic, inorganic, n.o.s., Class 8, UN3260, ERG#154
WHMIS (CANADA): Class E

SECTION 15 REGULATORY INFORMATION

<u>SUBSTANCE</u>	<u>SARA 313</u>	<u>TSCA INVENTORY</u>	<u>CERCLA RQ</u>	<u>RCRA CODE</u>
Sufamic Acid	No	Yes	N/A	N/A
Sodium Borate	No	Yes	N/A	N/A

SECTION 16 OTHER INFORMATION

This document is prepared pursuant to the OSHA Hazardous Communication Standard (29 CFR 1910.1200). The information herein is given in good faith, but no warranty, express or implied is made. Consult RectorSeal for further information: (713) 263-8001.