

MATERIAL SAFETY DATA SHEET

Product Name: DESCALER

Product Number: 014.00

SAVIN PRODUCTS COMPANY, INC.

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: DESCALER

Emergency phone: Chemtrec: 800-424-9300

Product Information: 781-961-2744

Company: SAVIN PRODUCTS COMPANY, INC.
214 HIGH STREET
RANDOLPH, MA 02368

Date Prepared: 05-19-04

Supersedes: 10-2-00

Prepared by: KJS

2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Component</u>	<u>CAS No.</u>	<u>Exposure Limits</u>	<u>Typical % by Weight</u>
1. Phosphoric Acid	7664-38-2	ACGIH TLV 1 mg/m3 OSHA PEL 1 mg/m3	10 - 20
2. Hydrochloric Acid	7647-01-0	ACGIH TLV 7mg/m3 (ceiling) OSHA PEL 7 mg/m3(ceiling)	1 - 10

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER: CORROSIVE. Causes eye burns. May cause skin damage with prolonged contact. Inhalation of mist can cause damage to respiratory tract. Harmful if swallowed. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Avoid breathing mist.. Do not take internally.

EFFECTS of OVEREXPOSURE:

CARCINOGENICITY:

NTP: No

IARC: No

OSHA: No

EYES: CORROSIVE. Causes eye burns.

SKIN: Repeated or prolonged contact may cause skin burns.

INHALATION: Mist can cause damage to mucous membranes and respiratory tract.

INGESTION: Harmful if swallowed. Can result in damage to mouth, throat, esophagus and stomach.

CHRONIC EFFECTS and MEDICAL CONDITIONS: The effects of long-term, low-level exposures to this product have not been determined. Safe handling of this material on a long-term basis should emphasize the avoidance of all effects from repetitive acute exposure. This product may aggravate existing eye, skin and respiratory conditions.

4. FIRST AID MEASURES

EYES: Flush with copious amounts of water for at least 15 minutes, lifting upper and lower lids occasionally. Get immediate medical attention.

SKIN: Immediately flush with large quantity of cool water. Remove contaminated clothing. Launder contaminated clothing before reuse.

INHALATION: Remove to fresh air. If breathing is difficult, oxygen may be given, preferably with a physician's advice. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention.

INGESTION: If swallowed, give several glasses of water. Do not induce vomiting. If vomiting does occur, give fluids again and keep head below hips to help prevent aspiration. Do not give anything by mouth to an unconscious person. Get immediate medical attention.

MATERIAL SAFETY DATA SHEET

Product Name: DESCALER

Product Number: 014.00

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES:

Flash Point: >200 F Test: Tag Closed Cup (Method D-56)

Explosive Limits: LEL: N/A UEL: N/A

EXTINGUISHING MEDIA: Use water spray, dry chemical, CO₂ or "alcohol" foam.

UNUSUAL FIRE and EXPLOSION HAZARDS: Combustion may produce noxious and irritating gases which require fresh air source in fire fighting. Acids react with many metals to release Hydrogen gas which can form explosive mixtures with air.

FIREFIGHTING INSTRUCTIONS: Firefighters should wear NIOSH approved, positive pressure, self-contained breathing apparatus and full protective clothing when appropriate.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILLS: Cover contaminated surface with Sodium Bicarbonate or a Soda Ash/Slaked Lime mixture (50/50). Mix and add water if necessary to form a slurry. Deposit slurry in a suitable disposal container. Wash site with a Soda Ash solution.

LARGE SPILLS: Limit access to area. Dike and contain spill with inert material (sand, earth, etc.) and transfer the liquid and solid separately to containers for recovery or disposal. Keep spill out of sewers and open bodies of water. CAUTION: Floor may become slippery.

7. HANDLING AND STORAGE

Handle according to good manufacturing and warehousing practices. Use good personal hygiene practices. Wash hand before eating, drinking, smoking or using toilet facilities. Promptly remove soiled clothing and wash thoroughly before reuse. Store only in tightly closed containers away from heat, strong alkalis and reactive metals.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EYE PROTECTION: Avoid splashing. Wear chemical-resistant safety goggles if necessary. Contact lenses must not be worn.

PROTECTIVE GLOVES: Depending on conditions of use, protective gloves, apron, boots, head and face protection should be worn. This equipment should be cleaned thoroughly after each use.

RESPIRATORY PROTECTION: No occupational exposure standards have been developed for this material. Where exposure through inhalation may occur from use, NIOSH/MSHA approved respiratory protection equipment is recommended.

VENTILATION: Ventilation is required in case of mist conditions. Either local exhaust or general room ventilation is usually adequate.

OTHER PROTECTIVE EQUIPMENT: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Clear, light brown, thin foamy liquid.

BOILING POINT: approx. 100C @ 1ATM

FREEZE/MELT POINT: approx. 0C

VAPOR PRESSURE (mm): approx. 4 mm Hg @ 70F

VAPOR DENSITY (air=1): Not determined.

EVAPORATION RATE: approx. water

SOLUBILITY IN WATER: Complete.

SPECIFIC GRAVITY: 1.172 @ 20C

DENSITY: 9.09lb./gal. @ 20C

pH(1% soln): 1.9

ODOR: Slightly pungent.

ODOR THRESHOLD (ppm): Not determined.

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY (CONDITIONS TO AVOID): Stable. Keep away excessive heat.

INCOMPATIBILITY: Strong alkalis and reactive metals.

HAZARDOUS DECOMPOSITION PRODUCTS: Phosphorus oxides, Chlorine and Hydrogen gas resulting from contact with reactive metals and other toxic gases.

HAZARDOUS POLYMERIZATION: None.

MATERIAL SAFETY DATA SHEET

Product Name: DESCALER

Product Number: 014.00

11. TOXICOLOGICAL INFORMATION

No LD50 or LC50 found for oral, dermal or inhalation routes of administration.

12. ECOLOGICAL INFORMATION

Toxic to aquatic life. Do not discharge to streams, ponds, or waterways. Surfactant components are biodegradable. Phosphorous content =3.5%

13. DISPOSAL CONSIDERATIONS

RCRA: This product, if disposed as shipped, is considered a hazardous waste as specified in 40 CFR 261.22. Dilute solutions of this product with a pH of ≤ 2.0 are classified as hazardous waste. Dispose in accordance with all applicable federal, state and local regulations.

14. TRANSPORT INFORMATION

SHIPPING NAME: CORROSIVE LIQUIDS, n.o.s. (Hydrochloric Acid, Phosphoric Acid)
HAZARD CLASS: 8
ID #: UN1760
PACKING GROUP: III
LABEL: CORROSIVE

15. REGULATORY INFORMATION

This material does not contain nor was it manufactured using ozone-depleting chemicals.

U.S. FEDERAL REGULATIONS:

TSCA STATUS: All ingredients on Toxic Substance Control Act Inventory.

CERCLA REPORTABLE QUANTITY: Phosphoric Acid- 5000 lb. (2270 Kg)
Hydrochloric Acid 5000 lb. (2270 Kg)

SARA TITLE III:

Section 302 Extremely Hazardous Substances:	None.
Section 311/312 Hazardous Categories:	Immediate (Acute)
Section 313 Toxic Chemicals:	None

16. OTHER INFORMATION

All label precautions must be observed when handling, storing and transporting empty containers due to product residues. Do not reuse this container unless it is professionally cleaned and reconditioned.

REFERENCES:

- U.S. Dept. of Health and Human Services, NIOSH: Registry of Toxic Effects of Chemical Substances, 1985-86 Edition.
- Sax, N. Irving and Lewis, R.J.: Dangerous Properties of Industrial Materials, 7th Edition, Van Nostrand Reinhold Co., 1989.
- Lewis, R.J.: Hawley's Condensed Chemical Dictionary, 12th Edition, Van Nostrand Reinhold Co., 1993.
- U.S. Dept. of Transportation, U.S. Coast Guard: CHRIS Hazardous Chemical Data, 1982.
- U.S. Dept. of Labor, OSHA: Air Contaminants - Permissible Exposure Limits, 1989.
- National Fire Protection Association (NFPA): Fire Protection Guide on Hazardous Materials (NFPA 325M/49/491M/704), 9th Edition, 1986.
- National Fire Protection Association (NFPA): Hazardous Materials Response Handbook, Henry, M.F., Editor, 1989.
- Merck & Co., Inc.: The Merck Index, 11th Edition, 1989.

Information herein is given in good faith as authoritative and valid; no warranty, express or implied can be made.