Everpure

MATERIAL SAFETY DATA SHEET March 26, 1997 SCALE-KLEEN™

1. Chemical Product and Company Identification

Product name: Scale-Kleen™ (dry mixture of aluminum salts and weak organic acids used to dissolve lime scale in food service equipment that uses water)

Company: Everpure, Inc.	N.V. Everpure (Europe) S.A.	Everpure Japan, Inc
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Technical Service: (800)942-1153

Chemical Emergency Number (CHEMTREC®) : (800)424-9300

2. Composition / Information on Ingredients

Chemical Name	CAS Number	Percent by Weight
Aluminum Chloride hexahydrate	7784-13-6	50
Citric Acid monohydrate	5949-29-1	50

3. Hazards Identification

Emergency Overview: Scale-Kleen is not considered toxic or corrosive, but it can be an irritant to eyes, skin and mucous membranes. Fire may produce corrosive fumes of HCl.

Citric Acid monohydrate

OSHA P.E.L.: 15 mg/m^3 total dust (nuisance dust)
5 mg/m^3 respirable dust

ACGIH T.L.V.: 2 mg/m^3

LD_{50}: 5040 mg/kg (oral, mouse)

Aluminum Chloride hexahydrate

OSHA P.E.L.: 2 mg/m^3 as Al

LD_{50}: 3750 mg/kg (oral, rat)

Potential Health Effects

EYES--irritation
SKIN--irritation
INGESTION--not likely
INHALATION--irritation

4. First Aid

GENERAL--administer normal treatment for exposure to an acid.
EYES--flush thoroughly with water or saline solution for 15 minutes.
SKIN--flush thoroughly with water, then wash with soap and water.
INGESTION--unlikely, but if swallowed, give milk or milk of magnesia; do NOT induce vomiting.
INHALATION--move to fresh air, give oxygen if needed.

5. Fire Fighting Measures

Flammable Properites

Not considered flammable, but can be oxidized above 1000°C to produce carbon monoxide. Fire can liberate fumes of hydrochloric acid.

Flash Point: N/A Method Used: N/A

Extinguishing media

water, CO_2, talc, dry chemical

Fire Fighting Procedures

Wear MSHA/NIOSH approved self contained breathing grear or respirator with an acid/gas canister.

6. Accidental Release Measures

If spilled, avoid dusting. Sweep up and discard with non-hazardous trash; dissolve remainder in water and flush to drain.

7. Handling and Storage

Protect from physical damage. If plastic bag is punctured or unsealed, transfer to a sealed container to prevent contact with moisture. Wet Scale-Kleen™ forms an acid. Do not touch without protective gloves.

8. Exposure Controls and Personal Protection

Direct contact with the material during use is not required or expected, but eye protection is always wise.

EYE PROTECTION: splash goggles recommended
SKIN PROTECTION: rubber/plastic gloves recommended
INGESTION PROTECTION: always rinse cleaned equipment before returning to service
RESPIRATION PROTECTION: use normal room ventilation

9. Physical and Chemical Properties

melting point: decomposition at 100 C
vapor pressure: not tested
solubility: very soluble
appearance: white/pale yellow powder
stability: chemically stable but hygroscopic (actively absorbs moisture)

boiling point: NA
density: 2.05 g/cm^3
pH of solution: 3.0
odor: none

10. Stability and Reactivity

This product is stable under normal conditions. Waters of crystallization are lost at 100 C, and decomposition to CO and CO_2 occurs above 1000 C. Fire may produce fumes of HCl. Moisture produces acid, possibly with some HCl fumes. Incompatible with alkalis.

11. Toxicological Information

The components of this product are not carcinogenic, teratogenic, mutagenic, toxic to reproductive organs, or synergistic with any known toxicants. This product has not been tested for these.

12. Ecological Information

This product is environmentally safe in the quantities recommended for use. The working solution is as acidic as lemon juice, but normal dilution with other sewage (or rinse water if spilled) is acceptable. When neutralized, aluminum salts become innocuous solids, and citric acid is readily consumed by sewage organisms.

13. Disposal Considerations

If more than a handful is spilled, sweep up and dispose with non-hazardous trash. Dissolve smaller amounts with water and flush to drain.

14. Transport Information

No restrictions. Not regulated by DOT.

15. Regulatory Information

No information available.

16. Other Information

No other information available.

Prepared by

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