MATERIAL SAFETY DATA SHEET

Prepared in accordance with OSHA1910.1200 and ANSI Z400.1 and Canadian WHMIS

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: **Efflorescence Cleaner for Pavers and Slabs**

MANUFACTURER: **Techni-Seal Inc.**
ADDRESS: 1470, De Coulomb
Boucherville (Quebec)
Canada J4B 7K2

Phone: 1-800-465-7325 (North America) 514-523-8324 (International)
Emergency Phone: CANUTEC (613) 996-6666
Website: www.techniseal.com

2. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No.	Conc in %
Phosphoric Acid	7664-38-2	30-50
Nitric Acid	7697-37-2	10-30
Water	7732-18-5	30-50

See Section 8 for Exposure Limits

3. HAZARDS IDENTIFICATION

Yellow liquid with a lemon odor.

EMERGENCY OVERVIEW

DANGER! Causes severe burns. May cause skin burns and irreversible eye damage. Inhalation of vapors or mists causes severe irritation or burns of the nose, throat and respiratory tract. May cause lung damage. Harmful or fatal if swallowed.

See Section 11 for detailed information

4. FIRST AID MEASURES

INGESTION: If conscious, rinse mouth with a small amount of water and give 1 eight ounce glass of water to drink. DO NOT INDUCE VOMITING. Seek immediate medical attention. Never give anything by mouth to a person who is unconscious or drowsy.
SKIN CONTACT: Flush immediately with plenty of running water for at least 15 minutes while removing contaminated clothing and shoes. Get immediate medical attention. Launder contaminated clothing before reuse. Destroy contaminated items such as shoes that cannot be decontaminated.
EYE CONTACT: Rinse immediately with plenty of water for 15 minutes, while lifting the eyelids. Get immediate medical attention.

INHALATION: Remove affected person from source of exposure. If breathing is difficult, have qualified person administer oxygen. If breathing has stopped, administer artificial respiration and get immediate medical attention. Effects from overexposure may be delayed.

5. FIRE FIGHTING MEASURES

FLASH POINT: Not flammable or combustible.
AUTOIGNITION TEMPERATURE: Not applicable
FLAMMABILE LIMITS IN AIR (% BY VOL.) LOWER: Not applicable
UPPER: Not applicable

BASIC FIREFIGHTING PROCEDURES: This product is not flammable or combustible. Use any media that is appropriate for the surrounding fire. Firefighters should always wear positive pressure self-contained breathing apparatus and protective clothing when fighting fires involving chemicals. Cool fire exposed containers with water.

UNUSUAL FIRE AND EXPLOSION HAZARDS: This product will react with most metals to form flammable hydrogen gas.

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition under fire conditions will generate oxides of phosphorus and nitrogen.

6. ACCIDENTAL RELEASE MEASURES

Spill: Ventilate area. Wear appropriate protective clothing to prevent eye and skin contact including impervious gloves and safety goggles and supplied air respirator. Contain and collect using an inert, non-combustible absorbent. Do not use combustible material such as sawdust. Place into an appropriate container for disposal. Dike large spills and collect into appropriate containers. Prevent spill from entering waterways or sewers. Report spills and releases as required to appropriate authorities.

7. HANDLING AND STORAGE

HANDLING: Do not breathe vapors or mists. Use only with adequate ventilation. Prevent contact with the eyes, skin and clothing. Always wear appropriate protective clothing and equipment handling this material. Wash thoroughly after handling. Do not eat, drink or smoke in the work area.

STORAGE: Store in cool, dry, well-ventilated area. Keep containers closed. Keep away from incompatible materials (see Section 10). Keep product away from metals.

EMPTY CONTAINERS: Empty containers may contain product residue and may be dangerous. Do not cut, weld, drill, etc. on or near containers, even empty containers, as explosion may occur. Follow all MSDS precautions in handling empty containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION INFORMATION

EXPOSURE LIMITS

Chemical Name	Exposure Limits
Phosphoric Acid	1 mg/m3 ACGIH TLV-TWA, 3 mg/m3 TLV-STEL 1 mg/m3 OSHA PEL-TWA
Nitric Acid	2 ppm ACGIH TLV-TWA, 4 ppm TLV-STEL 2 ppm OSHA PEL-TWA

ENGINEERING CONTROLS: Use with adequate general or local exhaust ventilation to maintain exposures below applicable occupational exposure limits.

EYE PROTECTION: Chemical safety goggles and face shield required.

SKIN PROTECTION: Prevent skin contact. Wear impervious gloves such as neoprene or rubber.

RESPIRATORY PROTECTION: If needed, a NIOSH approved supplied air respirator is recommended. Respirator selection and use should be based on contaminant type, form and concentration. Follow OSHA 1910.134, ANSI Z88.2, CSA Standard Z94.4-02 and good Industrial Hygiene practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT: Not available
SPECIFIC GRAVITY: 1.306 g/cm^3
FREEZING POINT: <-50°C (-58°F)
% VOLATILE: 100%
VAPOR PRESSURE: 7.1 mmHg @ 20°C (nitric acid)
EVAPORATION RATE (BUTYL ACETATE = 1): Not available
VAPOR DENSITY (AIR = 1): 2.17 (nitric acid)
SOLUBILITY IN WATER: Soluble
OCTANOL/WATER PARTITION COEFFICIENT: Not determined
pH: 0.1
VOC: Not applicable
APPEARANCE/ODOR: Yellow liquid with a lemon odor.

10. STABILITY AND REACTIVITY DATA

STABILITY: Stable under normal conditions of use and storage.

INCOMPATIBILITY: Metals, strong oxidizing agents, strong bases, amines, ammonia, sulfuric acid, nitromethane, sodium tetrahydroborate, alcohols, aldehydes, cyanides, metal powders, organic solvents, metals, carbides, sulfides, acetic acid, acetone, aniline, chromic acid, hydrogen sulfide, flammable liquids.

CONDITIONS TO AVOID: Avoid excessive heat.

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition will generate oxides of phosphorus and nitrogen.

11. TOXICOLOGICAL INFORMATION

PRODUCT HEALTH HAZARD INFORMATION

SKIN: Causes severe burns. Vapors and mists will cause severe irritation and burns. Contact with liquid may cause tissue destruction and can result in death if burns are widespread.

EYE: Causes severe burns. Irreversible eye damage is possible resulting in blindness.

INHALATION: Inhalation of vapors or mists causes severe irritation and burns of the nose, throat and upper respiratory tract. Symptoms include burning of the nose and throat, coughing, sore throat and difficulty breathing. May be fatal due to inflammation, edema of the larynx and bronchi, chemical pneumonitis and pulmonary edema. Effects may be delayed.

INGESTION: Cause severe irritation and of the mouth and gastrointestinal tract with abdominal pain, nausea and vomiting , diarrhea, collapse and possibly death.

CHRONIC HEATH EFFECTS: Continued exposure to vapors and mists may result in a chronic bronchitis, and more severe exposure results in a chemical pneumonitis. The vapors and mists may erode the teeth, particularly affecting the canines and incisors. None of the components of this product are listed as carcinogens or suspected carcinogens by IARC, NTP or OSHA.

ACUTE TOXICITY VALUES
Phosphoric Acid: LD50 oral rat 1530 mg/kg. LC50 inhalation rat >850 mg/m3/1 hr, LD50 dermal rabbit 2740 mg/kg.
Nitric Acid: LD50 oral rat >90 mL/kg, LC50 inhalation rat 130 mg/m3/4 hr

12. ECOLOGICAL INFORMATION

The ecological effects of this product have not been determined.

13. DISPOSAL CONSIDERATIONS

This product, as sold, meets the RCRA criteria for corrosively (D002). Dispose in accordance with all local, state and federal regulations.

14. TRANSPORT INFORMATION

DOT PROPER SHIPPING NAME: Corrosive liquid, n.o.s. (Nitric Acid)
DOT HAZARD CLASS: 8, II
UN NUMBER: UN1760
DOT LABELS REQUIRED: Class 8
HAZARD SUBSTANCE: Nitric Acid
REPORTABLE QUANTITY: 3,300 lbs
Note: Inner packagings with not more than 1L for consumer use can be re-classed to Consumer Commodity, ORM-D if packing requirements at 49CFR173.154c are met.

CANADIAN TDG PROPER SHIPPING NAME: Corrosive liquid, n.o.s. (Nitric Acid)
TDG HAZARD CLASS: 8, II
UN NUMBER: UN1760
TDG LABELS REQUIRED: Class 8

Note: Inner packagings of not more than 1L can be shipped under the Limited Quantity provisions (TDG Part 1.17).

IATA/IMDG PROPER SHIPPING NAME: Corrosive liquid, n.o.s. (Nitric Acid)
IMDG HAZARD CLASS: 8, II
UN NUMBER: UN1760
LABELS REQUIRED: Class 8

15. REGULATORY INFORMATION

SARA TITLE III INFORMATION:
Section 311/312 (40 CFR 370) **Hazard Categories**: Acute Health, Chronic Health
Section 313 (40 CFR 372): This product contains the following chemicals subject to SARA Title III Section 313 Reporting requirement:

Nitric Acid	7697-37-2	10-30

Section 302 (40 CFR 355): This product contains the following chemicals listed as extremely hazardous chemicals under SUPERFUND Amendments and Reauthorization Act (SARA): Nitric Acid, TPQ 1,000 lbs.

CERCLA 103 Reportable Quantity: Spills of this product over the RQ (reportable quantity) must be reported to the National Response Center. The RQ for the product, based on the RQ for nitric acid (30% maximum) of 1000 lbs, is 3,300 lbs. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

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

California Proposition 65: This product contains the following chemicals known to the State of California to cause cancer, birth defects or other reproductive harm: None

Canadian WHMIS Classification: Class E (Corrosive), Class D, Division 1, Subdivision B (Toxic Material causing immediate and serious toxic effects)

This MSDS has been prepared according to the criteria of the Controlled Products Regulation (CPR) and the MSDS contains all of the information required by the CPR.

16. OTHER INFORMATION

NFPA Rating:	Health: 3	Fire: 0	Reactivity: 0
HMIS Rating:	Health: 3	Fire: 0	Reactivity: 0

REVISION DATE: 06/01/05 REPLACES SHEET DATED: 6/23/04

NOTICE: The information presented herein is based on data considered to be accurate as of the date of preparation of this Material Safety Data Sheet. However, no warranty or representation, express or implied, is made as to the accuracy or completeness of the foregoing data and safety information. It is the responsibility of the user to determine the applicability of this information for his use.