KLEN INTERNATIONAL
Above & Beyond
A.B.N. 50 009 067 556

Quality System
Quality Endorsed Company
ISO 9002
LIC 3538
Standards Australia

MATERIAL SAFETY DATA SHEET

Product Code: M910: File S:\Antieff.doc

Section 1 – Statement of Hazardous Nature, Chemical Product and Company Identification

CLASSIFIED AS HAZARDOUS ACCORDING TO CRITERIA OF NOHSC AND CLASSIFIED AS A DANGEROUS GOOD ACCORDING TO THE ADG CODE.

Klen International (74) Pty Ltd
19 Motivation Drive
Wangara WA 6065
EMAIL: info@klen.com.au
ABN: 25 008 776 681
TEL: (08) 9302 4000
FAX: (08) 9302 5000
TOLL FREE: 1800 999 196

CONTACT POINT - Chemist - TELEPHONE (08) 9302 4000
EMERGENCY TELEPHONE NUMBER: A/H 0419 906 672 or Toll Free 1800 999 196

Product Name: **ANTI EFF**

Product Use: *Acidic Solution for the treatment of efflorescence.*

2. Hazards Identification

Emergency overview: Strong oxidizer. Contact with other material may cause fire. Corrosive. Liquid and mist cause severe burns to all body tissue. May be fatal if swallowed or inhaled. Inhalation may cause lung and tooth damage

Potential Health Effects: Nitric acid is extremely hazardous; it is corrosive, reactive, an oxidizer, and a poison.

Inhalation: Corrosive! Inhalation of vapours can cause breathing difficulties and lead to pneumonia and pulmonary oedema, which may be fatal. Other symptoms may include coughing, choking, and irritation of the nose, throat, and respiratory tract.

Ingestion: Corrosive! Swallowing can cause immediate pain and burns of the mouth, throat, oesophagus and gastrointestinal tract.

Skin Contact: Corrosive! Can cause redness, pain, and severe skin burns. Concentrated solutions cause deep ulcers and stain skin a yellow or yellow-brown colour.

Eye Contact: Corrosive! Vapours are irritating and may cause damage to the eyes. Contact may cause severe burns and permanent eye damage.

Chronic Exposure: Long-term exposure to concentrated vapours may cause erosion of teeth and lung damage. Long-term exposures seldom occur due to the corrosive properties of the acid.

Aggravation of Pre-existing Conditions: Persons with pre-existing skin disorders, eye disease, or cardiopulmonary diseases may be more susceptible to the effects of this substance.

3. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Nitric Acid	7697-37-2	30 - 60	Yes
Phosphoric acid	7664-38-2	10 - <30	Yes
Non-hazardous ingredients		Balance	No

4. First Aid Measures

Immediate first aid treatment reduces the health effects of this substance.

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

Ingestion: do not induce vomiting! Give large quantities of water or milk if available. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Skin Contact: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

5. Fire Fighting Measures

Fire: Not combustible, but substance is a strong oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition. Can react with metals to release flammable hydrogen gas.

Explosion: Reacts explosively with combustible organic or readily oxidizable materials such as: alcohols, turpentine, charcoal, organic refuse, metal powder, hydrogen sulfide, etc. Reacts with most metals to release hydrogen gas, which can form explosive mixtures with air.

Fire Extinguishing Media: Water spray may be used to keep fire-exposed containers cool. Do not get water inside container.

Special Information: Increases the flammability of combustible, organic and readily oxidizable materials. In the event of a fire, wear full protective clothing and NOHSC (AS 1715/1716) approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

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., vermiculite, dry sand, and earth), and place in a chemical waste container. Do not use combustible materials, such as sawdust. Do not flush to sewer.

7. Handling and Storage

Store in a cool, dry, ventilated storage area with acid resistant floors and good drainage. Protect from physical damage. Keep out of direct sunlight and away from heat, water, and incompatible materials. Do not wash out container and use it for other purposes. When diluting, the acid should always be added slowly to water and in small amounts. Never use hot water and never add water to the acid. Water added to acid can cause uncontrolled boiling and splashing. Containers of this material may be hazardous when empty since they retain product residues (vapours, liquid); observe all warnings and precautions listed for the product.

8. Exposure Controls/Personal Protection

NOHSC Airborne Exposure Limits: Nitric acid: TWA 2 ppm (5.2 mg/m^3); STEL 4 ppm (10 mg/m^3); Phosphoric acid: TWA 1 mg/m^3, STEL 3 mg/m^3

Ventilation System: A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area

Personal Respirators (AS 1715/ 1716 approved): If the exposure limit is exceeded, wear a supplied air, full-facepiece respirator, airlined hood, or full-facepiece self-contained breathing apparatus. Nitric acid is an oxidizer and should not come in contact with cartridges and canisters that contain oxidizable materials, such as activated charcoal. Canister-type respirators using sorbents are ineffective.

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

9. Physical and Chemical Properties
Appearance: Colourless to yellowish liquid.
Odour: Suffocating, acrid.
Solubility: Infinitely soluble.
Specific Gravity: 1.26
pH: <1
% Volatiles by volume @ 21°C: No data
Boiling Point: Not determined. Nitric acid 62% 122°C, Phosphoric acid 85% 158°C
Melting Point: No data
Vapour Density (Air=1): Nitric acid 2-3
Vapour Pressure (mm Hg): 48 @ 20°C
Evaporation Rate (BuAc=1): No information found.

10. Stability and Reactivity
Stability: Stable under ordinary conditions of use and storage. Containers may burst when heated.
Hazardous Decomposition Products: When heated to decomposition, emits toxic nitrogen oxides and phosphorous oxide fumes. Will react with water or steam to produce heat and toxic and corrosive fumes.
Hazardous Polymerization: Phosphoric acid may polymerize.
Incompatibilities: A dangerously powerful oxidizing agent, concentrated nitric acid is incompatible with most substances, especially strong bases, metallic powders, carbides, hydrogen sulfide, turpentine, and combustible organics.
Conditions to Avoid: Light and heat.

11. Toxicological Information
No data for this product. However the following information is available for the ingredients.
Nitric acid: Inhalation rat LC50: 244 ppm (NO_2)/30M; Investigated as a mutagen, reproductive effector. Oral (human) LDLo: 430 mg/kg. Not listed by IARC or NTP as a carcinogen.
Phosphoric acid: LD50/LC50: Oral, rat: LD50 = 1530 mg/kg; Skin, rabbit: LD50 = 2740 mg/kg. Carcinogenicity: Phosphoric acid - Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA

12. Ecological Information
Phosphoric acid: Ecotoxicity: Shore crab LC50=240 mg/L/48H Chronic plant toxicity=100 ppm Environmental Fate: No information found.

13. Disposal Considerations
Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste facility. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information
Australian DG Code: Proper Shipping Name: Corrosive Liquid, N.O.S. (Nitric Acid); UN 1760; Class 8; Hazchem 2X; PG II

15. Regulatory Information
Chemical Inventory Status: All ingredients are listed by the AICS