Material Safety Data Sheet

Unicare Paver Cleaner (Efflorescence)

1. Product and company identification

Product name : Unicare Paver Cleaner (Efflorescence)

Material uses : Use to dissolve efflorescence (whitish salt) and remove ground-in dirt (traffic marks, etc.) on pavers, slabs and retaining walls made of concrete.

Code : 141-534

Supplier/Manufacturer : Techniseal
300, avenue Liberté
Candiac, QC, Canada, J5R 6X1
Tel: (514) 523-2110
Toll free: 1-800-465-7325
Fax: (450) 633-3035

Validation date : 3/22/2010.

Prepared by : Atrion Regulatory Services, Inc.

In case of emergency : CANUTEC (613) 996-6666

2. Hazards identification

Physical state : Liquid.

Color : Yellow.

Odor : Lemon-like.

Emergency overview

Signal word : DANGER!

Hazard statements : CAUSES SEVERE RESPIRATORY TRACT, EYE AND SKIN BURNS. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.

Precautions : Do not breathe vapor or mist. Do not get in eyes or on skin or clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Routes of entry : Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Inhalation : Severely corrosive to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Ingestion : May be harmful if swallowed.

Skin : Severely corrosive to the skin. Causes severe burns.

Eyes : Severely corrosive to the eyes. Causes severe burns.

Potential chronic health effects

Chronic effects : Contains material that may cause target organ damage, based on animal data.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Target organs : Contains material which may cause damage to the following organs: lungs, mucous membranes, upper respiratory tract, skin, eyes, teeth.

Over-exposure signs/symptoms

2. Hazards identification

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Ingestion : Adverse symptoms may include the following:
stomach pains

Skin : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

Eyes : Adverse symptoms may include the following:
pain
watering
redness

Medical conditions aggravated by over-exposure : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

3. Composition/information on ingredients

United States

Name	CAS number	%
nitric acid	7697-37-2	10-30
sulphamidic acid	5329-14-6	10-30

Canada

Name	CAS number	%
nitric acid	7697-37-2	10-30
sulphamidic acid	5329-14-6	10-30

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. 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. Clean shoes thoroughly before reuse. Get medical attention immediately.

Inhalation : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Ingestion : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

5. Fire-fighting measures

Flammability of the product : In a fire or if heated, a pressure increase will occur and the container may burst.

Extinguishing media

Suitable : Use an extinguishing agent suitable for the surrounding fire. Use water spray or fog.

Not suitable : None known.

Special exposure hazards : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
nitrogen oxides
sulfur oxides
Evolves toxic fumes when heated to decomposition.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Special remarks on fire hazards : Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air. Drying on clothing or other combustible materials may cause fire.

6. Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods for cleaning up

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). The spilled material may be neutralized with sodium carbonate, sodium bicarbonate or sodium hydroxide. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

7. Handling and storage

Handling : Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from alkalis. Empty containers retain product residue and can be hazardous. Do not reuse container.

7. Handling and storage

Storage : Do not store below the following temperature: 16°C (60.8°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Separate from alkalis. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

United States

Ingredient	Exposure limits
nitric acid	**ACGIH TLV (United States, 1/2009).** TWA: 2 ppm 8 hour(s). TWA: 5.2 mg/m³ 8 hour(s). STEL: 4 ppm 15 minute(s). STEL: 10 mg/m³ 15 minute(s). **OSHA PEL 1989 (United States, 3/1989).** TWA: 2 ppm 8 hour(s). TWA: 5 mg/m³ 8 hour(s). STEL: 4 ppm 15 minute(s). STEL: 10 mg/m³ 15 minute(s). **NIOSH REL (United States, 6/2009).** TWA: 2 ppm 10 hour(s). TWA: 5 mg/m³ 10 hour(s). STEL: 4 ppm 15 minute(s). STEL: 10 mg/m³ 15 minute(s). **OSHA PEL (United States, 11/2006).** TWA: 2 ppm 8 hour(s). TWA: 5 mg/m³ 8 hour(s).

Canada

Occupational exposure limits		TWA (8 hours)			STEL (15 mins)			Ceiling			
Ingredient	List name	ppm	mg/m³	Other	ppm	mg/m³	Other	ppm	mg/m³	Other	Notations
nitric acid	US ACGIH 1/2009	2	5.2	-	4	10	-	-	-	-	
	AB 4/2009	2	5.2	-	4	10	-	-	-	-	
	BC 7/2009	2	-	-	4	-	-	-	-	-	
	ON 8/2008	2	5	-	4	10	-	-	-	-	
	QC 6/2008	2	5.2	-	4	10	-	-	-	-	

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

8. Exposure controls/personal protection

Respiratory : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Recommended: Nitrile gloves.

Eyes : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. Recommended: face shield .

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Recommended: Synthetic apron.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. Physical and chemical properties

Physical state : Liquid.

Flash point : Not available.

Auto-ignition temperature : Not available.

Flammable limits : Not available.

Color : Yellow.

Odor : Lemon-like.

pH : 0.1

Boiling/condensation point : Not available.

Melting/freezing point : <-50°C (<-58°F)

Density : 1.036 g/cm^3

Vapor pressure : Not available.

Vapor density : Not available.

Odor threshold : Not available.

Evaporation rate : Not available.

Viscosity : Dynamic: 21.5 mPa·s (21.5 cP)

Solubility : Miscible in water.

LogK_{ow} : Not available.

10. Stability and reactivity

Chemical stability : The product is stable.

Conditions to avoid : Avoid contamination by any source including metals, dust and organic materials. Avoid contact with combustible materials (wood, paper, oil, clothing etc.). Drying on clothing or other combustible materials may cause fire.

Incompatible materials : Reactive or incompatible with the following materials: reducing materials, combustible materials, organic materials, metals and alkalis. Metallic powder. Cyanides . Sulfides . Alcohols. Carbides.
Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air.

10. Stability and reactivity

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Under normal conditions of storage and use, hazardous polymerization will not occur.

11. Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
sulphamidic acid	LD50 Oral	Rat	3160 mg/kg	-

Chronic toxicity

Not available.

Irritation/Corrosion

Not available.

Sensitizer

Not available.

Carcinogenicity

Classification

Not available.

Mutagenicity

Not available.

Teratogenicity

Not available.

Reproductive toxicity

Not available.

12. Ecological information

Ecotoxicity : No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
nitric acid	Acute LC50 180000 ug/L Marine water	Crustaceans - Carcinus maenas - Adult	48 hours
sulphamidic acid	Acute LC50 14200 ug/L Fresh water	Fish - Pimephales promelas	96 hours

Persistence/degradability

Not available.

13. Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	Not available.	Consumer commodity	ORM-D	-		**Limited quantity** Yes. **Packaging instruction** **Passenger aircraft** Quantity limitation: 30 to 30 kg **Cargo aircraft** Quantity limitation: 30 to 30 kg
TDG Classification	UN3264	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (nitric acid, sulphamidic acid)	8	II		**Explosive Limit and Limited Quantity Index** 1 **Passenger Carrying Road or Rail Index** 1 **Special provisions** 16 **Remarks** Limited Quantity Exemption : Quantity < 500 kg.
IMDG Class	UN3264	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (nitric acid, sulphamidic acid)	8	II		**Emergency schedules (EmS)** F-A, S-B
IATA-DGR Class	UN3264	Corrosive liquid, acidic, inorganic, n.o.s. (nitric acid, sulphamidic acid)	8	II		**Passenger and Cargo Aircraft**Quantity limitation: 1 L Packaging instructions: 808 **Cargo Aircraft Only**Quantity limitation: 30 L Packaging instructions: 812 **Limited Quantities - Passenger Aircraft**Quantity limitation: 0.5 L Packaging instructions: Y808

PG* : Packing group

15. Regulatory information

United States

HCS Classification : Corrosive material
Target organ effects

U.S. Federal regulations : **TSCA 8(a) IUR**: water
United States inventory (TSCA 8b): Not determined.

SARA 302/304/311/312 extremely hazardous substances: nitric acid
SARA 302/304 emergency planning and notification: nitric acid
SARA 302/304/311/312 hazardous chemicals: nitric acid; sulphamidic acid
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: nitric acid: Fire hazard, reactive, Immediate (acute) health hazard; sulphamidic acid: Immediate (acute) health hazard

Clean Water Act (CWA) 307: No products were found.

Clean Water Act (CWA) 311: nitric acid

Clean Air Act (CAA) 112 accidental release prevention: nitric acid

Clean Air Act (CAA) 112 regulated flammable substances: No products were found.

Clean Air Act (CAA) 112 regulated toxic substances: nitric acid

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 313

	Product name	CAS number	Concentration
Form R - Reporting requirements	nitric acid	7697-37-2	10-30
Supplier notification	nitric acid	7697-37-2	10-30

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

State regulations

Massachusetts : The following components are listed: NITRIC ACID

New York : The following components are listed: Nitric acid

New Jersey : The following components are listed: NITRIC ACID; SULPHAMIC ACID; SULFAMIC ACID

Pennsylvania : The following components are listed: NITRIC ACID

California Prop. 65

No products were found.

No listed substance

Canada

WHMIS (Canada) : Class E: Corrosive material

Canadian lists

15. Regulatory information

Canadian NPRI : The following components are listed: Nitric acid

CEPA Toxic substances : None of the components are listed.

Canada inventory : Not determined.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

International regulations

International lists : **Australia inventory (AICS)**: Not determined.
China inventory (IECSC): Not determined.
Japan inventory: Not determined.
Korea inventory: Not determined.
New Zealand Inventory of Chemicals (NZIoC): Not determined.
Philippines inventory (PICCS): Not determined.

Chemical Weapons Convention List Schedule I Chemicals : Not listed

Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

16. Other information

Label requirements : CAUSES SEVERE RESPIRATORY TRACT, EYE AND SKIN BURNS. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.

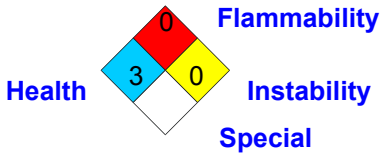
Hazardous Material Information System (U.S.A.) :

Health	*	3
Flammability		0
Physical hazards		0
Personal protection		D

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.) :



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16. Other information

Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Date of issue	:	3/22/2010.
Date of previous issue	:	No previous validation
Version	:	3

Indicates information that has changed from previously issued version.

Notice to reader

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Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.