

STAINLESS RESTORATION LTD

MATERIAL SAFETY DATA SHEET - according to ISO -11014-1 and 91/155/EEC

Trade name: CT-160
 Manufacturer: Sold by: STAINLESS RESTORATION LTD
 Date of issue: 20/11/00
 Revision date: 20/11/00

1. PRODUCT AND COMPANY IDENTIFICATION

Name of the product

Product name - code: CT-160 Brick cleaner
 Anticipated package: 25, 200 and 1000 litres polyethylene containers
 Application: Spray Pickling of stone work

Manufacturer

Name: Sold by: Stainless Restoration Ltd
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 Emergency Number:

- France	(+33) - 1 - 40 37 04 04	(Paris)	- UK	(+44) (0)191 282 0300	(Newcastle)
	(+33) - 4 - 7854 1414	(Lyon)	- Czech Rep.	(+42) - 2 - 293868	(Praha)
- Germany	(+49) - 89 - 4140 2211	(Munich)	- USA	800 - 424 - 9300	(Chemtrack)
	(+49) - 228- 28 73 211	(Bonn)	- Canada	(+1) - 613 - 9966666	(Canutreck)
- Greece	(+30) - 1 - 779 3772	(Athens)	- Israel	(+972) - 4 - 529205	(Haifa)
- Italy	(+39) - 2 - 66 1010 29	(Milan)	- Netherlands	(+31) - 30 - 74 88 88	(Bilthoven)
	(+39) - 6 - 305 4343	(Rome)	- New Zealand	(+64) - 3 - 474 7000	(Dunedin)

2. COMPOSITION/INFORMATION ON INGREDIENTS

Preparation

Chemical nature: Strong acid gel solution with corrosive properties

Hazardous components name / formula	CAS-No.:	EEC-No.:	Contents: (Weight-%)	Risk Code for the preparation /R- Chemical phrase:
Hydrofluoric acid / HF	7664-39-3	231-634-8	appr. 1 -7	T - toxic / R23 / 24 / 25-34
Phosphoric acid	7664-38-2		appr. >25	C R34

Additional information: Classification according to directive 67/548/EEC

3. HAZARDS IDENTIFICATION

Health hazard in case of accidental exposure (R-phrases):
R 23/ 24/ 25 Toxic by inhalation, in contact with skin and if swallowed.
R35 Causes severe burns.

Environmental effects: Fluid will strongly reduce pH in water. Must be neutralized.

4. FIRST AID MEASURES

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Measures to be taken immediately after the following ways of contact with brick cleaning acids,

Inhalation: Fresh air and rest. Rinse nose and mouth with water. Possibly breathing help, oxygen. Seek medical care also if only smaller troubles occur.

Ingestion: Drink at once, preferably milk, or water. Thereafter 10-15 lime tablets dissolved in water. Do not cause vomiting. Seek medical care.

Skin contact: Rinse immediately off with plenty of water. If necessary also inside the clothes. Take of splashed clothes. Treat with a Calcium containing agent in order to neutralize the harmful fluorid-ions.

- Alternative A: HF Antidote Gel, containing 2,5 % **Calcium Gluconate** Manufactured by Industrial Pharm. Serv., Manchester / UK.
- Alternative B: Solve Calcium tablets (manufacturer Sandoz-Pharma) 20 pcs into 2 litres of water, and immerse skin into this.
- Alternative C: If A or B could not be done, the skin could be bathed with milk or calcium containing solution.

After alt. A, B or C seek medical help.

Eye contact: Treat with Antidote eye drops, **Calcium Glubionate** (injection solution) or or if not available ,rinse immediately with plenty of water for at least 15 minutes. Thereafter immediate medical care - eye doctor.

Information for medical care: Inform the doctor that the injury has been caused by contact with Hydrofluoric and Phosphoric solution. Anti-dote treatment after contact with Hydrofluoric acid is 2.5% Calcium Gluconate Gel (H-F Anti dote Gel, supplier Ind. Pharm. Service, Manchester, UK).

5. FIRE-FIGHTING MEASURES

Danger of fire/explosion: Fluid is non-flammable. In contact with metals hydrogen gas is formed in small quantities, which together with air can give an explosion. Bottles close to fire should be removed or cooled with water. Released product should be neutralized with caustic soda.

Extinguishing media:

Chemical exposure risks caused by

- the product itself: The Pickling Fluid will cause corrosive damage on skin-contact.
- released gases/vapours: The Pickling Fluid will emit toxic fumes in the presence of heat/fire.

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Protective clothing for the firemen:	Normal protective clothing. Breathing protection: Gas mask with filter of chlorine type B (grey) and dust filter P2, according to CEN (Central European Norms).
How to clean or destroy soiled fire equipment:	Thoroughly wash with water.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:	Avoid direct contact. Wear eye protection, skin-protection, rubber gloves and breathing apparatuses. Keep a good ventilation.
Environmental precautions (water, air, soil):	Prevent spillage from entering sewage or public waters.
Methods for cleaning up:	Neutralize with caustic soda. Embank with sand. Arrange for pick up. Rinse with plenty of water.
Spillage and decontamination:	Spillage should be picked up and disposed of in full compliance with federal, state and local regulations as acid waste.

7. HANDLING AND STORAGE

Handling

Technical measures:	Working place and methods should be worked out in order to avoid direct contact. Keep a good ventilation. A closed rinse water system with filtration and reuse of clear water is recommended.
To prevent fire and explosion:	Bottles close to fire should be removed or cooled with water.
Precautions:	Avoid fume generation and accumulation by using in a well ventilated area. Use in areas having local exhaust and general ventilation. Possibilities to rinse the eyes with water must be available at the working place. Antidote Eye-drops made of Calcium Glubionate or Eye bath 3% Magnesium sulphate solution and Calcium Gluconate Gel for treatment after skin contact, should be available at the premises.

Storage

Technical measures:	Storage room should be kept separate, warm, dry and closed to unauthorized persons.
Incompatible products:	Not applicable
Storage conditions:	Keep containers securely closed when not in use and in upright position. Store in areas where temperature remain between 0-40 ° C at all time.
Packaging materials:	Package material must be of acid resistant plastic material.
Shelf life:	At least 1 year in unopened bottle correctly stored.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters:

Hazardous ingredient	LTEL 8hr ppm	TWA mg/m3	STEL		Time mins
			ppm	mg/m3	
Hydrofluoric acid (as HF)	3	2.5	6	5	OES
Phosphoric acid		1		3	OES

Personal protective equipment

Respiratory protection: Gas mask with a filter of the chlorine type B (grey) and dust filter P2
 Hand protection: Rubber gloves
 Eye protection: Face shield
 Skin and body protection: Rubber boots and acid resistant clothes, which covers all body parts exposed to splashes.

Specific hygienic measures:

Do not inhale fumes, avoid contact with eyes, skin and clothes.
 It is not allowed to eat, drink and smoke at workplace. Remove contaminated clothes immediately. Wash hands and face thoroughly after working with brick cleaners.
 Possibilities to rinse the eyes with water must be available at the working place. Antidote Eye-drops made of Calcium Glubionate or Eye bath 3% Magnesiumsulphate solution and Calcium Gluconate Gel for treatment after skin contact, should be available at the premises.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Liquid
 Colour: Light Brown
 Solubility in water: Soluble
 Ph: <1.0
 Reactivity: Attacks glass and metals

10. STABILITY AND REACTIVITY

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Hazardous Reactions:

Heat evolved when reacting with alkalis. Will attack glass and metals

11. TOXICOLOGICAL INFORMATION

Local effects

Effects on the skin: Gives corrosive damages with yellowish discoloration of the skin, blisters and slow-healing wounds.

Effects on the eyes: Gives intensive pain and corrosive damages. Risk of irreparable damage to the eyes.

After ingestion: Gives corrosive damages with burning pain, possibly severe general effect and damage to kidneys and liver.

Upon inhalation: Inhalation of fumes or mist might cause aches, cough and difficulty in breathing. Risk for oedema on the lungs.

Additional information: Symptoms will not appear immediately.

12. ECOLOGICAL INFORMATION

Environmental effects

Mobility: The product in its concentrated form will have a poison- influence on the ground and water. During usage the product will be diluted with water but will still lower the pH of ground-water and may not be discharged in clearwater system without pre-treatment.

Ecotoxicity: LC₅₀ for fish (96 h) = 600 mg / L
(Valid for the product as a concentrate, during usage it will be diluted >1:10)

Persistence/ degradability: Will be protolized in water to H⁺, HNO₃ , F⁻ .
Bioaccumulation: The product is not regarded as bioaccumulative

13. DISPOSAL CONSIDERATIONS

Methods of removal

Waste from residues: Contaminated residues, water waste must be neutralized to correct its pH-value pH 6-11.
Neutralize with Chem-tek Neutralizing Agent or slaked lime.

Contaminated packing: Rinse of with plenty of water.

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Additional information: A filtration system for rinse water is recommended. Effluent must be separated and disposed of as acidic waste. Consult with your local authorized and licensed waste disposal agency and ministry of environment for instructions and procedures for approved waste disposal.

14. TRANSPORT

International regulations (UN)

UN-Classification No.:	2922 (corrosive liquid, Toxic, N.O.S.)
Packaging group:	II
IMDG(Sea):	Class 8 (6.1)
ADR/RID (road, rail):	Class 8, (6.1)
IATA/DGR (air):	Class 8 (6.1)
Additional information:	The product is to be transported according to dangerous goods regulations.

15. REGULATORY INFORMATION

Regulations

Hazard and safety information:	According to handling of dangerous goods.
Danger symbols:	T and C
Sentences expressing the risks:	R 23/24/25 , 35
Sentences about safety measures:	<p>S1/2 Keep locked up and out of the reach of children.</p> <p>S 7/47 Keep container tightly closed and at temperature not exceeding 45° C.</p> <p>S23 Do not breathe fumes</p> <p>S26 In case of contact with eyes rinse immediately with plenty of water and seek medical advice.</p> <p>S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.</p> <p>S61 Avoid release to environment. Refer to special instructions/safety data sheet</p>

16. OTHER INFORMATION

Recommended applications and restrictions:	Only for pickling of brick work, not to be used on other materials
Chem-Tek CT160 main uses:	Brick / Stone Cleaner