


SAFETY DATA SHEET

FABRIKEM® RESTORATION CLEANER TYPE S

SECTION 01 PRODUCT AND COMPANY IDENTIFICATION

Product Identifier	Fabrikem® Restoration Cleaner Type S
Recommended Use	Masonry Cleaning Compound
Manufacturer's Name	Fabrikem Manufacturing Ltd. 20361 Duncan Way, Langley, BC V3A 7N3
Supplier's Name	Fabrikem Manufacturing Ltd. 20361 Duncan Way, Langley, BC V3A 7N3
Phone Number	604-532-3883 (Monday to Friday; 0800-1600 Pacific Time)
Preparation Date of SDS	21 November 2019
Revision Date of SDS	21 February 2020
SDS Prepared By	WHMIS Team
CANUTEC Emergency Number	613-996-6666 (Transport Emergencies)

SECTION 02 HAZARD IDENTIFICATION

Hazard Classification	ACUTE TOXICITY – ORAL ACUTE TOXICITY – DERMAL ACUTE TOXICITY – INHALATION (DUSTS & MISTS) SKIN CORROSION/IRRITATION SERIOUS EYE DAMAGE/EYE IRRITATION	Category 2 Category 1 Category 2 Category 1A Category 1
Label Elements		
Symbols		
Signal Word	Danger	
Hazard Statements	H300 Fatal if swallowed. H310 Fatal in contact with skin. H314 Causes severe skin burns and eye damage. H330 Fatal if inhaled. H335 May cause respiratory irritation. H350 May cause cancer by inhalation.	
Precautionary Statements	P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P234 Keep only in original container. P260 Do not breathe mist, vapours or spray. P262 Do not get in eyes, on skin, or on clothing. P264 Wash face, hands, and any exposed skin thoroughly after handling. P271 Use only outdoors or in a well-ventilated area. P280 Wear protective gloves, protective clothing, eye protection, and face protection. P310 Immediately call a POISON CENTER or doctor/physician. P320 Specific treatment is urgent (see first aid treatment section 04 below). P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.	

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	<p>P310 Immediately call a POISON CENTER or doctor/physician.</p> <p>P390 Absorb spillage to prevent material damage.</p> <p>P363 Wash contaminated clothing before reuse.</p> <p>P405 Store locked up.</p> <p>P403 + P233 Store in a well-ventilated place. Keep container tightly closed.</p> <p>P501 Dispose of contents/container in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act.</p>
Other Hazards	

SECTION 03 COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS#	Concentration	Synonyms
Hydrogen Fluoride	7664-39-3	10 - 30	Hydrofluoric Acid
Phosphoric Acid	7664-38-2	10 - 30	Orthophosphoric acid

SECTION 04 FIRST AID MEASURES

Route of Exposure	
Inhalation	Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur.
Skin Contact	Get immediate medical advice/attention. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
Eye Contact	Get immediate medical advice/attention. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing.
Ingestion	Get immediate medical advice/attention. Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person.
Self-protection of the First Aider	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Wear personal protective clothing (see section 8). Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Avoid contact with skin, eyes or clothing.
Most Important Symptoms & Effects	Corrosive to the respiratory passage. Symptoms include pain, redness and tearing. Corrosive May cause permanent eye damage. May cause severe skin burns which will be slow in healing. The fluoride ion readily penetrates the skin causing destruction of deep tissue layers and even bone. The subcutaneous tissue may be affected, becoming blanched (whitened) and bloodless. Gangrene of the affected areas may follow. May cause sore throat, coughing, labored breathing and lung congestion / inflammation. May cause abdominal discomfort, nausea, vomiting and diarrhea. Corrosive! Effects on the skin may be delayed and damage may occur without the onset of pain. May cause kidney damage. May cause burns of the mouth, throat and stomach. Causes blurred vision.
Immediate Medical Attention & Special Treatment	Obtain medical assistance.

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Note to Physicians	<p>Immediately apply calcium gluconate gel 2.5% and massage into the affected area using rubber gloves; continue to massage while repeatedly applying gel until 15 minutes after pain is relieved. HF-Antidote Gel from IPS Healthcare is recommended as treatment for injuries from hydrofluoric acid. Treatment based on sound judgment of physician and individual reactions of patient.</p> <p>Aspiration may cause severe lung damage. Evacuate stomach in a way which avoids aspiration. If ingestion has occurred less than 2 hours earlier, carry out careful gastric lavage; use endotracheal cuff if available, to prevent aspiration. Observe patient for respiratory difficulty from aspiration pneumonitis. Give artificial resuscitation and appropriate chemotherapy if respiration is depressed. Following exposure the patient should be kept under medical review for at least 48 hours as delayed pneumonitis may occur.</p>
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SECTION 05 FIRE FIGHTING MEASURES

Suitable Extinguishing Media	Foam. Dry powder. Carbon dioxide.
Unsuitable Extinguishing Media	Water reactive. DO NOT use water or water-based extinguishers since it can generate heat and cause spattering if applied directly to either hydrofluoric or sulphuric acids.
Hazardous Combustion Products	On contact with metals, liberates hydrogen gas. On heating to decomposition, could yield toxic fumes of fluorides and sulphur. Attacks glass and other silicon containing compounds. Reacts with silica to produce silicon tetrafluoride, a hazardous colourless gas.
Special Fire Fighting Procedures	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

SECTION 06 ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures	Wear appropriate personal protective equipment (impervious gloves, safety glasses, protective clothing, face-shield). Ventilate area. Only enter area with PPE. Stop or reduce leak if safe to do so.
Environmental Precautions	Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.
Methods and Materials for Containment and Cleaning Up	<p>SMALL SPILLS: Contain and soak up spill with absorbent material which does not react with spilled chemical. Put material in suitable, covered, labeled containers. Neutralize with soda ash (sodium carbonate) or lime over area of spill. Flush area with water. Do not get water inside containers. Contaminated absorbent material may pose the same hazards as the spilled product.</p> <p>LARGE SPILLS: prevent contamination of waterways. Dike and pump into suitable containers. Clean up residual with absorbent material, place in appropriate container and flush with water. Spilled material may cause floors and contact surfaces to become slippery. Neutralize with soda ash (sodium carbonate) or lime over area of spill.</p>

SECTION 07 HANDLING AND STORAGE

Precautions for Safe Handling	Use caution when handling any chemical substance. When diluting an acid, ALWAYS add the acid slowly to water and stir well to avoid spattering. Wash
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	thoroughly after handling. Keep away from water. Do not breathe product vapour or mist. Wear all protective equipment. Do not swallow. Keep the containers closed when not in use. Avoid contact with eyes, skin and clothing. Use only dry, clean utensils in handling. Use with adequate ventilation.
Conditions for Safe Storage	Store in a cool, dry, well-ventilated area, out of direct sunlight and away from heat sources. Keep quantity stored as small as possible. Drums should be vented when received and then at least weekly to relieve internal pressure. Avoid storage with incompatible materials.

SECTION 08 EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters					
		ACGIH TLV		OSHA PEL	
		TWA	STEL	TWA	STEL
Chemical Name					
Hydrogen Fluoride		0.5 mg/m ³	2 ppm	0.4 ppm	1 ppm
Phosphoric Acid		1 mg/m ³	3 mg/m ³	1 mg/m ³	3 mg/m ³
Engineering Controls	General	Mechanical ventilation (dilution or local exhaust), process or personnel enclosure and control of process conditions must be provided in accordance with all fire codes and regulatory requirements.			
	Local Exhaust	Supply sufficient replacement air to make up for air removed by exhaust systems.			
	Other	Emergency shower and eyewash must be available and tested in accordance with regulations and be in close proximity.			
Personal Protective Equipment	Gloves	Impervious gloves of chemically resistant material (rubber or PVC) should be worn at all times. Wash contaminated clothing and dry thoroughly before reuse.			
	Respirator	If the exposure limit is exceeded, a full facepiece respirator with an acid gas cartridge may be worn up to 50 times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator.			
	Eye	Chemical goggles, full-face shield, or a full-face respirator is to be worn at all times when product is handled. Contact lenses should not be worn; they may contribute to severe eye injury.			
	Footwear	Impervious footwear of chemically resistant material (rubber or PVC) should be worn at all times.			
	Clothing	RECOMMENDED (resistance to breakthrough longer than 8 hours): Butyl rubber, Neoprene rubber, Viton™, Viton™/Butyl rubber, Barrier (PE/PA/PE), Trelchem™ HPS, Trelchem™ VPS, Tychem™ SL (Saranex™), Tychem™ CPF 3, Tychem™ F, Tychem™ BR/LV, Tychem™ Responder™, Tychem™ TK. CAUTION: use for short periods only (resistance to breakthrough within 1 to 4 hours): Polyethylene			
	Other				

SECTION 09 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Fuming liquid, slightly yellow to amber
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Odour	Pungent odour
Odour Threshold	Not Established
pH	<1
Melting/Freezing Point	-17°C
Initial Boiling Point/Range	100°C
Flash Point	N/A
Evaporation Rate (n-butyl acetate = 1)	Not Established
Flammability	Non-flammable
Lower Flammable/Explosive Limit	N/A
Upper Flammable/Explosive Limit	N/A
Vapour Pressure	Not Established
Vapour Density (air = 1)	3.4 @ 20°C
Relative Density	1.1 – 1.2
Solubility	Completely miscible
Partition Coefficient (n-octanol/water)	Not Established
Auto-Ignition Temperature	N/A
Decomposition Temperature	Not Established
Viscosity	Not Established

SECTION 10 STABILITY AND REACTIVITY

Reactivity	Contact with hypochlorites liberates chlorine gas. May react violently with incompatible substances. Large amounts of heat can be released when concentrated acid is mixed with water or with organic solvents.
Chemical Stability	Stable, heat and contamination could cause decomposition.
Possibility of Hazardous Reactions	Hazardous polymerization does not occur.
Conditions to Avoid	High temperatures. Incompatibles.
Incompatible Material	Bases (alkalies). Contact with organic materials (such as alcohol, acrylonitrile, chlorates, carbides, epichlorohydrin, fulminates, isoprene, nitrates and picrates) may cause fire and explosions. Contact with metals may produce flammable hydrogen gas. Reducing agents. Hydrofluoric acid is incompatible with arsenic trioxide, phosphorus pentoxide, ammonia, calcium oxide, sodium hydroxide, sulfuric acid, vinyl acetate, ethylenediamine, acetic anhydride, alkalis, organic materials, most common metals, rubber, leather, water, strong bases, carbonates, sulfides, cyanides, oxides of silicon, especially glass, concrete, silica, fluorine. Will also react with steam or water to produce toxic fumes. Strong oxidizing agents.
Hazardous Decomposition Products	On contact with metals, liberates hydrogen gas. On heating to decomposition, could yield toxic fumes of fluorides or sulfur. Attacks glass and other silicon containing compounds. Reacts with silica to produce silicon tetrafluoride, a hazardous colourless gas.

SECTION 11 TOXICOLOGICAL INFORMATION

Routes of Exposure	Inhalation, Skin, Eyes, Ingestion
Symptoms of Acute Exposure	Skin Corrosion/Irritation Corrosive! Effects on the skin may be delayed and damage may occur without the onset of pain.

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	<p>Hydrofluoric Acid may cause severe skin burns which will be slow in healing. The fluoride ion readily penetrates the skin causing destruction of deep tissue layers and even bone. The subcutaneous tissue may be affected, becoming blanched (whitened) and bloodless. Gangrene of the affected areas may follow.</p> <p>Ingestion Causes severe burns of the mouth, esophagus, and stomach, with consequent pain, nausea, vomiting, diarrhea, circulatory collapse, and possibly death.</p> <p>Inhalation May be fatal if inhaled. Inhalation of the mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath.</p> <p>Serious Eye Damage/Irritation Corrosive. May cause permanent eye damage. Causes blurred vision. Symptoms include pain, redness and tearing.</p>		
Symptoms of Chronic Exposure	Affection/discolouration of the teeth.		
Irritancy of Product	Respiratory tract, skin and eye irritant.		
Other Toxicological Information			
Ingredient	LD ₅₀	LC ₅₀	TLV
Hydrofluoric Acid	>90 mL/kg	0.79 mg/L (Rat – 1 hr)	2.5 mg/m ³
Phosphoric Acid	1,530 mg/kg	> 850 mg/m ³ (Rat – 1 hr)	3.0 mg/m ³
Carcinogenicity:			
Chemical Name	IARC	ACGIH	OSHA
Hydrofluoric Acid	N/A	N/A	N/A
Phosphoric Acid	N/A	N/A	N/A
Reproductive Toxicity:	No information available.		
Germ Cell Mutagenicity:	No information available.		
Interactive Effects:	No information available.		

SECTION 12 ECOLOGICAL INFORMATION

Ecotoxicity				
Chemical Name	Ecotoxicity Freshwater Algae Data	Ecotoxicity Fish Species Data	Toxicity to Microorganisms	Crustacea
Hydrofluoric Acid	Not Available	Not Available	Not Available	EC50: =270mg/L (48h, Daphnia species)
Phosphoric Acid	Not Available	Not Available	Not Available	Not Available
Persistence & Degradability	No information available.			
Bioaccumulative Material				
Chemical Name	Partition Coefficient			
Hydrofluoric Acid	-1.4			
Phosphoric Acid	N/A			

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Other Adverse Effects	No information available.
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SECTION 13 DISPOSAL CONSIDERATIONS

Waste Disposal	Dispose in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act.
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SECTION 14 TRANSPORT INFORMATION

Shipping Name	Proper Shipping Name: UN 1760, CORROSIVE LIQUID N.O.S. (Contains: Hydrofluoric Acid and Phosphoric Acid), Class 8(6.1), Packing Group II
TDG	UN 1760, CORROSIVE LIQUID N.O.S. (Contains: Hydrofluoric Acid and Phosphoric Acid), Class 8(6.1), Packing Group II
DOT	UN 1760, CORROSIVE LIQUID N.O.S. (Contains: Hydrofluoric Acid and Phosphoric Acid), Class 8(6.1), Packing Group II

SECTION 15 REGULATORY INFORMATION

All components of this product are listed, or excluded from listing, on the Canadian DSL (Domestic Substances List) and NDSL (Non-Domestic Substances List) inventories.
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SECTION 16 OTHER INFORMATION

Date of Latest Revision	21 February 2020
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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. It is provided solely for the customer's consideration, and verification and Fabrikem Manufacturing Ltd. hereby specifically claims it shall not be held liable for any damage resulting from handling or from contact with the above products.

N/A = Not Available
N/E = Not Established