



**Technical Data  
Sheet For:**

**INTACHEM™  
RS-250**

**Description:**  
Heavily Soiled  
Red Sandstone  
Cleaner

**Coverage:**  
Circa. 3-4 sq.m/litre

INTECHEM IS THE TRADE  
MARK OF F&D BULK  
SERVICE LTD

**IntaChem House  
No 1 Irwin Drive  
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NG6 7BJ  
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RC-250 has been specially formulated for use on heavy duty soiled red sandstone, instead of SC100 and SC100HD. This product is designed to reduce the formulation of white incrustations that can appear, unpredictably, on this type of porous red stone. It will remove heavy accumulations of dirt and carbon on the underside of protruding stone work, such as on balustrades, porticoes, lintels, gargoyles as well as on flat stone facing. Being thickened the cleaning activity is restricted to the stone face when applied on pre-wetted masonry.

**Product Description:**

RS-250 is a blue viscous aqueous material. It is corrosive and contains Hydrofluoric acid. When adequately diluted, as by the jetting off procedure the organic agents are all biodegradable. The product should only be used by competent stone cleaning contractors.

**How to use the product:**

Degrease using appropriate degreaser.  
Establish the detailed method and contact times by means of a test patch. Apply the product by means of a fibre bristle brush working it into the masonry face, making sure that any thicker coating of the gel is brushed out. This prevents these areas from running down the stone surface causing uneven marks on the stone. An even coating is essential and an area of between 12-14sq.m. should be processed at a time. Normal contact time is about 20 minutes and not greater than 30 minutes. Pressure jet off using hot water at the rate of 3 min/sq.m.

**General Safety Precautions:**

At any time when this product is being transported, or being used, persons handling or carrying the product should have available a 25 litre drum of clean water for use in emergencies and HYDROFLUORIC ACID ANTIDOTE GEL for immediate treatment of accidental splashes or burns. Containers should be stored in a safe place with caps secured, and a trained responsible person detailed for security in depots, in transit and on site. Spillages must be dealt with immediately. Only competent persons should handle the product.

**Materials to be avoided:**

Glass, polished granite, glazed aluminium, zinc, bronze, brass, copper and lead. RS250 is preferable for use with red sandstone. This product is NOT suitable for use on limestone, Portland Stone, Bath stone, marble, slate or calcited materials.

**Protection of Operative:**

Chemical protective suits are needed along with PVC gauntlets, face shields, head cover and suitable footwear. A bucket of clean water for emergencies should be to hand. Nobody must be allowed to pass underneath or work under cleaning area. Spillages must be washed down immediately. At the end of the work period wash down all equipment (e.g. scaffolding and boards). A HYDROFLUORIC BURNS KIT should be at hand for the treatment of any acid burns. Only experienced operatives should handle this product (see HYDROFLUORIC ACID TREATMENT SHEET).

**First Aid:**

See HYDROFLUORIC ACID TREATMENT SHEET and Safety Data Sheet for this product.

**Ecology:**

When diluted the organic ingredients are bio-degradable. Effluent, if washed into soil will break down rapidly. If the product is advertently sprayed onto plants/vegetation it should be rinsed off. Rinsing with water will prevent further damage to vegetation. Plastic sheeting could be used to protect such plant life.

Using the correct jetting technique maximise dilution of the chemical is achieved and no damage has been found to fish when such debris enters rivers and streams (yet, contractors are directed to advice the authorities before disposal and immediately in the event that an accidental disposal into a water course takes place).

**Disposal of containers:**

When empty, containers should be filled with water and then emptied and disposed of in an approved manner.



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**Safety Notes:**

1.	Always store containers in secure conditions.	
2.	Keep containers closed when not in use.	
3.	COSHH Data:	Contains Hydrofluoric Acid (less than 10%) UN1790. Splashes to the skin may cause severe burns. Toxic if swallowed.
4.	Hazard Classification:	Corrosive
5.	Physical Data:	Blue viscous aqueous liquid
6.	Solubility:	Totally water soluble
7.	S G:	1.1050—1.160
8.	pH Value	Less than 1
9.	Flammability:	Non-flammable
10.	Fume Hazards:	In confined spaces fumes may build up, TLV 8 hours (HF) 3ppm. Tests may be necessary in confined spaces or behind sheeted scaffolding in hot still weather.
11.	Other dangers:	Not to be mixed with Algae Rem as dangerous fumes will be created.
12.	Handling precautions:	Full body, hands, feet and face protection must be worn. A container of clean water, for emergency use, should be on hand. Operatives must have HYDROGEN FLOURIDE BURN ANTIDOTE GEL on hand.
13.	NEVER leave container full or empty where the public may come into contact with them.	
14.	ALWAYS fill containers with water before disposing of them.	

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Treatment Sheet for  
Hydrofluoric Acid  
Burns

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Treatment Sheet for  
Hydrofluoric Acid Burns

**FOR SKIN BURNS:**

**First Aid**

1.1	Immediately wash the burnt area with copious amounts of water for at least 1 minute
1.2	Apply CALCIUM GLUCONATE GEL on and around the burn and massage it in using clean hands (in the event this gel is not immediately available, continuing rinsing with water until it is applied)
1.3	Continue to massage in the gel, using repeated applications until 15 minutes after the pain in the burn has subsided, or until medical treatment is available.

**Medical Treatment**

2.1	Continue inunction with repeated applications of the calcium gluconate gel until 15 minutes after the pain has completely subsided. This may require several hours but so long as improvement in the lesion and symptoms is occurring, massaging with the gel should be continued. In cases where a thick necrotic coagulum has formed, it may act as a barrier and prevent the penetration of the gel. This will be indicated by lack of improvement. In these cases, the necrotic tissue should be exercised and the gel massaged into the base of the burn taking the usual aseptic precautions.
2.2	If the burn fails to respond to the calcium gluconate gel, injection of a sterile 10% solution of calcium gluconate (sandoz) into and under the burn should be considered. Relief of the pain is an indication that sufficient solution has been injected. Because of this, an anaesthetic should not be given except in the situation where the skin is tightly adherent to the underlying tissues for instance, the finger pads or in subungual finger and toe burns when slitting or removal of the affected nails may be required. In these cases, a general anaesthetic should be given as local anaesthetic is contra-indicated.
2.3	Subsequent magnesium oxide paste dressings are not indicated but if dressings appear to be required, use the gel for 24 hours.
2.4	After the gel or injection treatment has relieved the pain, it may recur later, especially in the case of burns from diluted acid. The patient should be advised to return for further treatment if the pain recurs.
2.5	Treat symptomatically.

**General**

3.1	In large area skin burns, systematic administration of calcium and/or magnesium may be necessary. Six effervescent calcium tablets (sandocal tablets; Sandoz each containing 400mg calcium and 20mg ascorbic acid) should be given in water by mouth every two hours until admitted to hospital. The hospital should be reminded that serum calcium and/or magnesium may have to be replaced intravenously if indicated either by clinical signs e.g. carpopedal spasm, or by electrolyte monitoring (which should be done frequently) and if calcium gluconate is to be given intravenously it should be administered slowly.
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**FOR EYE SPLASHES:**

**First Aid**

1.1	Irrigate with isotonic saline or water for at least 10 minutes.
1.2	Obtain medical treatment.

**Medical Treatment**

2.1	Continue irrigation with isotonic saline or water, until the severe pain of the burn is relieved
2.2	Instil several drops of sterile calcium gluconate 10% solution (sandoz)
2.3	Treat symptomatically.

**SPILLAGES:**

Dilute with plenty of water or cover with soil/sand and dispose of the debris in an approved manner.

**DISPOSAL:**

Ensure adequate dilution before discharge to drains.

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## 1. IDENTIFICATION OF SUBSTANCES, PREPARATIONS AND COMPANY:

Name of Preparation:	RS-250
Supplier:	IntaChem, 1 Irwin Drive, Nottingham NG6 7BJ
Supplier Ireland:	Conservation Technology Ltd., Davitt Road, Dublin 12, D12 YXK8

## 2. COMPOSITION/INFORMATION ON INGREDIENTS:

Composition:	Rs-250 is classified as hazardous both for supply and carriage under CHIP regulations.
Contains:	(1) 9% Hydrofluoric Acid TX + C (2) 7% Hydrochloric Acid
Symbols:	C + TX

## 3. HAZARDS IDENTIFICATION:

RS-250 presents critical hazards to operators if not used correctly as hydrofluoric acid is very toxic by skin contact, inhalation and if swallowed. Extremely irritant and corrosive to the skin producing skin burns slow to heal and requiring specialist treatment. Subcutaneous tissues can become blanched and bloodless. Gangrene of the affected area may follow. Fluorine poisoning is demonstrated by sclerosis of the bones. Lowest published toxic concentration for gaseous hydrofluoric acid: Inhalation man = 110ppm/1minute. RS-250 presents little ecological hazard due to the large amounts of rinse water used in normal operations. Always consult local water authority and local council before disposal of waste water debris.

## 4. FIRST AID MEASURES:

Extreme care should be taken to avoid contact with eyes and skin and to avoid inhalation fumes. If splashes occur the following procedures should be adopted.

**IMPORTANT: Refer to attached sheet—"Treatment Sheet for Hydrofluoric Acid Burns"**

## 5. FIRE FIGHTING PROCEDURES:

RS-250 is not flammable, but in general fire conditions will release toxic fumes of hydrogen fluoride. Fire fighters should wear breathing apparatus. Use water foam or dry powder as agents for extinguishing.

## 6. ACCIDENTAL RELEASE MEASURES:

Always prevent skin and eye contact. Do not breathe fumes. Inform Police and Fire Brigade if any spillages greater than 0.5 litre (circa. 1 pint) occurs. For smaller spillages, use fine water jet around and over the spillage. Wash away with a further 100 litres (circa. 20 gallons) of water. In the case that the spillages is larger than 1 litre and you need to contact the authorities—slowly cover with sand or soil. Neutralise with soda ash and dispose separately. See also Exposure Controls and Personnel Protection Section B.

## 7. HANDLING & STORAGE:

Handling: Ensure all information in this data sheet is read and understood before using this product. Do not allow the concentrated or dilute preparation to come into contact with eyes and skin. Wear full protective clothing, PVC overalls and gloves, face shields and rubber footwear. Use with care. Only experienced operatives should handle this product. Avoid inhalation of mist or fumes when using on stonework. Use cold only. Do not allow to come into contact with bleach. Storage: Keep container tightly closed and in a well ventilated area away from oxidising agents e.g. bleach. Store only in labelled containers.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

### Engineering Controls:

Ensure that both operators carrying out the stone cleaning and the general public do not come into contact with concentrated product or wash water by following the procedures (close sheeting) outlined in BS8221 Code of Practice for Cleaning of Stone and Masonry.

Respiration protection is not normally required as a full face visor incorporated into a plastic wet suit is adequate for stone cleaning purposes when rinsing is carried out. Hands must always be protected by PVC gauntlet type ensuring no gaps between the protective suit and gloves. Wear full protective suit, rubber boots in addition to PVC and full face shield.



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**9. PHYSICAL & CHEMICAL PROPERTIES:**

Appearance:	Blue liquid
Odour:	Acrid acid
pH:	Less than 1 (for undiluted RS-250)
Boiling Point:	100 degrees Celsius
Melting Point:	Less than minus 20 degrees Celsius
Flash Point:	Non Flammable
Specific Gravity:	1.07
Solubility in H2O:	Soluble in water at all proportions
Viscosity:	200 centipoises approx.

**10. STABILITY & REACTIVITY:**

Product is stable at normal ambient temperatures. Always use cold. Avoid contact on the following materials: glass, polished granite, glazed aluminium, zinc, bronze, copper and lead. DO NOT USE ON RED SANDSTONE. RS-250 is NOT suitable for use on limestone, Portland stone, Bath stone, marble, slate or calcited materials. If the product is accidentally heated toxic fumes of fluorides are emitted where the maximum exposure limit for gaseous hydrogen fluoride is 3ppm (2.5mg/m3) for 8 hour time weighted average.

**11. TOXICOLOGICAL INFORMATION:**

RS-250 is very toxic by skin contact inhalation and if swallowed due to its 11% content of hydrofluoric acid the toxicity of which overrides all other ingredients in the formulation. Hydrofluoric acid causes intense burns to skin mucous membrane and ulcers of the upper respiratory tract. Sclerosis of bones is caused by fixation of bone calcium by fluorine.

**12. ECOLOGICAL INFORMATION:**

The use of RS-250 provides little ecological hazard as all organic detergents are fully biodegradable. The acid residues from washings are neutralised readily in soil to form calcium fluoride and phosphate. Experience has shown that when a stone surface is washed in the manner recommended the acid residues are not considered an ecological hazard. Should the concentrated product be accidentally spilled into water courses carry out procedures as detailed in previous section for general spillage. Inform immediately the local water authority.

**13. DISPOSAL CONSIDERATIONS:**

Small quantities should be hosed away with copious amounts of water to foul sewer. Larger quantities should be absorbed with sand, granules or soil and this solid residue disposed in an approved manner. When empty containers may then be disposed via solid waste.

**14. TRANSPORT INFORMATION:**

RS-250 is classified as CORROSIVE and TOXIC both for supply and conveyance according to CHIP.

Transport:	UN No. 2922, Corrosive Liquid, Toxic NOS
Carriage:	Corrosive Primary Hazard: Toxic subsidiary hazard
Packaging:	Packing Group II

**15. REGULATORY INFORMATION:**

R&S Phrases

R26,27,28	Very toxic by inhalation, in contact with skin and if swallowed.
R35	Causes severe burns
S7,9	Keep container tightly closed and in a well ventilated place.
S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36.37	Wear suitable protective clothing and gloves
S45	In case of accident or if you feel unwell, seek medical advice immediately and show the container label or this document.

Refer to use instructions for building cleaning as detailed in BS8221 Code of Practice—Cleaning of Stone & Masonry. All relevant procedures under Health & Safety at Work Act and Control of Substances Hazardous to Health regulations must be observed. Prior to work a complete written COSHH assessment must be carried out so that all personnel are aware of the handling precautions and operations necessary with this preparation. Possession of this data sheet does not constitute users own assessment of workplace risk as required by COSHH but will form the basis of such assessment.



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**16. OTHER INFORMATION:**

**Training Advice:**

As RS-250 contains toxic and corrosive acids, full training in the use of this preparation must be given to ensure they are aware of both health and safety precautions and operating procedures.

Detailed advice on building cleaning methods is provided in the IntaChem product data sheet for this product and in BS8221 Code of Practice—Cleaning of Stone & Masonry. These bulletins must be read in conjunction with this safety data sheet before operation starts.

**Recommended Uses and Restrictions:**

Use for cleaning sandstone, brick and Terracotta according to detailed operating instructions. RS-250 should not be used on calcareous stone, marble or polished granite. RS-250 will etch glass and will attack sensitive metals such as glazed aluminium, zinc, bronze, copper and lead.

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