WATERPROOF COATING

AQUELLA

TECHNICAL DATA

1.0 DESCRIPTION

AQUELLA is an inorganic powder based on white cement with a hardening accelerator, mixed with water and applied to the inside of damp walls and floors to prevent the passage of water and moisture.

AQUELLA unites with the substrate to form a surface which is watertight from both sides and sets rock hard with age.

AQUELLA contains no organic binder or stearate. Owing to its minutely dispersed aggregates, AQUELLA fills and closes the microscopic pores of the clean masonry surface to which it is applied.

Contrary to the shrinkage phenomena of most surface coatings, AQUELLA expands minutely upon curing, ensuring a complete filling of the pores and a better bond.

AQUELLA was developed in 1935 by one of the leading industrialists of France. One of the earliest uses of AQUELLA was in the underground fortifications of the Maginot Line, where, due to the great depth and considerable hydrostatic pressure, profuse seepage existed.

AQUELLA has been used extensively throughout Europe, in the USA and Australia as well as in New Zealand and has been approved by the following testing authorities.

Laboratories of the Building Trades and Public Works, Paris.

United States Bureau of Standards.

Institute of Civil Engineering, University of Liege, Belgium.

Laboratories of Tests and Studies of Casablanca, Morocco.

AQUELLA has been tested in New Zealand to 50 times the maximum pressure prescribed by the U.S. Bureau of Standards (Sec 111 BMS-82) which is 10lb per sq. ft. (480Pa).

2.0 PHYSICAL PROPERTIES

2.1	Colour	White. Can be tinted to pastel shades.
2.2	Water Pressure Resistance	Withstands 80 metres head on water face.
		Withstands 40 metres head on reverse face.
2.3	Toxicity	Non-Toxic. Suitable for use with potable water.
2.4	D.G. Classification	Non Hazardous.
2.5	Chemical Resistance	Acid – Poor. Equivalent to good concrete.
		Chlorinated Water – Good up to 1 part per million chlorine.
		Alkali – Excellent.
2.6	Coverage	1 – 1.5m^2 per kg.
2.7	Shelf Life	Unlimited in original sealed containers.

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3.0 USES

3.1 The chief application for AQUELLA is for waterproofing internal subgrade walls and floors as found in Basements, Tunnels, Lift Wells etc.

AQUELLA is also used to seal floors without or with damaged damp courses prior to laying carpet or tiles.

AQUELLA can also be used internally or externally on Tanks and Water retaining structures.

3.2 It can be used on the following surfaces: Brick, Concrete, Mortar, Cement Rendering, Breeze Blocks, Stucco, Stone, Terra Cotta Tiles (Roughened), Fish Tanks — Fill and rinse three times before introducing fish.

3.3 It is not suitable for: Gypsum Plaster, Metals, Timber, Silicone Treated Surfaces, Bituminous Surfaces, Whitewashed Surfaces, Painted Surfaces.

4.0 APPLICATION INSTRUCTIONS

4.1 SURFACE PREPARATION

Granular or porous surfaces are the most suitable for AQUELLA. Smooth surfaces require etching, (see following). The following treatments may be employed for the removal of stains, grease, paints, and other extraneous materials:

4.1.1 Dust, dirt and loose particles — Wire brush and hose down or stiff fibre brush with 1 part MISTIC ACID to 10 parts clean water.

4.1.2 Whitewash — Brush with stiff fibre brush using 1 part MISTIC ACID to 5 parts clean water.

4.1.3 Grease — Brush with a stiff brush using a strong solution of trisodium phosphate or 1kg of washing soda to 5 litres of hot water.

4.1.4 Oil Paint — If thick and hard burn off or sand blast. If loose or flakey wire brush followed by brushing with a stiff fibre brush, using 1kg washing soda to 5 litres of water.

4.1.5 Organic type water proofing — Sand blast.

4.1.6 Smoke and Carbon Stains — Hose down with clean water then fibre brush with 3 tablespoons trisodium phosphate to 5 litres of water.

4.1.7 Mildew — Brush with a solution consisting of 250ml ammonia, 150gms trisodium phosphate to 4.5 litres of cold water using a stiff fibre brush.

4.1.8 Efflorescence — Hose down, brush with a stiff fibre brush using 1 part commercial sulphuric acid to 4 parts of water: after 5 minutes scrub with stiff brush and water.

4.1.9 Smooth Surfaces — Lightly sand blast; dry rub with No: 16 carborundum, or use MISTIC Acid diluted 2:1 with water.

4.2 Acid solutions must always be made by adding the acid slowly to the water: rubber gloves and goggles should be worn. Plastic brushes and buckets must be used. AQUELLA will not set if any acid is left on the surface and so it is recommended that after thorough washing, the surface be treated with 10% caustic soda or 20% washing soda. The treatment must always be hosed down thoroughly with clean water before the AQUELLA is applied.

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4.3 The cleaned surfaces must be saturated with water preferably using a hose and spray. A superficial dampening is not sufficient. Spray the surface from all directions at least four times. Allow sufficient time between spraying for water to soak in.

4.4 Surfaces should be uniformly moist without free water on the surface. If they are not saturated much of the mixing water will be absorbed from the AQUELLA, thereby depriving it of moisture required for proper chemical action and hardening. Keep the surface moist for 30 minutes before applying AQUELLA.

4.5 WEATHER CONDITIONS

The minimum application and curing temperature for AQUELLA is 5°C. Surfaces subject to quick drying conditions require careful curing (see Section 4.8)

Exterior work should be carried out early in the morning or in the evening, preferably in damp humid weather, to avoid rapid drying by wind or sun.

4.6 MIXING

AQUELLA is prepared by mixing approximately 2 parts AQUELLA with 1 part water. The powder is added to the water gradually, stirring constantly until all lumps have disappeared and a "Cream" consistency obtained (that is, not paint thin). If any lumps remain, strain through a course sieve. Allow to stand for 10 minutes before using.

The mixture should be stirred frequently to keep it uniform and must be used within 30 minutes or it will begin to set. Up to 10% water may be added during the work as and when AQUELLA thickens.

4.6.1 COLOURING — AQUELLA may be tinted to pastel shades using oxide pigments normally used with Portland cement but not exceeding 4% of the weight of AQUELLA. A concentrate of the pigment should be made in the form of a paste, with water, the day before the AQUELLA is to be mixed. The pigment paste may then be added to the mixed AQUELLA at the appropriate rate to obtain the desired shade. By this means, uniformity of shade can be obtained in successive mixes.

4.7 APPLICATION

4.7.1 BY BRUSH — The AQUELLA must be well brushed into the surface avoiding pinholes. A stiff brush is suitable followed by a damp soft hair paintbrush a few minutes after AQUELLA is applied. This will give a smooth finish if required. A soft plastic hearth brush is also suitable. Apply smoothly and avoid “peaks” or thin areas where the substrate is still visible.

4.7.2 BY SPRAY — Low-pressure equipment is recommended, with AQUELLA feeding from the bottom of the pressure pot which must include an agitator. The mix should be used within 30 minutes. Ensure that no pinholes are left in the surface. Brushing the surface with a damp, soft paintbrush, immediately after spraying, can often prevent this.

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4.7.3 One coat of AQUELLA is sufficient, applied so that no colour from the substrate is visible. Do not over apply.

4.7.4 For plugging holes — mix 2 parts AQUELLA with 1 part quick setting cement and moisten to a stiff paste.

4.8 CURING

AQUELLA must not, under any circumstances, be allowed to dry quickly. It should not be applied to surfaces exposed to sun and wind.

When it has hardened sufficiently, 1-2 hours, AQUELLA should be kept moist for a further 48 hours by using a fine spray of water at frequent intervals.

The slower the curing, the harder the finish. A damp surface before application, maintained during the work if necessary, will ensure satisfactory results.

4.9 RE-COAT

A second coat is seldom required but if thought necessary, apply when the first coat is firm but not hard. If the first coat is hard, it must be acid etched, i.e., treated as a smooth surface as indicated above.

4.10 PAINTING

AQUELLA, once cured, can be painted with any paint suitable for use on concrete surfaces.

5.0 PACKAGING

2kg, 4.5kg, 10kg and 22.5kg containers.

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