

LETTER & INFORMATION BULLETIN FOR SPECIFIERS – SINGLE LEAF CONCRETE MASONRY WALL CONSTRUCTION

Dear Concrete Masonry Manufacturer/Specifier/Surface Coating Applicator/Builder



SINGLE 'SKIN' CONCRETE MASONRY CONSTRUCTION

SUCCESSFUL BUILDING WITH SINGLE LEAF CONCRETE MASONRY:

Building with good, firm, weatherproof, single leaf concrete masonry walls (concrete brick or block veneer wall construction) is an economical, architecturally accepted – fast form of building construction increasing in popularity – throughout Australasia.

The cost-effectiveness to architects, landscape architects, consulting civil engineers, builders, tradespeople and building owners of this minimalist system of construction if efficiently carried out are becoming clearer and much more attractive each year. The cost of alternative tilt-up concrete construction (hardware, crane hire, labour and other costs related to site-cast concrete), and some other forms of wall construction continue to escalate.

Quality 30 MPa compressive strength, water-tight and adequately fire rated machine made concrete masonry bricks or blocks laid efficiently by good bricklaying and block-laying contractors using a weatherproof mortar laying mix in a pre-planned way and concentrating on speedy but quality construction can economically beat tilt-up concrete 'hands down'!

IMPERMEABLE WATERPROOF CONCRETE MASONRY:

Ability can assist concrete masonry brick and block manufacturers to produce exceptionally durable and water impermeable units with their unique *multi-functional* powder admixture product 'EFFLOREIN®' MARK 2 – a combined water-proofing (water absorption reducing admixture/moisture barrier),

colouring pigment particle 'lock-in' and brightening (dispersing) aid and efflorescent white salt bloom eliminating agent.

Ability can virtually guarantee* that satisfactorily cured** and hardened concrete masonry blocks, bricks (or pavers) of minimum 30 MPa compressive strength produced with the addition of their powder admixture 'EFFLOREIN®' MARK 2 added at optimum dose and well mixed into a suitable dampened, semi-dry concrete (no slump) mix during manufacture will have after they harden fully, the same or a greater degree of water-tightness as a baked clay brick for the same density and mechanical strengths, ie the degree of non-porosity/ impermeability to liquids of a concrete masonry brick or block unit will be the same or better than a baked clay unit (NOTE: when tested and proven by the manufacturer for their products modified in this way, this statement can perhaps be used in their advertising).

* Provided that a minimum of 1.5% by weight of the cement weight of Ability's 'EFFLOREIN®' MARK 2 moisture barrier, colour brightening and **anti-efflorescent** admixture powder is added to the mix and efficiently mixed prior to the moulding cycle, that the aggregates – coarse and fine - are of optimum size, grading and shape for obtaining impermeability in hardened machine made concrete masonry, and that the weight of these combined does not exceed ten (10) times the cement weight and the concrete masonry units are steam or efficiently 'burner' heat/high humidity air cured in 95% relative humidity conditions to ensure complete mix *water retention in the blocks or bricks for approximately 9 hours.*

** Curing means mix water retention ie a **procedure** adopted after setting to prevent the evaporation of the mix water continuously during the time it takes for the concrete units to harden to the required degree and achieve the mechanical strengths required of them.

TEST FIRST PRIOR TO ACTUAL USE. TRIALS ARE ESSENTIAL.

CONCRETE BETTER THAN BAKED CLAY:

The specifier for, or user of, densely compacted, watertight concrete masonry bricks or blocks suitable for single leaf construction has the traditional advantages over baked clay masonry units of better thermal and acoustic insulation – especially if ability's 'E-SPHERES'*** (strong hollow ceramic macro and microspheres) are incorporated. In addition, compared with walls made of either material, installation costs for single leaf construction are significantly lower than a two course system.

EXCELLENT INSURANCE:

'EFFLOREIN®' MARK 2 – a high performance white powder admixture when added integrally into machine made concrete masonry mixes during manufacture as well as into the masonry laying mortar mix on site and thoroughly mixed in is also an excellent 'insurance' against the occurrence of ugly leached white 'salty' efflorescence, ('bloom' or 'scum') on, as well as moisture penetration into, decorative concrete face brick/blockwork. The same 'insurance' can apply to machine made semi-dry mix concrete pavers as well as for concrete roofing tiles.

A 'NO MAINTENANCE', LONG-LIFE WATERTIGHT COATING IS ALSO AVAILABLE:

For high performance conservative specifications written according to many Australian building/local government codes of practice for weather-proof single leaf construction, Ability, in conjunction with their offer for 'EFFLOREIN®' MARK 2 for use integrally in the concrete masonry brick/block/paver units - as well as in the masonry wall mortar mix, offer their absolutely water-proof coating/filling product – particularly for single leaf construction - called 'the Paint'.

This high performance, impermeable, weatherproof, highly protective, colourful and decorative polymer modified, high adhesion mineral paint product can be easily mixed and applied (with preferably two (2) coats) by brush, broom, roller, damp hessian bag, (for the 'bagged' finish look), hopper spray gun etc to virtually any wall. It can also be trowel applied but the thickness must be below 1mm – otherwise it will 'craze' (plastic) crack prior to setting and hardening.

'the Paint', which is supplied as a powder, after easy but thorough site mixing into the recommended low quantity of drinkable water with a suitable power mixer, may be easily applied (by virtually any normal painting means) to masonry walls for the monolithic 'rendered' look,

*** PS Further printed information about Ability's range of 'E-SPHERES®' will be supplied upon request.

'painted brick', 'bagged brick', architectural finish effects etc. It is an exceptionally durable thick, high build coating product, which after the application of two (2) coats or layers looks like a conventional trowel applied render but is better than a render, will perform better and is of significantly lower cost.

'the Paint' is available on firm advance order in white, 'concrete masonry grey' and several attractive UV resistant 'abilox®' mineral oxide natural looking 'ochre' colours. It is a subtly sandy-textured as well as being a high build, absolutely watertight coating. *One thick coat* (typically .25mm - .5mm thick) is enough to completely prevent water ingress from wind driven rain through single leaf wall construction – even if poor, permeable masonry jointing mortar work is apparent, although two (2) coats are **always** recommended for maximum performance and longevity.

The material cost for 'the Paint' is currently approximately Au\$8.00 per square metre for two (2) coats – depending on the coating thickness applied, the degree of texture of the substrate and therefore the application coverage rate.


'the Paint' after mixing to a normal liquid paint product for painting, with the addition of up to 50% coarse washed **concrete** sand by volume, may also be potentially trowel/float applied as a very thin bed wall render or floor coating (maximum 5mm thick) by experienced plasterers and concreters using the recommended lower amount of water than is required for its application as a paint coating.

WATERTIGHT MASONRY & CEMENT RENDERING MORTARS – WITH 'EFFLOREIN®' MARK 2:

'EFFLOREIN®' MARK 2 waterproofing and anti-efflorescent admixture for use in 'semi-dry' mix type concrete products (as well as for normal poured-in-place 'slump' pre-mixed concrete) is also a superbly efficient integral clear waterproofer for masonry laying mortars – usually the weakest areas of masonry wall constructions and often susceptible to water ingress. Used as recommended in correctly proportioned mortar mixes it increases the bond of the mortar to bricks, blocks or stone and helps to reduce shrinkage as well as assisting to control the occurrence of white salty efflorescence.

Bricklayers and plasterers provided with a specification where 'EFFLOREIN®' MARK 2 is specified *flat* (no alternative product specified) for integral use in their masonry wall mortar mixes (or trowel applied cement render mixes) at an optimum dose, after thoroughly mixing 'EFFLOREIN®' MARK 2 in, should automatically produce watertight mortar joints/walls.

Yours faithfully



Robert F Barber
MANAGING DIRECTOR/TECHNICAL MANAGER



EFFLOREIN®
MARK 2

Want more information on Ability's 'EFFLOREIN®' MARK 2 and 'the Paint', then contact us for a rapid, efficient response?

PLEASE DIRECT ALL ENQUIRIES FOR AUSTRALIAN SUPPLY AND EXPORT ORDERS TO:

ABILITY BUILDING CHEMICALS CO
SUBSIDIARY OF AUSTRALIAN OXIDES PTY LTD

Manufacturers of fine, high grade UV resistant 'abilox®' mineral oxide powder 100% efficient colouring pigments; 'duro®' solely organic bright, even vivid, or inorganic semi-bright and organic pigment colour blends – both used for the colouring of a multitude of manufactured products and materials; additives etc for the paint, ink, baked clay and plastics industries, chemical **admixtures** to modify, improve, make lightweight (whilst *retaining* mechanical strengths) protect, decorate and improve the performance of cement bound concretes, mortars, cementitious coatings and applied finishes as well as specialised high performance, long-life surface treatments, stains and **coatings** for concrete and many other building surfaces.

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PRODUCTS OF EXCELLENCE

ABILITY BUILDING CHEMICALS CO

- ACHIEVING BETTER CONCRETE
- ACHIEVING BETTER COATINGS
- ACHIEVING BETTER COLOURS

ACTIVE SALES AGENTS, DISTRIBUTORS AND STOCKISTS ARE REQUIRED IN SOME AREAS OF AUSTRALIA, NEW ZEALAND AND OFFSHORE ELSEWHERE. 'EFFLOREIN®' MARK 2 AND 'the Paint' ARE AVAILABLE FOR EXPORT. YOU MAY CARE TO CONTACT US NOW FOR FURTHER DETAILS OF THIS EXCELLENT COMMERCIAL BUSINESS OPPORTUNITY.

⊗ **BUSINESS MOTIVATION:**

OUR BUSINESS IS MOTIVATED AND DRIVEN ESSENTIALLY BY CUSTOMER REQUIREMENTS – WHICH WE CONSIDER MOST IMPORTANT AND ARE HIGHLY CONSIDERED IN OUR MANAGEMENT POLICY.

⊗ **PLEASE TAKE CAREFUL NOTE THAT:**

THIS INFORMATION, PRESENTATION, PRODUCT TRADE MARKS, LABELLING AND LOGOS AS WELL AS THE PRODUCT FORMULAE AND THEIR METHOD(S) OF PRODUCTION ARE THE INTELLECTUAL PROPERTY OF ABILITY BUILDING CHEMICALS CO – A SUBSIDIARY OF AUSTRALIAN OXIDES PTY LTD.

⊗ **PRODUCTS OF EXCELLENCE:**

ABILITY BUILDING CHEMICALS CO, STRIVES TO PRODUCE USEFUL PRODUCTS AND MATERIALS THAT *LAST* (AND LAST) AND WHEN USED INTELLIGENTLY ACCORDING TO OUR RECOMMENDATIONS, WORK DEPENDABLY, WITH SOME BEING CAPABLE OF IMPARTING GREAT ARCHITECTURAL BEAUTY AND MOST BEING THE *BEST* OF THEIR KIND.

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