

Concrete Masonry Surface Finishes

CONCRETE NZ - MASONRY INFORMATION SHEET #2

Concrete masonry has its own distinct surface finish which is not dependent on the construction of formwork. It becomes a permanent formwork system and as such there is an opportunity to take advantage of the construction system with respect to surface finishes. NZS 3114 sets out the specification for concrete surface finishes with great emphasis on the quality of formwork to achieve a surface finish. The slightest defect in the formwork either in surface absorption or leaks at joints will guarantee a surface defect. The leak at formwork joint will always be reflected in a colour variation or in extreme cases by the surface loss of grout. These construction risks are eliminated by using concrete masonry.

SPECIFICATION FOR STANDARD MASONRY SURFACE FINISH

It is suggested that the terminology of NZS 3114 be retained, i.e. an F3 finish requirement of NZS 3114 should be defined as

F3 M. The viewing distance, in determining compliance with the specification, is 3 m (NZS 3114, Clause 104.4.1.5).

An F3 finish is normally associated with civil or building structures not subjected to close or frequent scrutiny.

F3 NZS 3114	F3 M
<p>Surface Variations</p> <ul style="list-style-type: none"> • F3 abrupt change 6 mm to 3 mm permitted • F3 gradual variations to exceed 6 mm 	<p>Surface Variations</p> <ul style="list-style-type: none"> • NZS 4210 variation in construction is 3 mm maximum • NZS 4210 – 3 mm
<p>Colour Variations</p> <ul style="list-style-type: none"> • Special Precautions needed 	<p>Colour Variations</p> <ul style="list-style-type: none"> • No special precautions needed

F3 NZS 3114	F3 M
Physical Irregularities <ul style="list-style-type: none"> • Blowhole variations • Formwork tolerances • Honeycombing etc. • Striking damage 	Physical Irregularities <ul style="list-style-type: none"> • Surface of masonry already established • Standard construction to NZS 4210 • No surface defects due to concrete placing • No significant problem as little formwork is used
Surface Dressing <ul style="list-style-type: none"> • Tie Hole filling • Defect Repair • Bagging or Stoning 	Surface Dressing <ul style="list-style-type: none"> • Not needed • Not needed • Light stoning down

F4 FINISH

When an equivalent F4 finish (F4 M) is required, the only change required is to specify that masonry construction should be to NZS 4210, subject to the following modification to Table 2.2 – Maximum Tolerances, where nominated fair face vertical displacement should be 2 mm (i.e. replacing the 3 mm in the Standard). A licensed tradesperson LBP in blocklaying achieves these tolerances in normal practice.

Drawings will also have to nominate which face of a wall is to have Fair Face finish (F4 M).

Where a uniformity of colour, is required then block surface greyness should be assessed against Fig 24 Grey Scale of NZS 3114. Normally a tolerance of colour would to accept a range of 2 adjacent bands. Alternatively the full sample panel (or section of wall) can be followed as required in NZS 3114.

SPECIFICATION FOR SPECIAL MASONRY SURFACE FINISHES - ARCHITECTURAL MASONRY

A comprehensive **Best Practice Guide for Specifiers and Installers** has been produced by Firth Industries and

reference should be made to that document for guidance on using masonry where walls become architectural features of construction.

The Guide covers:

1. Range
2. Design considerations
3. Compliance considerations
4. Installation
5. On-site Honing or Factory Hone
6. Final Appearance
7. Availability
8. Ordering

The Guide can be obtained by contacting Firth 0800-800-576 or via www.firth.co.nz (<http://www.firth.co.nz/brochures-technical/brochures.aspx> under Masonry and Designer Masonry (Veneers)).

CONCRETENZ - MASONRY MEMBERS

For advice and concrete block availability, Concrete NZ – Masonry Sector Group members can be contacted at the following links:

COMPANY	LOCATION	CONTACT
Bowers Brothers Concrete Limited	Various Locations in the Upper North Island	www.bowersbrothers.co.nz
Firth Industries	Various Locations	www.firth.co.nz
Mitchell Concrete Limited	Taranaki	mitchellconcrete@xtra.co.nz
The Block Shop New Zealand Limited	Various Locations in the North Island	www.blockshop.co.nz
Viblock Limited	Christchurch and Alexandra	www.viblock.co.nz