

Product Technical Statement



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Product: Koramic Actua Roof Tiles

Description: Koramic Actua roof tiles are interlocking plain clay roof tiles. The tiles have an effective length of 310-370 mm, and an effective width of 261 mm. They are available in a range of colours. Each tile is permanently marked with the word ACTUA pressed into the tile before firing.

Scope of Use: This Product Technical Statement covers the use of Koramic Actua roof tiles as a roof cladding for non-specifically designed timber framed buildings designed and constructed in accordance with B1/AS1, NZS3604 and E2/AS1, non-specifically designed steel framed buildings to NASH 3405, and specifically designed buildings in accordance with B1/VM1 and AS/NZS 1170.
This Product Technical Statement covers the use of these roof tiles on buildings within the Scope of E2/AS1 para 1.1 with respect to height, plan area and roof pitch (with a minimum roof pitch of 25 degrees), and in all wind zones up to and including extra high as defined in NZS3604.

Conditions: Koramic Actua roof tiles must be installed in accordance with the Installation Guide for Actua. Roofing underlay in accordance with E2/AS1 must be used under the tiles.

Technical Literature: Installation Guide - Actua
Declaration of Performance 002-005W2400
AFNOR NF Certificate (Certification to EN1304:2013)
CTMNC Test Certificates 130187

When used as described above, Koramic Actua Roof Tiles meet the following relevant performance requirements of the New Zealand Building Code

Relevant Code Clause:	Basis of Compliance:	Related documents:	Comments:
Structure B1.3.1	Alternative solution compared with acceptable	E2/AS1; EN1304	Koramic Actua roof tiles are manufactured and certified to a European standard EN1304. The requirements of EN1304 for mechanical strength exceed the strength requirement of AS2049 which is the referenced standard in E2/AS1.

Structure B1.3.2	Alternative solution compared with acceptable	E2/AS1; EN1304	Koramic Actua roof tiles are manufactured and certified to a European standard EN1304. The requirements of EN1304 for mechanical strength exceed the strength requirement of AS2049 which is the referenced standard in E2/AS1.
Structure B1.3.3a, c, e, h, j, m, q	Alternative solution compared with acceptable	E2/AS1; EN1304	Koramic Actua roof tiles are manufactured and certified to European standard EN1304. The requirements of EN1304 for mechanical strength exceed the strength requirement of AS2049 which is the referenced standard in E2/AS1. Clay tiles are unaffected by normal ambient temperatures and easily accommodate thermal expansion. Their ability to withstand low temperatures is demonstrated by mechanical testing after freeze thaw cycles. Water does not affect the stability or amenity of clay tiles. Clay tiles are not normally subjected to impact loads, although may be affected by unusually large hailstones. Clay tiles when installed easily tolerate differential movement in the substrate structure should it occur. Clay roof tiles themselves do not shrink or creep.
Structure B1.3.4a, b, d	Alternative solution compared with acceptable	E2/AS1; EN1304	The manufacturing tolerances of Koramic Actua roof tiles comply with EN1304, which are similar to the requirements of AS 2049. The roofing membrane provides a second line of defense against water ingress should a tile be damaged.
Durability B2.3.1b	Alternative solution compared with acceptable	E2/AS1; EN1304	Koramic Actua roof tiles are a fired ceramic and can be expected to have a durability well in excess of 15 years. Fired clay products are not affected by UV light. The most severe category for frost resistance in EN1304 is 150 cycles, which Koramic Actua roof tiles meet. This compares with only five freeze/thaw cycles specified in AS2049. Koramic Actua roof tiles also meet the highest category EN 1304 requirement for water permeability of no more than 0.3 cm ³ per day. Clay tiles have an extensive history of traditional use in New Zealand and in Europe. Wienerberger is the largest producer of clay roof tiles in Europe.
External moisture E2.3.1 (Contributes to)	Alternative solution compared with acceptable		Koramic Actua roof tiles contribute to the shedding of precipitated moisture when used on an appropriately pitched and drained substrate.
External moisture E2.3.2 (Contributes to)	Alternative solution compared with acceptable	E2/AS1; EN1304	Koramic Actua roof tiles may be incorporated into a roofing system as described in E2/AS1. The Koramic Actua roof tiles have properties equivalent to or exceeding those required by AS2049 which is referenced in the acceptable solution E2/AS1. Koramic Actua roof tiles meet the highest category EN 1304 requirement for water permeability of no more than 0.3 cm ³ per day. The tiles are completely impervious (0.0 cm ³ /cm ² /day). The tile satisfies the Category 1 requirement, and is able to be used without a watertight roofing underfelt. (The basis of this PTS is use with a minimum roof pitch of 25 degrees and a roofing underlay as is specified in E2/AS1).
External moisture E2.3.5 (Contributes to)	Alternative solution compared with acceptable	E2/AS1	Koramic Actua roof tiles installed as roof cladding as described mirrors the construction details specified in E2/AS1.
External moisture E2.3.6	Alternative solution compared with acceptable	E2/AS1	Koramic Actua roof tiles do not contribute any construction moisture, and the construction details specified mirror the details in E2/AS1.

External moisture E2.3.7

Alternative solution
compared with acceptable

E2/AS1

The roof cladding construction details of E2/AS1 using Koramic Actua roof tiles with underlay makes due allowance for failure of the tiles and is tolerant of normal construction variabilities and tolerances.

Hazardous building F2.3.1
materials

Koramic Actua roofing tiles do not contain any harmful products.
