



Designa Basalt

Stone bricks formed by nature

^ Lava Stone Slim Line

Technical and Laying Specification

Compliance

Austral Bricks Designa Basalt is a natural stone product for use as an external cladding material. Designa Basalt is manufactured to AS/NZS 4455.1 Masonry Units. As such, Designa Basalt is a masonry cladding material that complies with the performance requirements of the National Construction Code, NCC, Volume 2 Clause 3.3.1 unreinforced masonry when designed and constructed in accordance with AS 3700.

Designa Basalt meets the requirements of NCC Clause 3.3.4 weatherproofing of masonry when designed and constructed in accordance with AS 3700. This is based on the service history of masonry in cavity or veneer construction with a drained and vented cavity.

Initial Rate of Absorption

Designa Basalt has a low IRA (initial rate of absorption) which is much lower than traditional clay bricks. As such it is essential that an additive is used in the mortar to achieve adequate bond strength. A polymer bonding agent is recommended to enhance the bond. Many such bonding agents are available consisting of PVA dispersions, also known as acrylic additives.

Laying Designa Basalt

Designa Basalt is to be constructed to AS 3700 and the following should be adhered to:

- Designa Basalt bricks shall be full bedded.
- Mortar shall comply with AS 3700 Table 11.1 and be of M4 classification.
- Mortar joints should be 10mm +/- 2mm.

- Masonry wall ties shall comply with AS 2699.1 and shall be installed at maximum 450mm centres both horizontally and vertically.
- Damp courses, weep holes, lintels should be installed in the same way as standard brickwork.
- During installation, use clean water and brush to promptly remove any fresh mortar that splashes onto the brickwork.

Mortar

Chisel Stone and Shadow Stone need to be laid with a bonding polymer addition to the mortar. The acrylic additive is combined with water, in the ratio specified by the manufacturer, and added to the mortar mix.

Lanko 752 Bondit is a suitable bonding polymer (Davco Construction Materials www.davco.com.au).

Technical Data

Austral Bricks manufactures Designa Basalt to satisfy the requirements of the Australian and New Zealand Standard for Masonry Units and Segmental Pavers, AS/NZS 4455. All products, including Designa Basalt, are tested to the Australian and New Zealand Standard for Masonry Units and Segmental Pavers – Methods of Test, AS/NZS 4456. The testing is carried out in Austral Bricks NATA accredited laboratory.

The properties of the Designa Basalt bricks exceed the minimum requirements:

- Dimensional Category is DW2
- Characteristic Compressive Strength is >50MPa
- Durability Classification is exposure grade
- Cold Water Absorption is < 3%
- Coefficient of Expansion is 0 mm/m

The technical data for Austral Bricks Designa Basalt are provided in the table below.

Wall Ties

The wall ties must have 50mm embedment and 15mm cover to external surface of mortar. To achieve this with a 40 to 50mm cavity the maximum raking permitted is 5mm.

Wall ties must be installed at minimum 450mm centres both horizontally and vertically. As such, wall ties should be placed every second course for the double height Basalt units and every 4th course for the single height Basalt units.

It is recommended that the wall ties be screw fixed when face fixed ties are used. Alternatively side fixed ties should be used.

Cleaning

Being a natural stone, care should be taken to ensure a minimal amount of mortar gets on the face of the bricks, and all the mortar haze should be thoroughly removed during the initial installation process.

It is recommended that strong acids such as hydrochloric acid (HCl) are NOT used, as this could create an irreversible reaction in the stone.

Technical Specifications

Product Name	Chisel Stone 76	Chisel Stone 162	Lava Stone 76	Lava Stone 162	Shadow Stone 76	Shadow Stone 162
Dimensions L x W x H (mm)	470 x 70 x 76	470 x 70 x 162	470 x 70 x 76	470 x 70 x 162	470 x 70 x 76	470 x 70 x 162
Dimensional category	DW2	DW2	DW2	DW2	DW2	DW2
Weight (kg)	5.2	11.1	4.8	8.9	5.2	11.2
F _{uc} (MPa)	>50	>50	>50	>50	>50	>50
e' Factor (mm/m)	0	0	0	0	0	0
Durability	Exposure Grade	Exposure Grade	Exposure Grade	Exposure Grade	Exposure Grade	Exposure Grade
Initial rate of absorption (kg/m ² .min)	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15
Cold water absorption (%)	<3	<3	<3	<3	<3	<3

For further information on cleaning and maintenance of Designa Basalt bricks please contact **Austral Bricks on 13 2742**