

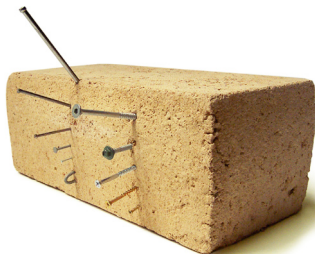
Cobblestone Series - 200mm Single Skin



Build something beautiful with Timbercrete's unique, energy efficient signature block, offering features and benefits that will astound you.



Cobblestone Single Skin
200mm Block



Cobblestone Series
200mm thick (left), 120mm thick (right)

The 200mm thick single skin Cobblestone Series Block is our most popular and has become our unique signature block. Each block is individually hand crafted, with slight variations of curved faces and dimensions inherent in the hand-made process. This variation is intentional in order to create the unique cobblestone appearance with the charm and character of the old world. The mortar thickness will also reflect this variation, ranging from 10mm to 20mm.

The 200mm Cobblestone Series features a range of specialty blocks to accommodate every type of vertical or horizontal service requirement. We also provide a half block and a power point or light switch box, which comes already cast into the block saving time and money on the electrical fit out. There are also specialty blocks to accommodate the window fin on aluminium windows, eliminating the need for timber reveals. In fact there are 11 different types of blocks in this 200mm single skin series. Once you understand and decide where all the specialty blocks are required, "single skin simplicity" is actually a very easy way of building.

There are several advantages to building with the timbercrete single skin series including:

- Ease of maintenance, walls are not easily marked or damaged and therefore do not need repairing or re-painting.
- Timbercrete walls can be nailed or screwed into directly. This means that attaching shelving, cupboards, or hanging paintings is incredibly simple.
- Improved acoustic performance. Due to the unique density and matrix of Timbercrete combined with the curved and textured surface, walls do not reflect (echo) back sound as with plasterboard or high-density masonry walls.
- The durable nature of internal Timbercrete walls makes it the ideal choice for maintenance free homes, rental properties, investment properties, commercial buildings, schools and homes with young families.
- Choosing either single skin (single leaf) or full brick (double brick) construction has considerable thermal benefits. Timbercrete not only insulates well but it also stores thermal energy. Storing thermal energy is equally as important as insulation. Timbercrete is unique in that it provides a workable balance, being able to insulate extremely well, while also storing thermal energy (thermal mass), unlike many other lower density insulating products.
- The 200mm wide single skin Timbercrete wall offers the highest possible Fire Resistant Level (FRL) of 240/240/240 minutes. This means that for a period exceeding four hours Timbercrete is able to maintain structural adequacy, structural integrity and insulate against excessive heat transference.

In fact a CSIRO fire test was carried out to determine Timbercrete's Structural Adequacy, Integrity and Insulation achieving a definition of FRL 240/240/240.

Cobblestone Block Series - 200mm cont.

The Definition of the Fire Resistant Level

FRL **240** / 240 / 240

The first 240/ - represents **Structural Adequacy**, this means that for a period of 240 minutes (four hours) the product being tested was able to support a load while subject to fire conditions. In the case of the Timbercrete test wall of 3 m long by 3 m high, it was able to support a load of 30 tonnes.

FRL 240 / **240** / 240

The second 240/ - represents **Integrity**, this means the product did not disintegrate or crack so as to see the flames of the fire or for gases to escape. Timbercrete maintained integrity for over 240 minutes at which time the test was terminated while the wall remained intact.

FRL 240 / 240 / **240**

The third /240 - represents **Insulation** which means the product being tested did not transfer an average temperature reading that exceeds 180°C above the ambient temperature.

Structural Adequacy and Integrity

Most walls fail in these categories because they buckle, severely flexing out as far as 150mm before suddenly failing. A careful study of the deflection graph shows that the 3m high Timbercrete wall only deflected 4mm towards the furnace in the first 30 minutes. The wall then corrected itself so that at the end of 240 minutes it had only moved 1mm from its original position. This ability to remain straight assists in its load-bearing capabilities.

Improved Insulation

With regard to the amazing thermal dynamic properties of Timbercrete, the ambient temperature at the beginning of the fire test was 30°. The average temperature of the wall being exposed to the flames (furnace temperature) was close to 1200°C. It took 75 minutes for the other side of the Timbercrete wall to reach the ambient air temperature of 30°C. After four hours the side of the wall not exposed to direct flame eventually reached 75°C! This means that the rise in temperature of the Timbercrete wall was only 45°C above the ambient air temperature, even after 4 hours of 1200 degrees directly onto its other side! "Fantastic insulation!"

This makes the 200mm thick Timbercrete single skin series the ideal block of choice where an exceptionally high fire rating is required, such as load-bearing commercial buildings, public buildings, industrial buildings and houses built in bushfire prone areas. (A bushfire may reach temperatures up to 1000°C however the front will typically pass in less than 30 mins).

CSIRO Fire tests on Timbercrete were conducted in accordance with Australian standard 1530 and part 4-1997. Test reference number FSV 1094. For a full test report including photos refer to the website www.timbercrete.com.au.

Durability

Timbercrete provides a unique kind of durability. The product is more resilient than harder fired clay or concrete blocks. In other words the product is strong without being brittle. For example if one was to strike a clay brick, mudbrick, concrete block or aerated concrete block with a hammer they would either shatter, break or disintegrate. If the same strike force is applied to a Timbercrete brick or block, typically you would simply leave a small dent.

Ballistic Proof (Bullet-Proof)

Durability tests on Timbercrete have been taken to extreme measures. Timbercrete has been tested in the US and Australia with a range of high-powered weaponry. Tests show that Timbercrete is bullet-proof whereas other masonry products shatter or explode. (Refer to ballistic test on website.)

Environment

Timbercrete Single Skin Cobblestone series is an insulating light weight masonry product that stores many tonnes of carbon gas. Not only does Timbercrete store a significant amount of carbon gas, the manufacturing process requires significantly less energy and is far less polluting than the process used to produce clay fired bricks. The outcome is a cleaner and healthier environment.



Cobblestone Block Series - 200mm cont.

Improved Thermal Properties

When compared with other denser standalone masonry products with the same thickness, such as fired clay bricks, concrete bricks and blocks, sandstone blocks, mud bricks or limestone, Timbercrete's unique thermal properties will ensure a superior thermal comfort, resulting in your house performing better in summer and winter and saving on energy costs.



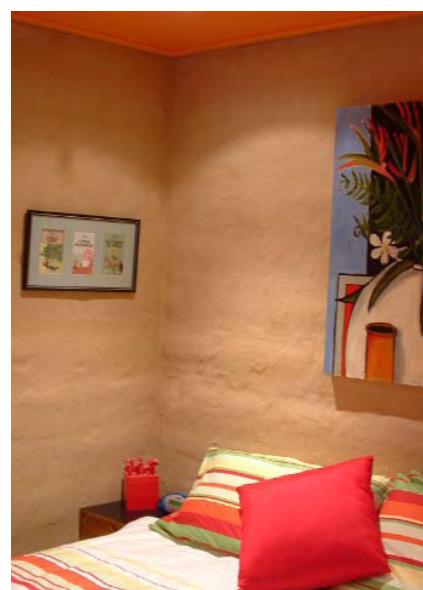
Construction Considerations

With the many advantages and benefits of using the 200mm thick single skin Cobblestone Series Block, the following considerations should also be taken into account:

- **Water tightness of mortar joints** - problems could arise due to poor block laying or porous mortar joints.
To remedy this, we recommend that a waterproofing agent is added to the mortar mix, a waterproof sealer is added to the entire wall, and generous eaves (450 to 900 mm) or verandahs should surround the house. It is best to also use a recommended bricklayer, who reads, understands and practices the procedures taught in the "Building with Timbercrete" manual. If you still have concerns about water tightness we are pleased to announce the availability of a narrower veneer brick (120mm wide) that shares the same facial features and measurements as the 200mm series.
- **Legislated or mandatory minimum R values for walls** - despite many satisfied clients in relation to thermal comfort, along with an exceptional thermal resistance performance as shown in the fire test, in some instances the R rating may not be sufficient for you to gain an energy audit through a do-it-yourself BASIX system. To remedy this you will need to obtain an independent energy assessment that will use a simulation program such as; First Rate, Accurate or Bers-Pro. Alternatively, some licensed Timbercrete manufacturers have access to a qualified energy assessor and provide a free BASIX energy assessment by offering a refund on the cost of your blocks. If this is not available in your area simply ask your local Timbercrete franchisee to recommend a good energy assessor.
- **Internal wall choices** - with single skin structures, what you see on the outside is similar to what you see on the inside. This will offer you the choice of either keeping the cost-effective and rustic beauty of the blocks inside and out, applying either a bag render (3mm thick) or smooth render (10mm thick) and paint. If this is not suitable, you could instead choose to build with our 120mm wide veneer to cover your stud frame and plasterboard your walls.



Lightly Bagged finish



Heavily Bagged finish

Specifications

Increment or Module Size	420mm long X 175mm high
Actual Size	405mm long X 160mm high X 200mm wide
Mortar joints	10mm to 20mm thick
Weight	12.7kg (approximately)
Bricks per m ²	13.6
Construction wall type	Single Skin. See also, Veneer Brick Walls or Full Brick Walls (Double Brick)

