

Laminated Safety Support Blocks



Made in Four Sizes

These blocks are rated not certified

Part Number	Length	Height	Width
Block 07170	700 mm	170 mm	300 mm
Block 07260	700 mm	260 mm	300 mm
Block 1170	1000 mm	170 mm	300 mm
Block 1260	1000 mm	260 mm	300 mm

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Preliminary Report on Laminated Blocks

Basis of Testing

Testing was carried using the prototype test provisions of AS1720.1, Appendix D, equation D2. This specifies an "equivalent test load" Q_E given by

$$Q_E = \frac{k_2 k_{26} k_{27} k_{28}}{k_1} Q^*$$

Specified design dead load $G = 50$ tonnes. In engineering design, this load is increased by a load factor of 1.35 to allow for underestimates of its value so that

$$Q^* = 1.35G = 1.35 \times 50 = 67.5 \text{ tonnes}$$

It is assumed that the blocks would be required to carry that load for only relatively short periods not exceeding 5 days so that a duration of load factor of $k_1 = 0.94$ has been assumed.

Following AS1720.1 recommendations,

$$k_2 = 1$$

$$k_{26} = 1$$

$$k_{27} = 1$$

$$k_{28} = 1.35 \text{ (Assuming a coefficient of variation of 10\% and 10 replicate tests)}$$

$$k_1 = 0.94$$

$$Q_E = \frac{1 \times 1 \times 1 \times 1.35}{0.94} \times 67.5 = 97 \text{ tonnes}$$

This load is applied over a distributed area 400×150 .

The ratio of the equivalent test load at 97 tonnes to the specified load of 50 tonnes is approximately 2.

The selection of the factor k_{28} depends on the variability of the failure loads (how much the failure load varies from one test specimen to the next) and the number of replicate tests. Given that the failure loads and therefore their variability are not known prior to commencing the tests failure load variability has to be estimated prior to starting the tests.

Satisfactory Performance

The performance criterion states that, "at no stage in its testing shall a unit have shown any failure of any part or member up to a load equal to the Q_E ".



There has been considerable difficulty in The testing in deciding what constitutes a sign of failure but it was considered that indentations in the surface of more than 2 mm constituted "showing failure". Should any user of this product consider this too severe a requirement then they should make appropriate adjustments to the recommendations. Monash University is not prepared to recommend their use with visible damage beyond that limit.

Audible noises coming from the specimens as the load was increased were also recorded as these indicate impending failure conditions.

Test Method

The test method varied as experience was gained with the performance of the blocks.

Having determined that an equivalent test load was approximately 100 tonnes the first round of tests consisted of placing or attempting to place that load on the block.

In later tests cross head movement of the testing machine was observed but this did not commence until specimen 14 and is thus only available for specimens 14 to 16.

In some tests loading was placed near the edge of the block as it cannot be guaranteed that loading will always occur in the centre of the block.

