

To whom it may concern,

RE: 400x400x60 Cautional Tactile White

Due to insufficient data, a product data sheet outlining the specific test results for 400x400x60 Cautional Tactile Paver White cannot be supplied. A detailed summary of both AS4455; Masonry units, pavers, flags and segmental retaining wall units, Part 2: Pavers and flags, and AS1428; Design for access and mobility, Part 4: Tactile indicators has instead been provided. AS1428 states that where masonry surfaces are used for tactile ground surface indications (TGSIs), they shall comply with AS 4455. This therefore means they shall comply with the following.

Please note that these are excerpts of the specifications to meet Australian Standards, and not the tested results of the product.

Category

The 400x400x60 Cautional Tactile White is considered a flag due to the gross plan area being greater than 0.08 m².

Dimensional Deviation from Work Size

Flags shall comply with either category DPA1 or DPA2 unless otherwise declared by the supplier. As the 400x400x60 Cautional Tactile pavers are over 250 mm in work size, the maximum dimensional deviations are shown in Table 1 for each given application. Further, the overall dimensions of 20 units taken from separate deliveries shall not differ by more than **40** mm.

Table 1 – Maximum dimensional deviations determined over 20 flags by cumulative measurement, work size over 250 mm

Category	Deviations	Category
DPA1	±75	Pedestrians only
DPA2	±60	Pedestrians and light vehicles only, Pedestrians and commercial vehicles

Deviation from Flatness

Pavers or flags shall not bow more than **2.5** mm convex deviation and **1.5** mm concave deviation.

Breaking Load

Pavers and flags shall have a sufficient characteristic breaking load to resist failure when laid correctly and subjected to the design load. Pavers and flags with breaking loads set out in Table 2 are deemed to be satisfactory in the nominated applications.

Table 2 - Minimum requirements for breaking load

Pavement application		Minimum characteristic breaking load kN (at 28 days) – Flags
Public space	Pedestrians only	5
	Pedestrians and light vehicles only	7
	Pedestrians and commercial vehicles	Specifically designed for each application

Abrasion Resistance

Pavers and flags shall provide adequate abrasion resistance to maintain a functional and aesthetically appealing surface. Pavers and flags with abrasion resistance set out in Table 3 are deemed to be satisfactory in the nominated applications.

Table 3 - Minimum requirements for abrasion resistance

Pavement application		Minimum abrasion resistance (mean abrasion index)		
		Pedestrian traffic volume		
		Low	Medium	High
Public space	Pedestrians only	7 (at 90 days)	5.5	3.5
	Pedestrians and light vehicles only	7 (at 90 days)	5.5	3.5
	Pedestrians and commercial vehicles	7 (at 90 days)	5.5	3.5

Slip Resistance

Pavers and flags shall have adequate slip resistance to minimize slip hazards. Pavers and flags with a slip resistance class of W, as specified in AS 4586 are deemed to satisfy.

Durability

Pavers and flags shall have sufficient durability to perform their required function without deteriorating under the environmental conditions of intended use. Pavers and flags classified in accordance with Table 4 are deemed to satisfy the salt attack resistance requirement.

Table 4 - Minimum requirements durability

Salt attack resistance grade	Requirements/description
Exposure	(a) Supplier’s experience, able to demonstrate that the product has a history of surviving under saline environmental conditions. (b) <0.4 g mass loss in 40 cycles in AS 4456.10
General purpose	(a) Supplier’s experience, able to demonstrate that the product has a history of surviving under non-saline environmental conditions. (b) <0.4 g mass loss in 15 cycles in AS 4456.10

AS1428; Design for access and mobility, Part 4: Tactile indicators; sets out the standards for TGSIs in relation to their application in the built environment. This includes information on the design and installation, guidance on typical applications and details on raised pavement markers. TGSIs shall be installed to alert people who are blind or vision impaired to pending obstacles or hazards on, or changes in direction and location points of, the continuous accessible path of travel, where those hazards or changes could not be reasonably expected or anticipated using existing tactile and environmental cues. The following criteria apply:

1. TGSIs shall be laid so that there is no likelihood of the edges lifting.
2. A TSGI along the direction of travel shall have a dimension of 300 mm to 400 mm.
3. A TSGI shall be slip-resistance tested.
4. TGSIs shall have the top surface of bars or domes no more than 4 mm to 5 mm above the base surface.

In relation to warning indicators, where required warning TGSIs shall be provided as applicable to the following:

1. Railway, tramway, light rail platform, bus/tram/light rail stop or passenger ferry wharf.
2. Level transition between pedestrian areas and carriageways.
3. Escalators and travelators.
4. Step(s).
5. Stairs.
6. Ramps.
7. Kerb ramps.
8. Any overhead impediments or hazards other than a doorway, with less than 2000 mm clearance in an accessible open public space with no clearly defined accessible path of travel, e.g., wall-mounted objects.
9. Water bodies or other items or features of significant risk.
10. A change in direction of directional indicators.

They shall be installed:

1. For the full width of the continuous accessible path of travel;
2. Perpendicular to the angle of approach to the hazard
3. Set back 300 ± 10 mm from the edge of the hazard, except at railway stations or wharves where the set back from the hazard shall be a minimum of 600 mm; and
4. On intermediate landings for stairs, stairways and ramps.

The design shall be such that:

1. The distance between the edge of the indicator and the first raised surface is 7.5 ± 1 mm.
2. The distance between the center of the raised surfaces is 50 ± 1 mm.
3. The distance between the edges of the raised surfaces is 15 ± 1 mm.
4. The radius of the top part of the raised surface is 25 ± 1 mm.
5. The raised of the bottom part of the raised surface is 35 ± 1 mm.
6. The height of the raised surface is between 4 – 5 mm.

For detailed information on the installation and design of TGSIs, AS1428.4 should be purchased and followed.

For any more information relating to the standards discussed, or to request testing of the 400x400x60 Cautional Tactile White (pending stock and testing suitability) please do not hesitate to contact me.

Regards,

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