Landscape House, Premier Way, Lowfields Business Park, Elland HX5 9HT Tel: 03704 11 22 33 https://www.marshalls.co.uk/commercial

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## Tactile Blister 450 x 450 x 50

Date Created: 08/02/19







Created to aid visually impaired and blind people as they navigate towns and cities on foot, Blister Tactile Flag Paving makes it easier to identify where drop kerbs and appropriate road-crossing places are located.

The raised blister pattern can be felt underfoot, while those with less severe sight loss can also use the product's colour coding to access extra information about their surroundings.

Red Blister Tactile Flag Paving is laid at controlled crossing points, while the same product in buff is found at uncontrolled crossing points. Alternatively, natural and charcoal units are permitted in some types of conservation areas.

DESCRIPTION		
Appearance	Solid unit with prof	iled surface
Manufacturing Process	Hydraulically press	ed concrete
Base Raw Material	Concrete	
Governing Manufacturing Standards	but not in complian	vant manufactured, ice, to BS EN 1339 : y of paving is excluded
NBS Specification	Q25 31	Q25 320





















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## Tactile Blister 450 x 450 x 50

Tolerances Minimum (mm) Maximum (mm)  Length 446 450  Width 446 450  Thickness 47 53  Work Dimensions (mm) 448 x 448 x 50  Nominal Dimensions (mm) 450 x 450 x 50  Tolerances on Work Dimensions (mm) Length ±2mm, width ±2mm, thickness ±3mm  Abrasion Resistance (mm) ≤ 23mm (Wide Wheel Abrasion Test)  Durability (Freeze-thaw) ≤ 1.0 kg/m² as a mean with no individual value > 1.5 kg/m²  Material Density 2300 kg/m³ (typically)  Slip/Skid Resistance (polished) Mean polished skid resistance value (PSRV) : > 45  Slip/Skid Resistance (unpolished) Mean unpolished skid resistance value (USRV) : > 45.  Thermal Conductivity (K value) Design data as defined to BS EN 13369 : 2013  Transverse/FlexuralSplit/Breaking Characteristic bending strength of 4.0 MPa with no individual result less than 3.2 MPa			
Length 446 450  Width 446 450  Thickness 47 53  Work Dimensions (mm) 448 x 448 x 50  Nominal Dimensions (mm) 450 x 450 x 50  Tolerances on Work Dimensions (mm) Length ±2mm, width ±2mm, thickness ±3mm  Abrasion Resistance (mm) ≤ 23mm (Wide Wheel Abrasion Test)  Durability (Freeze-thaw) ≤ 1.0 kg/m² as a mean with no individual value > 1.5 kg/m²  Material Density 2300 kg/m³ (typically)  Slip/Skid Resistance (polished) Mean polished skid resistance value (PSRV) : > 45  Slip/Skid Resistance (unpolished) Mean unpolished skid resistance value (USRV) : > 45.  Thermal Conductivity (K value) Design data as defined to BS EN 13369 : 2013  Transverse/FlexuralSplit/Breaking Characteristic bending strength of 4.0 MPa with no individual result	PHYSICAL PROPERTIES		
Width446450Thickness4753Work Dimensions (mm)448 x 448 x 50Nominal Dimensions (mm)450 x 450 x 50Tolerances on Work Dimensions (mm)Length ±2mm, width ±2mm, thickness ±3mmAbrasion Resistance (mm)≤ 23mm (Wide Wheel Abrasion Test)Durability (Freeze-thaw)≤ 1.0 kg/m² as a mean with no individual value > 1.5 kg/m²Material Density2300 kg/m³ (typically)Slip/Skid Resistance (polished)Mean polished skid resistance value (PSRV) : > 45Slip/Skid Resistance (unpolished)Mean unpolished skid resistance value (USRV) : > 45Thermal Conductivity (K value)Design data as defined to BS EN 13369 : 2013Transverse/FlexuralSplit/BreakingCharacteristic bending strength of 4.0 MPa with no individual result	Tolerances	Minimum (mm)	Maximum (mm)
Thickness 47 53  Work Dimensions (mm) 448 x 448 x 50  Nominal Dimensions (mm) 450 x 450 x 50  Tolerances on Work Dimensions (mm) Length ±2mm, width ±2mm, thickness ±3mm  Abrasion Resistance (mm) ≤ 23mm (Wide Wheel Abrasion Test)  Durability (Freeze-thaw) ≤ 1.0 kg/m² as a mean with no individual value > 1.5 kg/m²  Material Density 2300 kg/m³ (typically)  Slip/Skid Resistance (polished) Mean polished skid resistance value (PSRV) : > 45  Slip/Skid Resistance (unpolished) Mean unpolished skid resistance value (USRV) : > 45.  Thermal Conductivity (K value) Design data as defined to BS EN 13369 : 2013  Transverse/FlexuralSplit/Breaking Characteristic bending strength of 4.0 MPa with no individual result	Length	446	450
Work Dimensions (mm)  Nominal Dimensions (mm)  448 x 448 x 50  Nominal Dimensions (mm)  450 x 450 x 50  Tolerances on Work Dimensions (mm)  Length ±2mm, width ±2mm, thickness ±3mm  Abrasion Resistance (mm)  ≤ 23mm (Wide Wheel Abrasion Test)  Durability (Freeze-thaw)  ≤ 1.0 kg/m² as a mean with no individual value > 1.5 kg/m²  Material Density  2300 kg/m³ (typically)  Slip/Skid Resistance (polished)  Mean polished skid resistance value (PSRV) : > 45  Slip/Skid Resistance (unpolished)  Mean unpolished skid resistance value (USRV) : > 45.  Thermal Conductivity (K value)  Design data as defined to BS EN 13369 : 2013  Transverse/FlexuralSplit/Breaking  Characteristic bending strength of 4.0 MPa with no individual result	Width	446	450
Nominal Dimensions (mm)       450 x 450 x 50         Tolerances on Work Dimensions (mm)       Length ±2mm, width ±2mm, thickness ±3mm         Abrasion Resistance (mm)       ≤ 23mm (Wide Wheel Abrasion Test)         Durability (Freeze-thaw)       ≤ 1.0 kg/m² as a mean with no individual value > 1.5 kg/m²         Material Density       2300 kg/m³ (typically)         Slip/Skid Resistance (polished)       Mean polished skid resistance value (PSRV) : > 45         Slip/Skid Resistance (unpolished)       Mean unpolished skid resistance value (USRV) : > 45.         Thermal Conductivity (K value)       Design data as defined to BS EN 13369 : 2013         Transverse/FlexuralSplit/Breaking       Characteristic bending strength of 4.0 MPa with no individual result	Thickness	47	53
Tolerances on Work Dimensions (mm)  Abrasion Resistance (mm)  Solve 23mm (Wide Wheel Abrasion Test)  Durability (Freeze-thaw)  Solve 23mm (Wide Wheel Abrasion Test)  Durability (Freeze-thaw)  Solve 1.0 kg/m² as a mean with no individual value > 1.5 kg/m²  Material Density  Slip/Skid Resistance (polished)  Mean polished skid resistance value (PSRV) : > 45  Slip/Skid Resistance (unpolished)  Mean unpolished skid resistance value (USRV) : > 45.  Thermal Conductivity (K value)  Design data as defined to BS EN 13369 : 2013  Transverse/FlexuralSplit/Breaking  Characteristic bending strength of 4.0 MPa with no individual result	Work Dimensions (mm)	448 x 448 x 50	
(mm)       thickness ±3mm         Abrasion Resistance (mm)       ≤ 23mm (Wide Wheel Abrasion Test)         Durability (Freeze-thaw)       ≤ 1.0 kg/m² as a mean with no individual value > 1.5 kg/m²         Material Density       2300 kg/m³ (typically)         Slip/Skid Resistance (polished)       Mean polished skid resistance value (PSRV) : > 45         Slip/Skid Resistance (unpolished)       Mean unpolished skid resistance value (USRV) : > 45.         Thermal Conductivity (K value)       Design data as defined to BS EN 13369 : 2013         Transverse/FlexuralSplit/Breaking       Characteristic bending strength of 4.0 MPa with no individual result	Nominal Dimensions (mm)	450 x 450 x 50	
Test)  Durability (Freeze-thaw)  ≤ 1.0 kg/m² as a mean with no individual value > 1.5 kg/m²  Material Density  Slip/Skid Resistance (polished)  Mean polished skid resistance value (PSRV) : > 45  Slip/Skid Resistance (unpolished)  Mean unpolished skid resistance value (USRV) : > 45.  Thermal Conductivity (K value)  Design data as defined to BS EN 13369 : 2013  Transverse/FlexuralSplit/Breaking  Characteristic bending strength of 4.0 MPa with no individual result			idth ±2mm,
individual value > 1.5 kg/m²  Material Density 2300 kg/m³ (typically)  Slip/Skid Resistance (polished) Mean polished skid resistance value (PSRV) : > 45  Slip/Skid Resistance (unpolished) Mean unpolished skid resistance value (USRV) : > 45.  Thermal Conductivity (K value) Design data as defined to BS EN 13369 : 2013  Transverse/FlexuralSplit/Breaking Characteristic bending strength of 4.0 MPa with no individual result	Abrasion Resistance (mm)	`	/heel Abrasion
Slip/Skid Resistance (polished)  Mean polished skid resistance value (PSRV): > 45  Slip/Skid Resistance (unpolished)  Mean unpolished skid resistance value (USRV): > 45.  Thermal Conductivity (K value)  Design data as defined to BS EN 13369: 2013  Transverse/FlexuralSplit/Breaking  Characteristic bending strength of 4.0 MPa with no individual result	Durability (Freeze-thaw)	0	
value (PSRV) : > 45  Slip/Skid Resistance (unpolished) Mean unpolished skid resistance value (USRV) : > 45.  Thermal Conductivity (K value) Design data as defined to BS EN 13369 : 2013  Transverse/FlexuralSplit/Breaking Characteristic bending strength of 4.0 MPa with no individual result	Material Density	2300 kg/m³ (typic	cally)
value (USRV) : > 45.  Thermal Conductivity (K value) Design data as defined to BS EN 13369 : 2013  Transverse/FlexuralSplit/Breaking Characteristic bending strength of 4.0 MPa with no individual result	Slip/Skid Resistance (polished)		
13369 : 2013  Transverse/FlexuralSplit/Breaking Characteristic bending strength of 4.0 MPa with no individual result	Slip/Skid Resistance (unpolished)	'	
4.0 MPa with no individual result	Thermal Conductivity (K value)	O	efined to BS EN
	Transverse/FlexuralSplit/Breaking	4.0 MPa with no	individual result

SPECIFICATION	
Approx unit weight (kg)	23
Emission of Asbestos	No content
External Fire Performance	Deemed to satisfy. See commission decision 2000/553/ECU
Reaction to fire	Class A1, see commission decision 2000/605/EC

SUSTAINABILITY	
Breeam	These units can achieve an "A" rated system when used in conjunction with the correct sub-base components
Carbon Footprint	13 kg CO2 m²

APPLICATION	
Loading Classification	Category 1 - Pedestrian and domestic
	driveways

SITE WORKS	
Coverage	4.9 no per m <sup>2</sup>
SUPPLY	
Av. pack size (m²)	7.3
Units Per Pack	36
Av. pack weight (kg)	828
Packaging	All packs are suitable for crane off-load
	Fork lift off-load on request
FURTHER INFORMATION	N
Cleaning & Maintenance	Cleaning & maintenance details are

FURTHER INFORMATION	J
Cleaning & Maintenance	Cleaning & maintenance details are available on request
Efflorescence	Any product containing cement during its early life may exhibit a temporary white discolouration known as efflorescence. This is not a product fault and will gradually disappear with exposure to natural weathering and trafficking
Weathering	It should be appreciated that with all products weathering and site conditions can cause shade variation to appear across the surface of individual units. This does not in any way affect the performance of the units and any such variation will diminish over a period of time as the product matures.
Product Evolution	The evolution of new product design is continuous and information is subject to change without notice. Customers should check with the supplier to ensure that they have the latest details. Marshalls reserve the right to amend the technical information as deemed necessary and in accordance with the relevant national and international standards without notice
Contact Us	For technical information on the design,





















