



Providing Architects and Builders with
Superior Paving, Decking and Pedestal Products

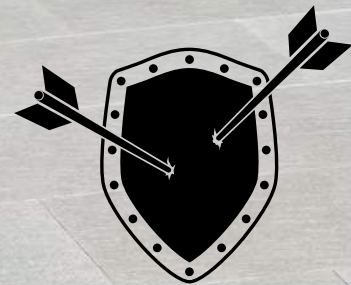
Commercial | Luxury Residential | Municipal

HDG Paver Defense Solutions



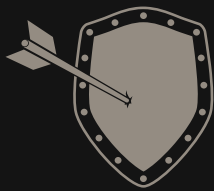
Beyond Breakage

HDG Paver Defense solutions offer peace of mind by preventing pedestrians from falling through a raised floor in case of porcelain paver breakage. This breakage may occur when the point load on the surface surpasses the tile's load capacity or due to a surface impact leading to rupture. HDG Building Materials offers several paver defense solutions for ensuring safe raised flooring installations, FLEX, IMPACT, and FORTIFY.

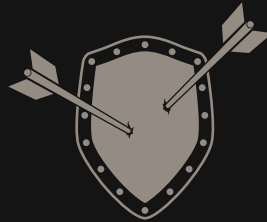


Paver Defense™

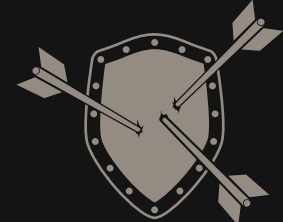
HDG Paver Defense Solutions



FLEX



IMPACT



FORTIFY

HDG Paver Defense Solutions at a Glance

Key Features	Unprotected	FLEX™	IMPACT™	FORTIFY™
Description	No backing	Self-adhering single-strand polyester backing	Self-adhering stainless steel reinforcement backing	Factory applied 2mm thick polymer matrix with embedded fiberglass mesh
Protection	None	Good	Better	Best
Breakthrough potential	Possible breakthrough to substrate	Stops breakthrough fall to substrate	Stops breakthrough fall to substrate	Stops breakthrough fall to substrate
Cost of solution	Lowest cost but highest liability	Lowest cost Paver Defense solution for 2cm pavers	Cost effective solution for 2cm pavers	Premium solution for 1cm pavers
Liability waiver for porcelain pavers in raised flooring	Yes, waiver may be required	Waiver not required	Waiver not required	Waiver not required

Ball Drop Test

10 lb ball drop to porcelain paver from 1 meter (3' 4") high.

Protection Details

Key Features	Unprotected	FLEX™	IMPACT™	FORTIFY™
Defect description on impact	Sharp ceramic shards produced	Multiple cracks to edge of intact paver	Spider fractures on intact paver	Cracks contained, edges remain intact
Protection of substrate	Substrate likely to be contacted	Prevents contact with substrate	Prevents contact with substrate	Prevents contact with substrate
Post impact jump test	Not enough paver remaining to perform test	Considerable flex and further cracking with subsequent contact	Some paver flex on subsequent contact	Minimal paver deflection on subsequent contact

Installation Details

Key Features	Unprotected	FLEX™	IMPACT™	FORTIFY™
Can be applied by Contractor?	N/A	Yes, apply on site or at warehouse	Yes, apply on site or at warehouse	No - factory applied
Use with any porcelain paver?	N/A	Yes	Yes	Limited to 1cm pavers
For commercial or residential applications?	Yes	Yes	Yes	Yes

Porcelain Pavers for Raised Flooring

Single slab 2cm thick porcelain modules are specifically designed for external use in elevated flooring installations. However, there are currently no specific regulations or standards relating to the use of porcelain pavers for elevated exterior flooring. The closest standard to porcelain pavers is that relating to concrete paving slabs. Under this test procedure, our 2cm thick porcelain complies with or exceeds the standard on all comparative tests, e.g., resists more than 1400 kg per slab (test result as per EN 1339 KN 14 >). This means, according to the adopted standard, the material is suitable for “collective and public use without limitation of the height of the pedestals or sleepers.”

In considering the use of 2cm thick porcelain pavers for raised flooring compared with conventional interior elevated flooring, the shock resistance of porcelain pavers is a factor that must always be taken into consideration (for example, when a hard object such as a hammer or other solid object weighing 4.5 kg is dropped from a height of 40 cm) – as specified under EN 12825. Despite the intrinsic

density and stiffness of porcelain pavers, the slabs can nonetheless break or shatter if a heavy object is dropped onto them from a height. In consideration of the risk to anyone standing or walking on such slabs, in situations where hard and heavy objects are likely to be used or where floor heights are greater than 1.9 cm (3/4”), porcelain manufacturers recommend the application of a reinforcement to the underside of the slabs such as: – glued fiber protection – metal tray backing – overlapping metal tray. These applications do not increase the bearing capacity of the floor; they help limit the possibility of the paver from caving in if broken, thereby reducing the risk of injury.

All Paver Defense lines are reinforcement solutions designed to help hold the paver together in case of impact breaks a tile. Similar to safety-glass, the backing will provide some impact resistance, but it will not prevent the pavers from cracking if something hard and heavy enough impacts them with enough force.

Need Help Selecting a Paver Defense Solution?
Call 503.360.9551 or email sales@hdgbuildingmaterials.com