

WASPGUARD

On guard at every fall.

A shock pad system for playgrounds and artificial turf sports surfaces, made from 100% recycled cross-linked polyethylene (XPE). It absorbs impact, lets water through, insulates and does not rot.



Thickness
20–80 mm

Critical fall height
1.03–3.43 m

Density
72–88 kg/m³

Panels
Straight, puzzle

EN 1177
2018 + A1:2023

CE

100% recycled XPE

Critical fall height by WASPGUARD thickness

Model	Thickness	Critical fall height	HIC
WASPGUARD 20	20 mm		1.03 m ≤ 1000
WASPGUARD 25	25 mm		1.23 m ≤ 1000
WASPGUARD 35	35 mm		1.79 m ≤ 1000
WASPGUARD 45	45 mm		2.25 m ≤ 1000
WASPGUARD 55	55 mm		2.46 m ≤ 1000
WASPGUARD 65 Lab tested	65 mm		2.83 m ≤ 1000
WASPGUARD 80 Lab tested	80 mm 35 + 45		3.43 m ≤ 1000

Measured to EN 1177:2018 + A1:2023, Method 1, with artificial grass (24–25 mm pile) and 25 kg/m² sand infill. Values for WASPGUARD 65 and 80 are documented by Sports Labs Ltd test reports. Values are indicative; system providers are responsible for testing their own installations.

Tested in an independent laboratory.

Sports Labs Ltd, Livingston, Scotland
BS EN 1177:2018 + A1:2023, Method 1

WASPGUARD 65

2.83 m

65 mm, single layer
Report no. SLL.3207/26-0741.A
29 May 2026

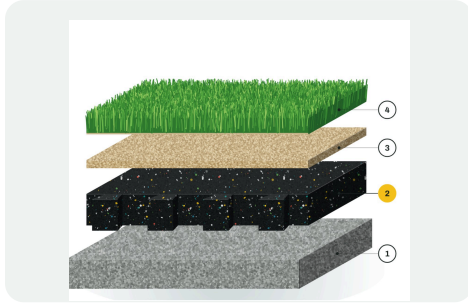
WASPGUARD 80

3.43 m

80 mm, 35 + 45 mm two layers
Report no. SLL.3207/26-1104.A
29 June 2026

The specifications in this document are based on internal and independent laboratory tests, manufacturer data, literature and calculations and are accurate to the best of our knowledge. All values are averages and intended as guidelines; they do not replace your own assessment of the product's suitability for the intended application. WASPPOLYMER reserves the right to change this specification and/or product without notice and assumes no legal liability for the use of the data. This publication supersedes all previous datasheets.

Four layers, one purpose.



4

Artificial grass

The surface players touch. The test systems use a 24–25 mm pile height.

2

WASPGUARD shock pad

The layer that absorbs the energy of a fall. It drains water vertically, insulates the surface and, being closed-cell, takes up no water.

3

Sand infill

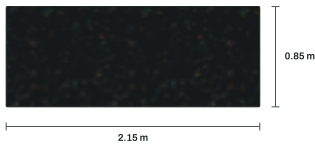
Holds the grass in place and stabilises the surface. 25 kg/m² in the test system.

1

Stable, permeable subsoil

A compacted, free-draining base that keeps the system level and stable.

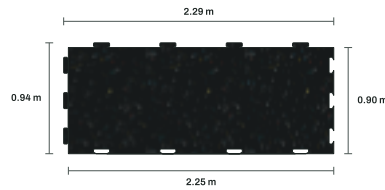
Two panel designs, one for every site.



Straight panel

2.15 × 0.85 m

Fast laying with fewer joints on large, regular areas.



Puzzle panel

2.25 × 0.90 m

2.29 × 0.94 m including joints

Four dovetail joints on the long edge, three on the short edge.

Panels lock together without adhesive, stay in place and can be replaced one by one.

Technical specifications

Material	100% recycled cross-linked polyethylene (XPE)
Cell structure	Closed-cell
Thickness options	20, 25, 35, 45, 55, 65, 80 mm
80 mm build	35 mm + 45 mm, two layers
Thickness tolerance	±3 mm
Density	80 kg/m ³ ±10% (72–88 kg/m ³)

Puzzle joint	Dovetail; 4 joints on the long edge, 3 on the short edge
Geotextile	One side as standard; both sides or none on request
Test	EN 1177:2018 + A1:2023, Method 1
Test system	Artificial grass (24–25 mm pile), 25 kg/m ² sand infill
Independent test	Sports Labs Ltd, United Kingdom (WASPGUARD 65 and 80)
Marking	CE

HIC and critical fall height

HIC (Head Injury Criterion) measures the severity of an impact to the head during a fall. EN 1177 defines the critical fall height as the highest drop at which HIC stays at or below 1000 and peak acceleration (g_{max}) at or below 200 g.

How the test was carried out

- 1 A 1 × 1 m sample was loose laid on a concrete substrate.
- 2 The pad was topped with artificial grass (25 mm pile) and 25 kg/m² silica sand infill.
- 3 An instrumented headform was dropped onto 9 different points of the sample from increasing heights.
- 4 The highest drop at which HIC did not exceed 1000 was calculated as the critical fall height.