

SHOCKPAD SH

Shockpad SH is a new generation sport technical subbase, creates the perfect basis for a high quality artificial grass construction. The characteristics of SH address the demands for various specific sport technical requirements and can therefore be used for sports such as soccer, rugby, field hockey, American Football, Gaelic Games, Australian Football and korfbal.

SH distinguishes itself with long time constant sporting characteristics. In comparison with other sport technical underlayers Shockpad SH brings consistent results for vertical deformation and shock absorption for its complete lifecycle, regardless of the intensity of use.



Technical data

Physical

Thickness at 2 kPa load	20	mm	
Mass per unit area	3,0	kg/m ²	

Tensile strength

0,26	MPa	EN 12230
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Performance

Force reduction	56	%	AAA*
Energy restitution	43	%	AAA*
Vertical deformation	6,8	mm	AAA*
Critical fall height (Head Injury Criterion ~ 1000)	0,68	m	EN 1177 / ASTM F 1292
Impact attenuation [g _{max}] **	80-110		ASTM F 355-A

Drainage and isolation

Water infiltration rate [IA]	72000	mm/hr	EN 12667 / ASTM C 177
Thermal conductivity [λ_{10}]	0,05	W/m.K	EN 12667 / ASTM C 177
(resulting) Thermal resistance [R-value]	400	m ² .K/W	ASTM C 177 / EN 12667

* AAA = Advanced Artificial Athlete

**Results will vary depending on actual field configuration and final cross-section design

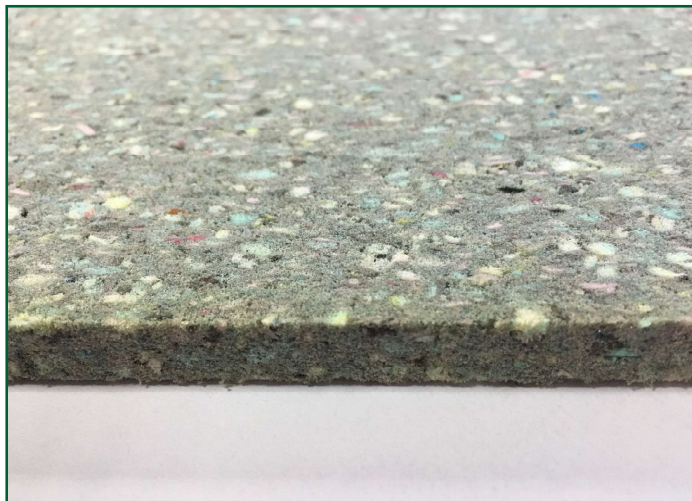
*Please check the website or get in touch for different material property requests.

SHOCKPAD RB

Shockpad RB is a shock absorbing underlay for artificial turf football pitches.

The product consists mainly of open-cell flexible polyurethane trim foam bonded with isocyanate binder.

- Easy to install
- Excellent shock absorption and ball rebound
- Good dimensional stability, dimensions are not influenced by temperature changes
- Ageing resistant
 - The functional properties are stable in function of time
 - The foam does not pulverize
- Good water permeability
- Widths of >2m are possible



Density	200 kg/m ³ (+-%15)	ISO 845
CDH-40%	> 60 kPa	ISO 3386
Ultimate Elongation(ER)	TV 70 %	ISO 1798
Tensile Strength(RR)	> 180 kPa (min 150)	ISO 1798
Tear Resistance(TR)	> 6.8 N/cm	ISO 8067
Dimensional Stability	< 0.5 %	EN 13746
Water Permeability	> 400 cm/h (min 50)	EN 12616
Length	On demand (+1%)	
Width	2.05 m (-0 + 0.02)	
Packaging	Rolls in foil (non pallet)	
Thickness 10mm		
Shock Absorption	TV 41 %	
Vertical Deformation	TV 5.5 mm	Triple A (*)
Energy Restitution	TV 42 %	
Thickness 12mm		
Shock Absorption	TV 45 %	
Vertical Deformation	TV 6.0 mm	Triple A (*)
Energy Restitution	TV 38 %	
Thickness 14mm		
Shock Absorption	TV 49 %	
Vertical Deformation	TV 7.5 mm	Triple A (*)
Energy Restitution	TV 35 %	

The foam properties are typical values provided by our internal control system.

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SHOCKPAD AS

Shockpad AS is a patented sport technical layer which is specifically designed for artificial turf systems which has been made from physically cross-linked closed cell polyolefine foam.

- Optimized shock absorption, energy restitution and ball rebounding
- Extended durability and constant performance; no freezing as it doesn't absorb water
- Excellent environmental profile
- Recyclable
- Fast and easy installation at most weather conditions
- Dimensional stable even at fluctuating temperatures due to patented design pattern



Properties	Norm	Unit	Average	Min	Max
General properties					
Thickness	ISO 1923	mm	10,0	9,0	11,0
Area weight	Internal	kg/m ²	0,42	0,35	0,49
Shock absorption					
	EN 14808	%	38	33	43
	Fifa method 04a	%	25	20	30
Vertical deformation					
	EN 14808	mm	5,5		
	Fifa method 05a	mm	5,5		
Tensile strength @ 23° C					
Lengthwise and crosswise at break ¹	ISO 1926	Mpa		0,3	
Compression set static load					
Deflection 25 % / 24 h, 23 °C 24 h after discharge	ISO 1856 C	%			6
Compression creep					
Compression 10 kPa / 260 h, 23 °C 24 h after discharge	EN 1606	%			2
Thermal conductivity					
at 20°C	EN 12667	W/mK			0,046
Water Absorption					
vol % water absorption ¹	ISO 2896	%			1
Water permeability					
Vertical water permeability	EN 12616	mm/hr	10000	Certificates of comparable product available.	
Horizontal water permeability	EN 12616	mm/hr	2000	Certificates of comparable product available.	
Thermal stability					
Shockpad is provided with "grinds" and is therefore able to absorb contraction and shrinkage which normally is caused by temperature differences in the environment.					
Toxicological / Ecological information					
Alveosport complies with:					
Determination of environmental compatibility	DIN 18035-7:	2002-06			
Requirements Federazione Italiana Giuoco Calcio	Tabella 1/A	Limiti Di concentrazione amnesi Lega Nazionale Dilettanti			
Dutch Soil Quality Decree		Certificates of comparable product available. Analyses of comparable product is executed at SGS Intron			
Requirements shockpads used for synthetic turf	NF P90-112	Certificates of comparable products available.			
EU Directive Packaging and packaging waste	94/62/EC	Certificates of comparable products available.			
Safety of Toys	EN 71-3	Certificates of comparable products available.			
Microbiological information					
No nutritive medium for growth of fungi and mildew and is therefore resistant against attack of fungi and mildew.					

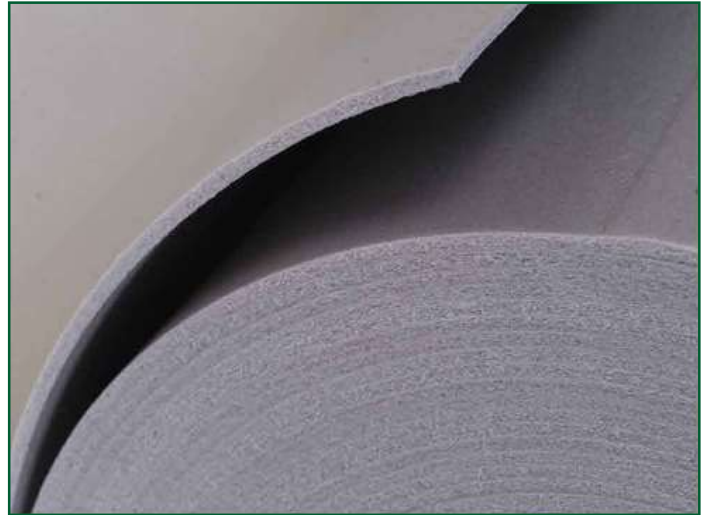
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SHOCKPAD DF

Shockpad DF is the most economical solution which is designed to be laid directly beneath any of artificial grass products for both amateur sports and landscaping/decoration to produce a softer feel under foot.

Can be installed loose laid, stapled, nailed or pegged to all prepared bases of concrete, wood, sand or soil.

- Child & Pet friendly
- Absorbs minor floor imperfections
- Non Toxic & odorless
- Laid on concrete or Decking
- Roofs & balconies



Density	30 kg/m ³ (+-%10)	ISO 845
Tensile Strength	> 200 kPa	ASDM D3575
Compression Resistance		
%25 Compression	>0,030 Mpa	ISO 844
%50 Compression	>0,070 Mpa	ISO 844
%75 Compression	>0,180 Mpa	ISO 844
Compression Set (%50, 72hrs)	<38 %	EN ISO 1856:1999
Hardness	10 Shore A	EN ISO 1856:1999
Water Absorption	0,1 kg/m ²	TS EN 12087:2002
Fire Response Class	E	TS EN 13501-1:2007
Flammability	Passed	TS EN 11925-2:2004
Utilisation Temperature	-40 +100 °C	
Dimensional Stability -transversally (48hrs, 70°C)	0,3 %	TS EN 1604
Dimensional Stability -longitudinally (48hrs, 70°C)	0,8 %	TS EN 1604

*Conforms RoHS and REACH standards

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