POWERBASE YSR XD®
BY BROCK

Typical Properties & Specification

Part Number	PBYSRXD
Material Type	Expanded Polypropylene
Part Format	Interlocking panel
Part Size, nominal net coverage	24.15 sq. ft. per panel (2.24 sq. m)
Part Thickness, nominal	1.00 in (25.4 mm)
Part Length, nominal	73.5 in (1867 mm)
Part Width, nominal	49.0 in (1245 mm)
Part Weight, nominal	5.2 lb per panel (2.36 kg)

Property (Shock Pad Only)	Typical Value	Specification	Test Method
Tensile Strength[1]	127 psi	> 80 psi	ASTM D3575-20, Suffix T
Tensile Elongation[1]	18%	> 15%	ASTM D3575-20, Suffix T
Compression Strength[1] @ 25% strain	28 psi	> 20 psi	ASTM D3575-20, Suffix D
Compression Set[1] 35 psi for 30 minutes – % set after 24 hr	6.6%	< 10%	Brock Test Method
Coefficient of Linear Thermal Expansion[1]	0.081 mm/m per °C	< 0.10 mm/m per °C	TSM5725G (modified)
Thermal Conductivity[1]	0.25 BTU·in/hr·ft^2·°F	Information Only	ASTM C518
Thermal Resistance (R-Value)[1]	3.596 hr·ft^2·°F/BTU	Information Only	ASTM C518
Water Absorption (24 h immersion, vol%)[2]	~1%	≤ 1%	DIN 53428
Water Permeability (Vertical Drainage)[1,3]	5410 in/hr	> 3000 in/hr	EN 12616
Lateral Flow (Horizontal Drainage)[1,3]			ASTM D4716
Flow Rate @ 0.005 gradient (0.5% slope)	1.16 gpm/ft	> 1.05 gpm/ft	
Flow Rate @ 0.0075 gradient (0.75% slope)	1.43 gpm/ft	-	
Flow Rate @ 0.01 gradient (1% slope)	1.66 gpm/ft	-	
Critical Fall Height (HIC = 1000)[1] Pad only, no turf	0.91 m	> 0.85 m	ASTM F3146, Procedure A
Gmax[1]	95 g	< 100 g	ASTM F355 (Missile A)
Shock Absorption[1]	70%	> 60%	ASTM F3189-20 (AAA)
Vertical Deformation[1]	8.6 mm	< 10 mm	ASTM F3189-20 (AAA)
Resistance to Chemicals[2]	1/2	≤ 2	JSP Method based on ASTM F925
Resistance to Acid and Alkaline Liquids[2] Avg. % tensile strength loss – 100yr model	0% after 12 days	<10% after 12 days	EN 14030:2010 / ISO 12960:1998
Resistance to Oxidation (Accel. Aging)[2] Avg. % tensile strength loss – 100yr model	6% after 56 days @ 110 °C	<10 % after 56 days @ 110 °C	EN ISO 13438:2004
Microbiological Analysis [2]			
bacteria resistance	No Growth	No Growth	ASTM G22
fungi resistance	No Growth	No Growth	ASTM G21
Environmental Standards Testing			
Cradle to Cradle Certified®	Certified	Certified	Cradle to Cradle Certified® Prod. Standard
Heavy Metals VOCs SVOCs	Compliant with EPA human health standards, surface water and groundwater quality	Compliant with EPA human health standards, surface water and groundwater quality	EPA 6010B, 7470A, 7471A EPA 8260B EPA 8270C
California Title 22	Compliant	Compliant	CA Code of Regulations, Title 22, Division 4.5, Chapter 11
California Proposition 65	Certified (no listed mat'ls)	Certified (no listed mat'ls)	California Proposition 65

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[1] Test reports available upon request. Patented and Patents Pending.
[2] Data for EPP material of same or similar density.
[3] Note that ASTM D4716 & EN12616 results for pad alone are not indicative of overall athletic field drainage performance.

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