

Track Bed Stabilisation

ArmaGrid®-BXpp

ArmaGrid® - BX_{PP} is a biaxial geogrid made from polypropylene by accurate punching, and then stretching in two directions under strictly controlled conditions with a continuous orientation through the nodes. ArmaGrid® – BX_{PP} is inert to chemicals, including acids, alkalis and salts, normally found in soils. ArmaGrid® – BX_{PP} dœs not suffer any attack by microorganisms in

Applications

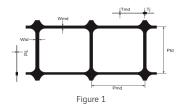
- Railways: Enhancing the ballast performance in railways and stabilisation of track foundation layers with reduced ballast degradation and settlement.
- Roadways: Subbase and sub-grade improvement by reinforcement and stabilisation; and increase in durability of flexible pavement and unpaved roads.
- Airport Runways and Taxiways: Subbase and sub-grade improvement for the runway and taxiway pavements of airfield.
- Ports: Sub-grade reinforcement and load distribution for container yards, under warehouse or similar load carrying platforms.

Technical Parameters

Physical Properties* Material Pmd* Learner Procession Sector Process	erties		Test Method	Unit	AG-BX _{pp} 1616	AG-BX _{pp} 2020	AG-BX _{pp} 3030	AG-BX _{pp} 4040	AG-BX _{pp} 2020L	AG-BX _{pp} 3030L	AG-BX _{pp} 4040L	
Pitch Size Pmd** mm 40 40 40 38 66 66 Pitch Size Ptd** mm 40 40 40 38 66 66 Pitch Size Ptd** mm 40 40 40 38 66 66 Rib Width Wmd** mm 23 23 24 26 44 44 Rib Width Wtd** mm 3.1 3.1 3.7 4.5 5.5 5.6 Rib Depth Tmd** mm 0.6 0.7 1 1 0.7 0.9 Tj** Td** mm 0.6 0.7 1 1 0.7 0.9 Tj** Td** mm 1.7 2.1 2.5 3.5 3 3.6 Mechanical Properties Wimmum Elongation (±0) MD* ASTM D6637 B kN/m 16 20 30 40 20 30 Maximum Elongation (±6) MD* ASTM D6637 B kN/m 16 20 30 40 20 30 Maximum Elongation (±6) MD* ASTM D6637 B kN/m 16 20 30 40 20 30 Maximum Elongation (±6) MD* ASTM D6637 B kN/m 16 20 30 40 20 30 Maximum Elongation (±6) MD* ASTM D6637 B kN/m 16 20 30 40 20 30 Maximum Elongation (±6) MD* ASTM D6637 B kN/m 15 15 15 15 15 15 Maximum Elongation (±6) MD* ASTM D6637 B kN/m 5.6 7.4 11 14 7.4 11 Tensile Strength @ 2% MD* ASTM D6637 B kN/m 5.6 7.4 11 14 7.4 11 Tensile Strength @ 5% MD* ASTM D6637 B kN/m 112 146 21 28 146 21 Junction Efficiency ASTM D7737/D6637 KN/m 280 350 550 700 350 550	cal Properties				`							
Pitch Size Pitd® mm 40 40 40 38 66 66 66 66 68 68 68	Material				Polypropylene							
Rib Width Wmd¹¹ mm 2.3 2.3 2.4 2.6 4.4 4.4 Rib Width Wtd⁴¹ mm 3.1 3.1 3.7 4.5 5.5 5.6 Rib Depth Trd¹¹ mm 0.6 0.7 1 1 0.7 0.9 Ty³¹ - mm 0.6 0.7 1 1 0.7 0.9 Ty³² - mm 0.6 0.7 1 1 0.7 0.9 Ty³² - mm 1.7 2.1 2.5 3.5 3 3.6 Mechanical Properties Ty³² Ty³² <th rowspa<="" th=""><th>iize</th><th>Pmd^{vi}</th><th></th><th>mm</th><th>40</th><th>40</th><th>40</th><th>38</th><th>66</th><th>66</th><th>61</th></th>	<th>iize</th> <th>Pmd^{vi}</th> <th></th> <th>mm</th> <th>40</th> <th>40</th> <th>40</th> <th>38</th> <th>66</th> <th>66</th> <th>61</th>	iize	Pmd ^{vi}		mm	40	40	40	38	66	66	61
Rib Width Wtd¹¹ mm 3.1 3.1 3.7 4.5 5.5 5.6 Rib Depth Tmd¹¹ mm 1.2 1.3 2.4 2.8 1.4 2 Rib Depth Ttd¹¹ mm 0.6 0.7 1 1 0.7 0.9 Tj²¹ - mm 0.6 0.7 1 1 0.7 0.9 Mechanical Properties *** Mchanical Properties*** ** Mchanical Properties*** *** Mchanical Properties**	ize	Ptd ^{vi}		mm	40	40	40	38	66	66	61	
Rib Depth Tmd ^M mm 1.2 1.3 2.4 2.8 1.4 2 Rib Depth Ttd ^M mm 0.6 0.7 1 1 0.7 0.9 Tj ^M - mm 1.7 2.1 2.5 3.5 3 3.6 Mechanical Properties *** Minimum Average Roll Value (MARV) ^M ** Ultimate Tensile Strength MD ^V ASTM D6637 B kN/m 16 20 30 40 20 30 Maximum Elongation (±6) MD ^V ASTM D6637 B kN/m 16 20 30 40 20 30 Maximum Elongation (±6) MD ^V ASTM D6637 B % 15	dth	Wmd ^{vi}		mm	2.3	2.3	2.4	2.6	4.4	4.4	4.7	
Rib Depth Ttd ^M mm 0.6 0.7 1 1 0.7 0.9 Tj ^M - mm 1.7 2.1 2.5 3.5 3 3.6 Mechanical Properties Machanical Properties More than 1.5 MID Machanical Properties Minimum Average Roll Value (MARV) ^{II} Ultimate Tensile Strength MD ^V ASTM D6637 B kN/m 16 20 30 40 20 30 CD ^V ASTM D6637 B kN/m 16 20 30 40 20 30 Maximum Elongation (±6) MD ^V ASTM D6637 B % 15	dth	Wtdvi		mm	3.1	3.1	3.7	4.5	5.5	5.6	6.1	
Machanical Properties	pth	Tmd ^{vi}		mm	1.2	1.3	2.4	2.8	1.4	2	2.8	
Mechanical Properties Minimum Average Roll Value (MARV) ^{II} Ultimate Tensile Strength MD ^V ASTM D6637 B kN/m 16 20 30 40 20 30 Maximum Elongation (±6) MD ^V ASTM D6637 B kN/m 16 20 30 40 20 30 Maximum Elongation (±6) MD ^V ASTM D6637 B % 15 1	pth	Ttd ^{vi}		mm	0.6	0.7	1	1	0.7	0.9	1.1	
MInimum Average Roll Value (MARV)			-	mm	1.7	2.1	2.5	3.5	3	3.6	4.5	
Ultimate Tensile Strength MDV ASTM D6637 B kN/m 16 20 30 40 20 30 Maximum Elongation (±6) MDV ASTM D6637 B kN/m 16 20 30 40 20 30 Maximum Elongation (±6) MDV ASTM D6637 B % 15 15 15 15 15 15 15 Maximum Elongation (±3) CDV ASTM D6637 B % 10 10 10 10 10 10 10 10 10	anical Properties			,				,	,			
Ultimate Tensile Strength CDV ASTM D6637 B kN/m 16 20 30 40 20 30 Maximum Elongation (±6) MDV ASTM D6637 B % 15 <					Minimum Average Roll Value (MARV)"							
Maximum Elongation (±6) MDV ASTM D6637 B KN/m 16 20 30 40 20 30	Ultimate Tensile Strength	MD ^v	ASTM D6637 B	kN/m	16	20	30	40	20	30	40	
Maximum Elongation (±3) CDV ASTM D6637 B % 10 11 14 7 11 11 14 7 11 11 14 7 11 14 7 11 14 7 11 14 21 28 14 21 28 14 <		CD ^v	ASTM D6637 B	kN/m	16	20	30	40	20	30	40	
Tensile Strength @ 2%	num Elongation (±6)	MD ^v	ASTM D6637 B	%	15	15	15	15	15	15	15	
Strain CDv ASTM D6637 B kN/m 5.6 7.4 11 14 7.4 11 Tensile Strength @ 5% Strain MDv ASTM D6637 B kN/m 11.2 14 21 28 14 21 Strain CDv ASTM D6637 B kN/m 11.2 14.6 21 28 14.6 21 Junction Efficiency ASTM D7737/D6637 % 95% 95% 95% 95% 95% 95% Radial Stiffnessiv ASTM D6637 kN/m 280 350 550 700 350 550 Standard Packaging	num Elongation (±3)	CD ^v	ASTM D6637 B	%	10	10	10	10	10	10	10	
Strain CDv ASTM D6637 B kN/m 5.6 7.4 11 14 7.4 11 Tensile Strength @ 5% MDv ASTM D6637 B kN/m 11.2 14 21 28 14 21 Strain CDv ASTM D6637 B kN/m 11.2 14.6 21 28 14.6 21 Junction Efficiency ASTM D7737/D6637 % 95% 95% 95% 95% 95% Radial Stiffnessw ASTM D6637 kN/m 280 350 550 700 350 550 Standard Packaging	O .	MD ^v	ASTM D6637 B	kN/m	5.6	7	11	14	7	11	14	
Strain CD ^v ASTM D6637 B kN/m 11.2 14.6 21 28 14.6 21 Junction Efficiency ASTM D7737/D6637 % 95%		CD ^v	ASTM D6637 B	kN/m	5.6	7.4	11	14	7.4	11	14	
Strain CDv ASTM D6637 B kN/m 11.2 14.6 21 28 14.6 21 Junction Efficiency ASTM D7737/D6637 % 95%	•	MD ^v	ASTM D6637 B	kN/m	11.2	14	21	28	14	21	28	
Radial Stiffnessi™ ASTM D6637 kN/m 280 350 550 700 350 550 Standard Packaging		CD ^v	ASTM D6637 B	kN/m	11.2	14.6	21	28	14.6	21	28	
Standard Packaging	Junction Efficiency		ASTM D7737/D6637	%	95%	95%	95%	95%	95%	95%	95%	
	Radial Stiffness ^{iv}		ASTM D6637	kN/m	280	350	550	700	350	550	700	
Roll Width ^{vii} m 3.9 3.9 3.9 3.9 3.9 3.9	ard Packaging											
	Roll Width ^{vii}			m	3.9	3.9	3.9	3.9	3.9	3.9	3.9	
Roll Length ^{vii} m 100 51.3 51.3 30.8 51.3 51.3	Roll Length ^{vii}			m	100	51.3	51.3	30.8	51.3	51.3	30.8	
Standard Roll Area ⁱⁱⁱ m² 390 200 200 120 200 200	Standard Roll Area ⁱⁱⁱ			m²	390	200	200	120	200	200	120	

All the values are Nominal values

These values are subject to ±1% variation



- A. These properties may change at the time of handling, storage and shipping
- B. The values can be customized.
- C. The above values are subject to change as per discretion of the company
- D. All mechanical properties are based on the manufacturer's laboratory test results at 21±1°C.
- E. Carbon black content ≥ 2%
- F. ASTM D7737 performed at 10% per minute strain rate.
- G. Expressed as a comparison of ASTM D7737 strength to ASTM D6637 strength of the same sample.
- H. Using specimens 2 ribs wide with ribs transverse to the specimen cut flush with the exterior edges of the ribs in the direction of the specimen

www.geoquest-group.com

Disclaimer: Neither this brochure/leaflet nor its text, illustrations, drawings or any part thereof, may be reproduced, stored in a retrieval system, photocopied, recorded or transmitted in any form, whether electronic or otherwise, without the consent of Geoquest. Descriptions and some illustrations contained in this catalogue are from computer generated imagery and actual product may differ wholly or partially. The images are only for static representation of the actual product. Geoquest Management cannot be held liable for any inaccuracies of description or illustration and reserve the right to change specifications without notification.

Values shown are minimum average roll values determinate in accordance with ASTMD4759.

Other weight option available

At 2% strain under 360° radial loading. Determined from tests in accordance with ISO10319.

MD= Machine Direction, CD= Cross Machine Direction

i Refer to figure 1