

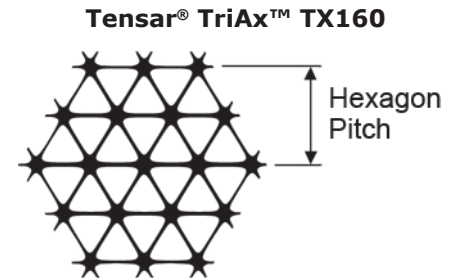
Geocomposite Tensar® TX160 & bidim® A19

Technical Data Sheet

The Geocomposite **Tensar®** TX160 & **bidim®** A19 consists of a geogrid and geotextile composite.

Tensar® Geogrid

1. The primary geogrid function is stabilisation as defined by European Organisation for Technical Approvals (EOTA) Technical report TR41.
2. The geogrid has European Technical Approval (ETA) certification for the stabilisation of unbound layers by way of interlock with the aggregate.
3. The geogrid is manufactured in accordance with a management system which complies with the requirements of BS EN ISO 9001:2008.
4. The geogrid is a hexagonal structure with triangular apertures manufactured from a punched and stretched polypropylene sheet which is then oriented in three directions so that the resulting ribs of rectangular cross section have a high degree of molecular orientation which continues through the mass of integral node.
5. The geogrid has a minimum of 2% finely divided carbon black content.
6. The properties contributing to the performance of a mechanically stabilised layer are:



Tensar® TX160 Specification

Required certification for stabilisation function	European Technical Approval (ETA) Certificate		ETA 12/0530	
Performance related physical properties of the product	Product Characteristic	Unit	Declared Value	Tolerance
	Radial Secant Stiffness at 0.5% strain ¹	kN/m	390	-75
	Radial Secant Stiffness Ratio ¹	-	0.80	-0.15
	Junction Efficiency ²	%	100	-10
	Hexagon Pitch ³	mm	80	±4
Durability Statement ^{5,6,7}	The minimum working life of the geogrid in natural soils with a pH value between 4 and 9 is assumed to be 100 years in soil temperatures less than 15°C and expected to be 50 years in soil temperatures less than 25°C, when covered within 30 days.			
Properties for identification of the product	Radial Secant Stiffness at 2% strain ¹	kN/m	290	-65
	Hexagon Pitch ³	mm	80	±4
	Weight of the product ⁴	kg/m ²	0.220	-0.035

Notes

1. Measured in accordance with EOTA Technical report TR41 B.1.
2. Measured in accordance with EOTA Technical report TR41 B.2.
3. Measured in accordance with EOTA Technical report TR41 B.4.
4. Measured in accordance with EOTA Technical report TR41 B.3.
5. Resistance to weathering of geogrid assessed in accordance with EN 12224. The retained strength is greater than 80% giving a maximum time for exposure after installation of 1 month.
6. Resistance to Oxidation is determined in accordance with EN ISO 13438. For the assumed working life of 50 years, the principle of Method A2 of EN ISO 12438 is followed, with the deviation that the exposure temperature is 120°C and the exposure time 28 days. Justification for this is provided in ETA Certificate 12/0530.
7. Resistance to acid and alkali liquids is determined in accordance with EN 14030.

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bidim® Geotextile Specification

bidim® A19 is a nonwoven geotextile manufactured in accordance with the ISO 9001:2008 standard, which is bonded to the geogrid component.

bidim® A19 MARV Values

	Test	Standard	Units	Value
Mechanical Properties	Wide Strip Tensile Strength (MD/XMD)	AS3706.2	kN/m	12.5/12.5
	Wide Strip Toughness	AS3706.2	kN/m ²	2.0/2.4
	Grab Tensile Strength (MD/XMD)	AS3706.2	N	800/800
	Trapezoidal Tear Strength (MD/XMD)	AS 3706.3	N	300/300
	CBR Burst	AS 3706.4	N	2,200
	G Rating	Austrroads	-	1,650

(MD)= Machine Direction Strength.

(XMD)= Cross Machine Direction Strength.

bidim® A19 Typical Values

	Test	Standard	Units	Value
Hydraulic Properties	Pore Size (0 ₉₅)	AS 3706.7-03	µm	80
	Permittivity	AS 3706.9-12	S ⁻¹	2.65
	Coefficient of Permeability	AS 3706.9-12	m/s x 10 ⁻⁴	43
	Flow Rate @ 100mm Head	AS 3706.9-12	l/m ² /s	265

The data and specifications contained in this table are obtained from the manufacturer's laboratory testing. To ensure this information is current please contact your local branch of Geofabrics Australasia.

* Please note: The Grab Tensile Strength test standard AS 3706.2-12 is equivalent to the AS 2001.2.3b.

All testing has been carried out by a NATA accredited laboratory and copies of test certificates are available on request.

The product properties listed on this sheet include both Typical and Minimum Average Roll Values (MARV) for machine and cross machine directions (MD/XMD).

Typical Value

A typical value is the arithmetic mean of a set of results. This implies that 50% of the tested specimens will typically exceed this value and 50% will typically not meet this value.

Minimum Average Roll Value (MARV)

MARV is a statistical derivation for any distribution of data. It is defined as the mean or typical value less 2 standard deviations. Mathematically it is implied that 97.5% of the tested specimens will exceed the MARV.

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