

woven geotextile

• separation • stabilisation • Reinforcement

Description

Syntex woven geotextiles are manufactured by extruding polypropylene film and then slitting the film into individual yarns which are then woven to form the geotextile.

Applications

Each Syntex woven has specific properties for separation, stabilisation, reinforcement and filtration. High strength reinforcement (wide width tensile greater than 50 kN) and filtration (including monofilament) geotextiles are manufactured with specific properties.



Woven geotextiles perform several important functions. Where separation is required on firm soils ($\text{CBR} \geq 8\%$) a woven geotextile provides a strong and economical solution. The grades of geotextiles used for this are typically 100 to 250 gsm. For applications where a weak subgrade needs to be reinforced ($\text{CBR} \leq 3\%$) a high strength woven geotextile is used. These are classed by strength and are typically from 35 kN to 1000 kN.

● Unpaved Roadways

Syntex woven geotextiles provide a stable base for unpaved roads. The fabric prevents subsoil mixing with aggregate which, without geotextile, will quickly require repair. Not only will the soil migrate to the surface but also deep ruts will occur causing greater repair costs. Woven geotextiles also provide stabilisation over soft ground. Where access roads become boggy due to trucks and poor weather, a woven geotextile can provide the needed foundation by spreading the load across a wide area.

● Paved Roadways

Syntex woven geotextile greatly strengthens paved roads. Roads were traditionally made by using extra aggregate which was designed to be absorbed by the soil. Over time the soil becomes weaker and potholes form. Syntex wovens will provide a permanent separation barrier. Even with the constant flow of heavy truck traffic, a road with a Syntex woven geotextile will retain separation of aggregate and subgrade.

Selection Guide

Function	CBR (%)	Style	Typical Applications
Separation	> 8	GW165	Light roads, paved, unpaved
Stabilisation	> 5	GW165	Rural roads, paved, unpaved, taxiways
Reinforcement	< 3	High Strength	Soft soils, embankments, slopes, walls

Physical Properties

GEOTEXTILES WOVEN Polypropylene (product prefix: GW)

PROPERTY	TEST METHOD	UNITS	165
MECHANICAL			
Polymer Type		-	PP
Mass per Unit Area	AS 3706.2	g/m ²	165
Grab Tensile Strength (MD/TD)	AS 3706.2	N	1300 x 1000
Elongation (MD/TD)	AS 3706.2	%	> 15
Wide Width Tensile Strength (MD/TD)	AS 3706-2	kN/m	35 x 28
Wide Width Elongation (MD/TD)	AS 3706-2	%	> 15
Trapezoidal Tear (MD/TD)	AS 3706-3	N	500 x 450
CBR Burst	AS 3706-4	N	4500
HYDRAULIC			
Apparent Opening Size (AOS)	AS 3706.7	mm	.15
Water Flow Rate (100mm head)	AS 3706.9	l/m ² /sec	> 8
ENDURANCE			
UV Resistance (Retained @ 500 hrs)	ASTM D 4355	%	90

Values are Typical = Mean or Average Value of all test data.



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