



### Key Features

- High impact resistance
- Good abrasion resistance
- Good elongation to break

### Description

Diolen is a low-cost, high tenacity polyester fibre with excellent impact and abrasion properties making it a popular choice for use in high impact applications, such as canoes, kayaks and life rafts.

This natural colour, plain weave 265gsm cloth would typically be used in conjunction with glass fibre reinforcement as a cost-effective way to add impact and abrasion strength to a laminate.

### Using Diolen

For boat construction, Diolen is typically combined with glass fibre (either chopped strand mat or woven glass rovings) to add impact strength to an otherwise brittle construction.

Diolen can be used with most resin systems including polyester, vinylester and epoxy, although to get the best performance epoxy resin would always be the first choice.

Diolen will wet-out and is laminated in a very similar way to Kevlar and is totally compatible with any laminating process including wet-lay, vacuum bagging, resin infusion and RTM.

### Cutting and Trimming

Diolen's very high elongation to break properties and abrasion resistance mean that it is very difficult (and frustrating!) to trim parts made from this material. Traditional cutting tools will tend to leave a 'furry' edge which subsequently can be removed using a fine grit abrasive sanding pad. After initial trimming (using

something like a Perma-Grit wheel in a Dremel) the loose Diolen fibres can often be cut away using a very sharp Stanley knife.

### Specification

The table below shows typical properties for the raw fibre:

Property	Unit	Value
Material	-	Diolen 164S
Colour	-	White
Format	-	Woven Fabric
Weave Type	-	1x1 Plain
Width	mm	960
Areal Weight	g/cm <sup>2</sup>	265
Thickness	mm	0.04
Consolidated Thickness	mm	0.04
Ends	/cm	3.4
Picks	/cm	3.4
Breaking Force	N	251
Breaking Tenacity	mN/Tex	739
Elongation at Break	%	14.0
Maximum Service Temperature in Air	°C	150
Linear Desnity	DTex	3395

### Disclaimer

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