



# Tegris Fabric

## Technical Data Sheet

<b>Product Description</b>	Tegris 100% polypropylene moldable fabric can be used to make rigid sheet and/or formed into articles yielding products that have a high stiffness-to-weight ratio and high impact resistance even at low temperatures.		
<b>Product Construction</b>	The fabric is comprised of a proprietary polypropylene-based tape yarn woven into a twill or plain weave construction. The tape has a high strength core with a low melt sheath.		
<b>Typical Physical Properties</b>	Note: The following technical information and data should be considered representative or typical only and should not be used for specification		
<b>Fabric</b>	Test Direction	Warp	Fill
	Tensile		
	Peak Load, N	720	660
	lbf	160	150
	Elongation at break, %	7.8	7.1
	Yarns/cm	4.3	4.3
	/in	11	11
	Thickness, mm	0.40	
	mil	16	
	Areal Density, g/m <sup>2</sup>	100	
	osy	3.0	
	Roll Width, cm	150, 300	
	in	60, 120	
<b>Yarn</b>	Tensile Modulus	13.5 GPa	
	Shrinkage (130 °C)	<5.5%	
	Sealing Temperature	130 °C	
	Denier	1020	
	** Milliken test method		
<b>General Information</b>	Tegris fabric is available in white and silver colors and in plain, diamond, and twill weaves. The silver fabric may be better suited to outdoor use as its UV performance is improved. The twill weave has been shown to mold better for more complicated shapes while the plain weave has a higher screw pullout value for mechanically adhered samples. The diamond weave is available for more decorative needs.		
<b>Product Characteristics</b>	<p><b>Impact Resistance</b> – Tegris provides 2X to 15X improvement in impact resistance over typical thermoplastics composites and maintains this level of performance at low temperatures (-40°C). With a ductile failure mode, Tegris has a great advantage over standard brittle materials.</p> <p><b>Stiffness</b> – Tegris is suitable for applications that have traditionally turned to glass reinforcement to achieve stiffness requirements.</p> <p><b>Weight Reduction</b> – Tegris, being 100% PP, allows for tremendous weight reduction compared to other, higher density glass-filled composites</p> <p><b>Recyclable</b> – Tegris is fully compatible with polypropylene recycle streams</p> <p><b>Glass Free</b> – Tegris is free from the safety and processing issues associated with glass-filled composites, namely skin irradiation and tool wear.</p>		



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<b>Applications</b>	Anti-Ballistics Transportation Sports and Leisure Watersports Construction	vehicle armor, helmets automotive / truck / bus parts helmets, recreational safety equipment canoes / kayaks architectural panels, building materials
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