# **Torodon**<sup>™</sup> vs. Commonly Used Thermoplastics

## **Technical Datasheet**

Developed and manufactured in the UK, Torodon<sup>™</sup> is a Self-Reinforcing Polypropylene (srPP) fabric that, when layered and thermoformed, exhibits a range of attractive properties.

Components manufactured from this material are extremely strong, light and impact resistant. These capabilities are illustrated by the early adoption of Torodon<sup>™</sup> into the demanding arenas of ballistics and blast attenuation.

The material performance characteristics of Torodon<sup>™</sup> are now being exploited in a range of other applications.

To date, Torodon<sup>™</sup> has been tried and tested in the aerospace, ballistics, sports, automotive and luggage sectors where it delivers excellent performance and competitive advantages.

### **Product Features**

- Self reinforcing Torodon™ requires no glass, carbon fibre or resin matrix
- Safer to handle and easier to machine that 'glass' or 'fibre' composites
- Broad thermoforming window with the possibility of reduced cycle times
- Low density with good stiffness properties
- Available as tape, fabric, sheet or component
- 100% recyclable
- Good resistance to chemical degradation
- Non-toxic and inert
- Impact resistant at temperatures as low as -40°C
- Advantageous price / performance ratio

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## **Torodon<sup>™</sup> vs. Commonly Used Thermoplastics**

MATERIAL PROPERTY	STANDARD	TORODON™		Thermoplastics		
		Twill Weave	Plain Weave	ABS	РС	PP
Density (g/cm³)	ISO 1183	0.85	0.9	1.03 - 1.11	1.2	0.91
Tensile Modulus (GPa)	ISO 527	4.1	4.35	1.69 - 2.83	2.3	1.3
Tensile Strength (MPa)	ISO 527	170	180	36 - 64	65 - 70	26 - 41
Flexural Modulus (GPa)	ISO 178	3.75	4.52	1.8 - 2.9	2.3 - 2.4	1
Notched Izod Impact (EP Type A) (kJ/m²)	ISO 180	No break	No break	9 - 36	65 - 94	8

#### All products are manufactured under BS EN ISO 9001.

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