

# ULTEM<sup>™</sup> FIBER

Fibers made from ULTEM<sup>™</sup> 9011 resin are compliant to Aircraft Interiors requirements of flame, smoke and toxicity. SABIC has teamed with Kuraray to offer our customers a range of denier sizes in staple and continuous fiber for applications in woven and non-woven composite systems.

Based on an amorphous, transparent, amber, polyetherimide thermoplastic, fibers spun with ULTEM resin and woven with aramids, carbon and glass fiber reinforcements can be tailored to meet the most demanding structural applications for optimal balance of performance and cost.

ULTEM resin has one of the highest tensile strengths of an unfilled thermoplastic, and therefore make for a very high strength matrix material in composites.



### POTENTIAL USES OF ULTEM FIBER

ULTEM based fiber can be used in variety of manufacturing processes, such as:

- Air Laid non-wovens
- Wet laid non-wovens
- Woven fabrics
- 3D woven fabrics
- Pre-preg laminates
- Tailored Fiber Placement
- Co-mingled yarns

# VALUE PROPOSITION FOR ULTEM FIBER BASED MATRIX:

- High heat resistance
- Lightweight
- High tensile strength matrix material
- Low water absorption
- Inherently flame retardant
- Non-halogen
- Good dye-ability
- UV resistance
- Low smoke density

# PHYSICAL PROPERTIES

Grade Name	Density kg/m <sup>3</sup>
Fineness	2.2 dtex
Tenacity	2.6 cN/dtex
Elongation at break	70%
Glass transition point (Tg)	215°C
Thermal shrinkage at 180°C	<3 %
L.O.I.	31
Smoke during burning	Very low density
Dyeability	Good



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