

## UD-fixedTow CF 24k

*Spread and binder-powder fixed CF tape*



### Material data:

<b>Roving type</b>	Carbon fiber (CF)	SGL Sigrafil C T24-5.0/270
<b>Binder type</b>	Reactive, epoxy-based	Hexion Epikote 06720
<b>Spreading width</b>	20 mm	
<b>Areal weight CF</b>	80 g/m <sup>2</sup>	
<b>Binder amount</b>	8 wt. % / 9 g/m <sup>2</sup>	
<b>Binder preforming</b>	80 - 90 °C	
<b>Binder crosslinking</b>	At > 100 °C	
<b>UD fixed tow per spool</b>	450 m	
<b>Spool dimension</b>	∅ 230 mm; core: 125 mm	Plastic spool

### Mechanical Properties of Laminates generated by **CROSSLAYER DRY FIBER PLACEMENT**:

Property	Test method	Value	Unit
<b>Tensile strength 0°</b>	DIN ISO 527-5	2268	MPa
<b>E-modulus 0°</b>	DIN ISO 527-5	127	GPa
<b>Bending stress</b>	DIN EN ISO 14125	1187	MPa
<b>Bending Modulus</b>	DIN EN ISO 14125	106	GPa
<b>Tensile Stress 90°</b>	DIN ISO 527-5	46	MPa
<b>Tensile Modulus 90°</b>	DIN ISO 527-5	7,9	GPa
<b>Shear strength</b>	DIN EN ISO 14129	83	MPa
<b>Shear modulus</b>	DIN EN ISO 14129	3,7	GPa
<b>ILSS</b>	DIN EN ISO 14130	61	MPa

Laminates from thin ply sheets were generated to determine mechanical properties: thin ply sheets via CROSSLAYER dry fiber placement. Infiltration with Hexion RIM 135 resin + RIM 137 hardener using vacuum assisted process (VAP) at <50 mbar and 30 °C. All data are normalized to 60% fiber volume fraction.