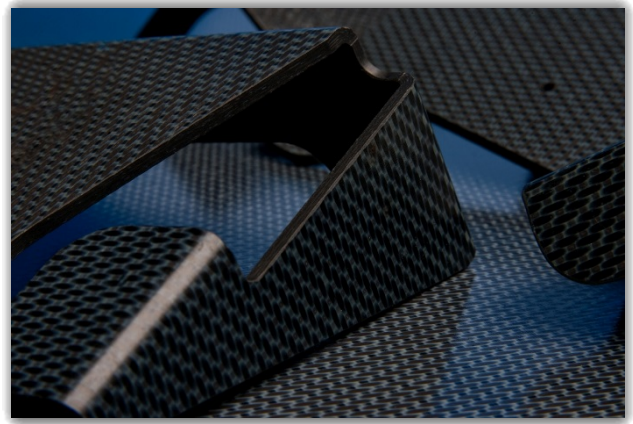
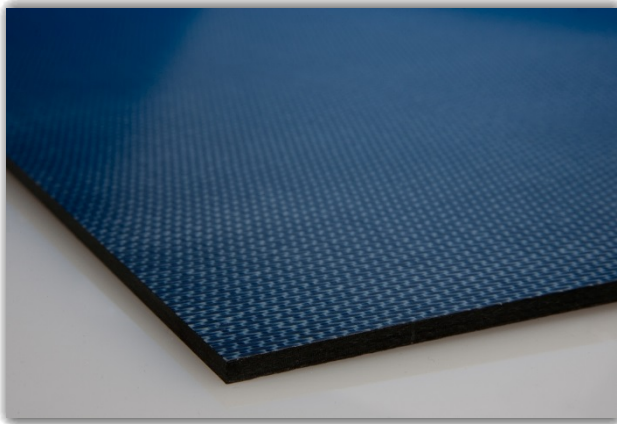


**Tenax®-E TPCL PEEK-HTA40** is a thermoplastic consolidated laminate (TPCL) made of several layers of thermoplastic powdered woven fabric. The powdered woven fabric is composed of the high tenacity carbon fiber product Tenax®-E HTA40 E13 3K 200tex and a PEEK matrix. The consolidated laminate can be simply heated above its melting temperature and then stamped in a metallic mould within a press in a short cycle time.



**Product Benefits**

- high-performance mechanical properties
- continuous use at elevated temperature
- low flammability, smoke and toxicity
- resistant to chemicals and solvents
- room temperature storage and shipping
- compliant to Health, Safety and Environment requirements
- biocompatible (comply with ISO 10993-5)
- recyclable

**Process Benefits**

- thermoformable (press forming)
- short cycle time
- large volume application
- suitable for automated processing (pick and place)
- thermoplastic joining technologies

**Dimensions**

Laminate dimension	800 mm x 1200 mm
Laminate thickness	multiple of 0.31 mm (typically 1.86 mm to 4.34 mm)

<b>Brand name</b>	<b>Tenax®</b>	
<b>Production site</b>	<b>E (Europe)</b>	
<b>Product name</b>	<b>TPCL PEEK-HTA40</b>	
<b>Product designation</b>	<b>Tenax®-E TPCL-PEEK-4-40-HTA40 E13 3K DT-5HS-285</b>	
<b>Fiber</b>	<b>Tenax®-E HTA40 E13 3K 200tex</b>	Density: 1.76 g/cm <sup>3</sup>
<b>Matrix</b>	<b>PEEK (Polyetheretherketon)</b>	Density: 1.30 g/cm <sup>3</sup>

**Semi-finished product**

Fabric	5HS
Prepreg areal weight	485 g/m <sup>2</sup>
Fiber areal weight	285 g/m <sup>2</sup>
Matrix content	42 wt%
Nominal ply thickness (52 % FVC <sup>(1)</sup> )	0.31 mm

**Thermoforming recommendations**

Consolidation temperature	390 ± 30 °C 734 ± 54 °F
Consolidation time	≤ 5 min
Consolidation pressure	25 ± 15 bar 363 ± 218 psi
Cooling-down rate	≤ 120 °C/min ≤ 248 °F/min

(1) FVC = Fiber volume content

<b>Properties (test direction)</b>		<b>Test temperature/ Conditioning</b>	<b>Typical values</b>	
Glass transition temperature	onset	23 °C / 50 % r.h.	143 °C	289 °F
Tensile (warp, 0°) ISO 527-4	modulus	23 °C / 50 % r.h.	60 GPa	8.7 Msi
	strength	23 °C / 50 % r.h.	963 MPa	139.7 ksi
Compression (warp, 0°) EN 2850 Type B	modulus	23 °C / 50 % r.h.	59 GPa	8.6 Msi
	strength	23 °C / 50 % r.h.	725 MPa	105.2 ksi
Flexural (warp, 0°) EN 2562 Type A	modulus	23 °C / 50 % r.h.	64 GPa	9.3 Msi
	strength	23 °C / 50 % r.h.	1166 MPa	169.1 ksi

- All data are typical values representative of the material. Properties may vary depending on samples preparation and test methods.
- For each shipment an inspection certificate 3.1 according to DIN EN 10204 is generated and supplied.
- A detailed customer specification is arranged on request.
- The export or transfer of carbon fiber products can be subject to authorization, depending on end-use and final destination