

# TOOLING MATERIALS

A wide range of tooling solutions

TB650 - Premium quality epoxy syntactic tooling block						
Property	Test Method	Value	SI Units	Value	Imperial Units	
Colour		Green				
Density	BS EN ISO 1183-3:1999	680	kg/m <sup>3</sup>	43	lb/ft <sup>3</sup>	
Shore Hardness	ISO 868:1998	69	°D	69	°D	
Uniaxial Compressive Strength	BS EN ISO 604	45.5	MPa	6600	lbf/in <sup>2</sup>	
Uniaxial Compressive Modulus	BS EN ISO 604	1490	MPa	216100	lbf/in <sup>2</sup>	
Heat Distortion Temperature	BS 2782	111	°C	232	°F	
Coefficient of Thermal Expansion	BS 4618 3.1	38.0	x 10 <sup>-6</sup> / °C	21.2	x 10 <sup>-6</sup> /°F	

TB620 - Cost effective epoxy syntactic tooling block						
Property	Test Method	Value	SI Units	Value	Imperial Units	
Colour		Blue				
Density	BS EN ISO 1183-3:1999	620	kg/m <sup>3</sup>	39	lb/ft <sup>3</sup>	
Shore Hardness	ISO 868:1998	69	°D	69	°D	
Uniaxial Compressive Strength	BS EN ISO 604	38.0	MPa	5510	lbf/in <sup>2</sup>	
Uniaxial Compressive Modulus	BS EN ISO 604	1200	MPa	174000	lbf/in <sup>2</sup>	
Heat Distortion Temperature	BS 2782	110	°C	230	°F	
Coefficient of Thermal Expansion	BS 4618 3.1	39.0	x 10 <sup>-6</sup> / °C	21.7	x 10 <sup>-6</sup> /°F	

TB610 - High performance CTE epoxy syntactic tooling block						
Property	Test Method	Value	SI Units	Value	Imperial Units	
Colour		Blue				
Density	BS EN ISO 1183-3:1999	623	kg/m <sup>3</sup>	39	lb/ft <sup>3</sup>	
Shore Hardness	ISO 868:1998	69	°D	69	°D	
Uniaxial Compressive Strength	BS EN ISO 604	40.0	MPa	5800	lbf/in <sup>2</sup>	
Heat Distortion Temperature	BS 2782	158	°C	316	°F	
Coefficient of Thermal Expansion	BS 4618 3.1	28.2	x 10 <sup>-6</sup> / °C	15.7	x 10 <sup>-6</sup> /°F	

TB400 - Low density tooling block						
Property	Test Method	Value	SI Units	Value	Imperial Units	
Colour		Beige				
Density	BS EN ISO 1183-3:1999	400	kg/m <sup>3</sup>	25	lb/ft <sup>3</sup>	
Shore Hardness	ISO 868:1998	55	°D	55	°D	
Uniaxial Compressive Strength	BS EN ISO 604	11	MPa	1595	lbf/in <sup>2</sup>	
Heat Distortion temperature	BS2782	120	°C	240	°F	
Coefficient of Thermal Expansion	BS 4618 3.1	20.0	x 10 <sup>-6</sup> / °C	11.1	x 10 <sup>-6</sup> /°F	

### EP678 - High quality tooling block

Property	Test Method	Value	SI Units	Value	Imperial Units
Colour		Blue			
Density	BS EN ISO 1183-3:1999	708	kg/m <sup>3</sup>	44	lb/ft <sup>3</sup>
Uniaxial Compressive Strength	BS EN ISO 604	52.0	MPa	7540	lbf/in <sup>2</sup>
Heat Distortion Temperature	BS 2782	119	°C	246	°F
Coefficient of Thermal Expansion	BS 4618 3.1	35.7	x 10 <sup>6</sup> / °C	19.9	x 10 <sup>6</sup> /°F

### EP671 - Cost effective epoxy syntactic tooling block

Property	Test Method	Value	SI Units	Value	Imperial Units
Colour		Tan			
Density	BS EN ISO 1183-3:1999	609	kg/m <sup>3</sup>	38	lb/ft <sup>3</sup>
Shore Hardness	ISO 868:1998	59	°D	59	°D
Uniaxial Compressive Strength	BS EN ISO 604	25.8	MPa	3740	lbf/in <sup>2</sup>
Heat Distortion Temperature	BS 2782	63	°C	145	°F
Coefficient of Thermal Expansion	BS 4618 3.1	60.3	x 10 <sup>6</sup> / °C	33.6	x 10 <sup>6</sup> /°F

### EP650 - Epoxy syntactic for high temperatures

Property	Test Method	Value	SI Units	Value	Imperial Units
Colour		Brown			
Density	BS EN ISO 1183-3:1999	684	kg/m <sup>3</sup>	43	lb/ft <sup>3</sup>
Shore Hardness	ISO 868:1998	67	°D	67	°D
Uniaxial Compressive Strength	BS EN ISO 604	40.6	MPa	5890	lbf/in <sup>2</sup>
Heat Distortion Temperature	BS 2782	123	°C	253	°F
Coefficient of Thermal Expansion	BS 4618 3.1	42.0	x 10 <sup>6</sup> / °C	23.4	X 10 <sup>6</sup> /°F

### Tooling block product size guide

Product	Sizes (Metric)				Sizes (Imperial)		
	49mm x 0.5m x 1.0m	49mm x 1.0m x 1.0m	123mm x 0.5m x 1.0m	123mm x 1.0m x 1.0m	2" x 24" x 60"	4" x 24" x 60"	6" x 24" x 60"
TB650	•	•	•	•			
TB620	•	•	•	•			
TB610					•	•	•
TB400					•	•	•
EP678					•	•	•
EP671					•	•	•
EP650					•	•	•

Other sizes may be available on request.



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