

## BASF Ultrason® E 2010 C6 30% Carbon Filled

Category : Polymer , Thermoplastic , Polysulfone (PSU) , Polyphenylsulfone, Glass or Carbon Fiber Reinforced

### Material Notes:

Carbon fibers and Ultrason® two partners with good properties. The combination of carbon fibers with the amorphous high-temperature plastic Ultrason® guarantees mechanical properties for temperatures of up to 200 °C. Excellent properties: very high stiffness, very constant mechanical properties, low and constant thermal expansion = dimensionally stable and excellent creep behavior. Potential applications: Substitution of metal, using the advantages of thermoplastic materials (e.g. realization of complex designs by injection-molding), substitution of PEEK for applications with a maximum of 200 °C, parts with antistatic requirements and parts with electrically conductive requirements. Information provided by BASF

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_BASF-Ultrason-E-2010-C6-30-Carbon-Filled.php](http://www.lookpolymers.com/polymer_BASF-Ultrason-E-2010-C6-30-Carbon-Filled.php)

Physical Properties	Metric	English	Comments
Bulk Density	0.700 - 0.800 g/cc	0.0253 - 0.0289 lb/in <sup>3</sup>	
Density	1.47 g/cc	0.0531 lb/in <sup>3</sup>	ISO 1183
Water Absorption	<= 1.7 %	<= 1.7 %	Equilibrium; ISO 62
Moisture Absorption at Equilibrium	0.60 %	0.60 %	23°C; 50% RH; ISO 62
Viscosity Measurement	56	56	[cm<sup>3</sup>/g]; ISO 1628
Linear Mold Shrinkage, Flow	0.0015 cm/cm	0.0015 in/in	ISO 294
Linear Mold Shrinkage, Transverse	0.0035 cm/cm	0.0035 in/in	ISO 294
Melt Flow	>= 22.05 g/10 min @Load 10.0 kg, Temperature 360 °C	>= 22.05 g/10 min @Load 22.0 lb, Temperature 680 °F	ISO 1133
	>= 45 g/10 min @Load 10.0 kg, Temperature 400 °C	>= 45 g/10 min @Load 22.0 lb, Temperature 752 °F	

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	227 MPa @Load 36.5 kg, Time 30.0 sec	32900 psi @Load 80.5 lb, Time 0.00833 hour	ISO 2039-1
Tensile Strength at Break	185 MPa	26800 psi	5 mm/min; ISO 527-2
Tensile Strength, Yield	185 MPa	26800 psi	50 mm/min; ISO 527-2
Elongation at Break	1.5 %	1.5 %	5mm/min; ISO 527-2

Elongation at Yield Mechanical Properties	1.5 % Metric	1.5 % English	50 mm/min; ISO 527-2 Comments
	0.21 %  @Time 3600 sec, Pressure 50.0 MPa	0.21 %  @Time 1.00 hour, Pressure 7250 psi	ISO 899
	0.23 %  @Pressure 50.0 MPa, Time 360000 sec	0.23 %  @Pressure 7250 psi, Time 100 hour	ISO 899
	0.24 %  @Pressure 50.0 MPa, Time 3.60e+6 sec	0.24 %  @Pressure 7250 psi, Time 1000 hour	ISO 899
	0.38 %  @Time 3600 sec, Pressure 70.0 MPa	0.38 %  @Time 1.00 hour, Pressure 10200 psi	ISO 899
	0.40 %  @Pressure 70.0 MPa, Time 360000 sec	0.40 %  @Pressure 10200 psi, Time 100 hour	ISO 899
	0.40 %  @Pressure 70.0 MPa, Time 3.60e+6 sec	0.40 %  @Pressure 10200 psi, Time 1000 hour	ISO 899
	0.50 %  @Time 3600 sec, Pressure 90.0 MPa	0.50 %  @Time 1.00 hour, Pressure 13100 psi	ISO 899
	0.55 %  @Pressure 90.0 MPa, Time 360000 sec	0.55 %  @Pressure 13100 psi, Time 100 hour	ISO 899
	0.58 %  @Pressure 90.0 MPa, Time 3.60e+6 sec	0.58 %  @Pressure 13100 psi, Time 1000 hour	ISO 899
	0.60 %  @Time 3600 sec, Pressure 110 MPa	0.60 %  @Time 1.00 hour, Pressure 16000 psi	ISO 899
	0.70 %  @Time 360000 sec, Pressure 110 MPa	0.70 %  @Time 100 hour, Pressure 16000 psi	ISO 899
	0.75 %  @Pressure 110 MPa, Time 3.60e+6 sec	0.75 %  @Pressure 16000 psi, Time 1000 hour	ISO 899
	0.80 %	0.80 %	

Mechanical Properties	Metric	English	Comments
	@Time 3600 sec, Pressure 130 MPa	@Time 1.00 hour, Pressure 18900 psi	
	0.90 %	0.90 %	
	@Time 360000 sec, Pressure 130 MPa	@Time 100 hour, Pressure 18900 psi	ISO 899
	0.98 %	0.98 %	
	@Pressure 130 MPa, Time 3.60e+6 sec	@Pressure 18900 psi, Time 1000 hour	ISO 899
Tensile Modulus	>= 13.0 GPa	>= 1890 ksi	
	@Temperature 200 °C	@Temperature 392 °F	
	>= 20.0 GPa	>= 2900 ksi	
	@Temperature 150 °C	@Temperature 302 °F	
	>= 21.0 GPa	>= 3050 ksi	
	@Temperature 100 °C	@Temperature 212 °F	
	>= 22.0 GPa	>= 3190 ksi	ISO 527-2
	@Temperature 50.0 °C	@Temperature 122 °F	
Shear Modulus	0.200 GPa	29.0 ksi	ISO 6721
	@Temperature 225 °C	@Temperature 437 °F	
	0.900 GPa	131 ksi	ISO 6721
	@Temperature 200 °C	@Temperature 392 °F	
	0.950 GPa	138 ksi	ISO 6721
	@Temperature 100 °C	@Temperature 212 °F	
	1.00 GPa	145 ksi	ISO 6721
	@Temperature 50.0 °C	@Temperature 122 °F	
Izod Impact, Notched (ISO)	8.00 kJ/m <sup>2</sup>	3.81 ft-lb/in <sup>2</sup>	ISO 180/A
	7.00 kJ/m <sup>2</sup>	3.33 ft-lb/in <sup>2</sup>	ISO 180/A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact Unnotched	4.00 J/cm <sup>2</sup>	19.0 ft-lb/in <sup>2</sup>	ISO 179/1eU
	4.00 J/cm <sup>2</sup>	19.0 ft-lb/in <sup>2</sup>	ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	0.750 J/cm <sup>2</sup>	3.57 ft-lb/in <sup>2</sup>	ISO 179/1eA
	0.650 J/cm <sup>2</sup>	3.09 ft-lb/in <sup>2</sup>	

Mechanical Properties	Metric	English	ISO 179/1eA Comments
	@Temperature -30.0 °C	@Temperature -22.0 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	4.00 µm/m-°C	2.22 µin/in-°F	ISO 11359-1/-2
	@Temperature 23.0 - 80.0 °C	@Temperature 73.4 - 176 °F	
	4.00 µm/m-°C	2.22 µin/in-°F	ISO 11359-1/-2
	@Temperature 140 - 180 °C	@Temperature 284 - 356 °F	
Maximum Service Temperature, Air	220 °C	428 °F	short cycle operations
Deflection Temperature at 1.8 MPa (264 psi)	225 °C	437 °F	ISO 75-2
Glass Transition Temp, Tg	225 °C	437 °F	ISO 11357-1/-2
Decomposition Temperature	>= 400 °C	>= 752 °F	
Flammability, UL94	V-0	V-0	
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	V-0	V-0	
	@Thickness 3.20 mm	@Thickness 0.126 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.9 ohm-cm	1.9 ohm-cm	IEC 60093
Surface Resistance	>= 1000 ohm	>= 1000 ohm	IEC 60093

Processing Properties	Metric	English	Comments
Melt Temperature	350 - 390 °C	662 - 734 °F	Injection molding/extrusion
	370 °C	698 °F	Optimal
Mold Temperature	150 - 190 °C	302 - 374 °F	Injection molding
	170 °C	338 °F	Optimal
Drying Temperature	140 °C	284 °F	
Dry Time	4 hour	4 hour	

Descriptive Properties	Value	Comments
Color	Black	

Descriptive Properties	Value <small>America and Europe</small>	Comments
Ignition Temperature	580-600°C	DIN 54836
Primary Processing Technique	Injection Molding and Extrusion	

## Contact Songhan Plastic Technology Co.,Ltd.

Website : [www.lookpolymers.com](http://www.lookpolymers.com)

Email : [sales@lookpolymers.com](mailto:sales@lookpolymers.com)

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China