CAMPUS® Datasheet

ULTEM™ Resin 1010R - PEI
SABIC

Product Texts

ULTEM 1010R Resin is an unreinforced amorphous polyetherimide (PEI) resin that may offer a high glass transition temperature (Tg) of 217°C, improved flow and it contains internal mold release. Features are excellent mechanical, electrical and dimensional properties up to high temperatures. The material may offer very good chemical resistance for an amorphous material and is inherently flame retardant offering UL94 V0 and 5V ratings and aerospace FAR 25.853 compliance. The material is RoHS compliant. The material is available in opaque colors.

UL Yellow Card Link E121562-101048269

Rheological properties	Value	Unit	Test Standard
Melt volume-flow rate, MVR	**25**	cm³/10min	ISO 1133
Temperature	**360**	°C	ISO 1133
Load	**5**	kg	ISO 1133

Mechanical properties	Value	Unit	Test Standard
Charpy notched impact strength, +23°C	**4**	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	**4**	kJ/m²	ISO 179/1eA

Thermal properties	Value	Unit	Test Standard
Temp. of deflection under load, 1.80 MPa	**192**	°C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	**209**	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	**211**	°C	ISO 306
Burning behavior at thickness h	**V-2**	class	IEC 60695-11-10
Thickness tested (h)	**0.4**	mm	IEC 60695-11-10
Burning behavior 5V at thickness h	**5VA**	class	IEC 60695-11-20
Thickness tested	**3.0**	mm	IEC 60695-11-20

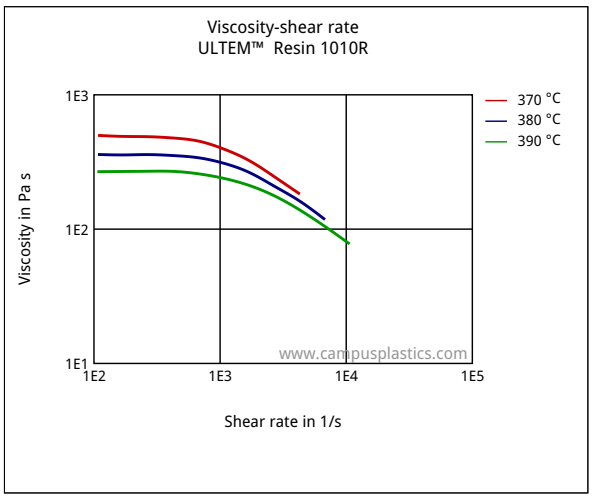
Electrical properties	Value	Unit	Test Standard
Relative permittivity, 1MHz	**2.9**	-	IEC 62631-2-1
Dissipation factor, 1MHz	**60**	E-4	IEC 62631-2-1
Volume resistivity	**1E11**	Ohm*m	IEC 62631-3-1
Surface resistivity	**1E15**	Ohm	IEC 62631-3-2
Electric strength	**33**	kV/mm	IEC 60243-1
Comparative tracking index	**150**	-	IEC 60112

Other properties	Value	Unit	Test Standard
Water absorption	**1.25**	%	Sim. to ISO 62
Density	**1270**	kg/m³	ISO 1183

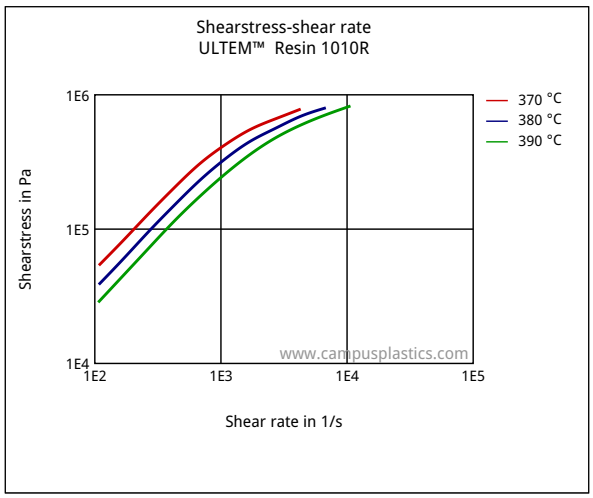
ULTEM™ Resin 1010R - PEI
SABIC

Diagrams

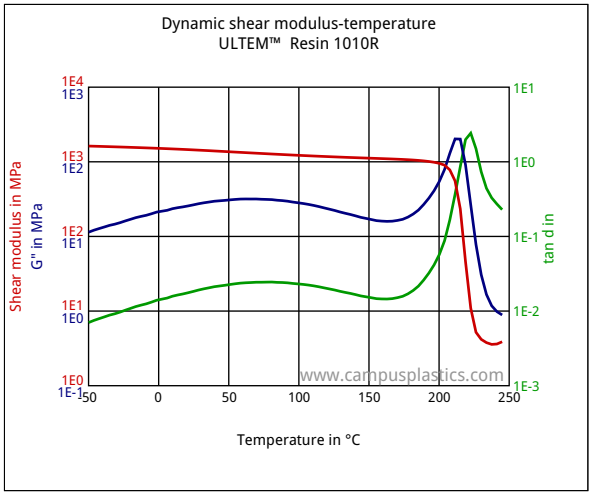
Viscosity-shear rate



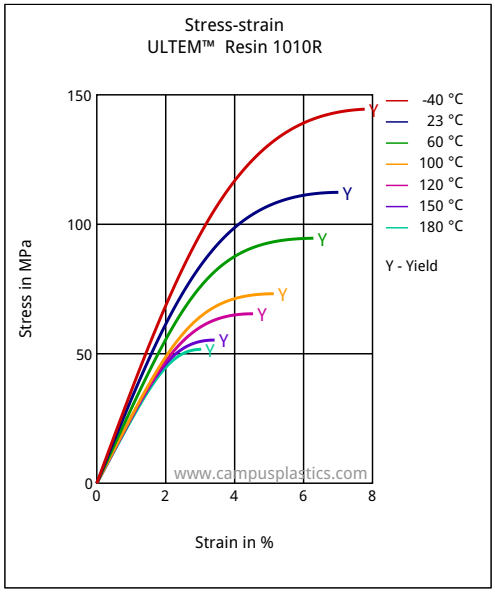
Shearstress-shear rate



Dynamic shear modulus-temperature

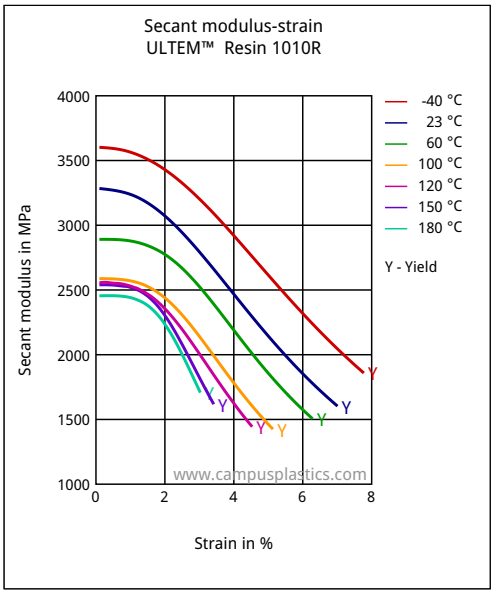


Stress-strain



ULTEM™ Resin 1010R - PEI
SABIC

Secant modulus-strain



Specific volume-temperature (pvT)