ULTEM™ Resin DT1810EVUCL

PEI — Saudi Basic Industries Corporation (SABIC)

Product Texts

Improved ductility, transparent, enhanced flow Polyetherimide blend (Tg 200C) with internal mold release and enhanced ductility.

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	**56**	cm³/10min	ISO 1133
Temperature	**360**	°C	-
Load	**5**	kg	-
ASTM Data			
Melt Flow Index, MFI	**43**	g/10min	ASTM D 1238
Temperature	**337**	°C	-
Load	**6.6**	kg	-

Mechanical properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	**2500**	MPa	ISO 527
Yield stress	**98**	MPa	ISO 527
Yield strain	**7**	%	ISO 527
Stress at break	**80**	MPa	ISO 527
Strain at break	**80**	%	ISO 527
Flexural modulus, 23°C	**3100**	MPa	ISO 178
Charpy notched impact strength, +23°C	**2**	kJ/m²	ISO 179/1eA
Izod notched impact strength, +23°C	**2**	kJ/m²	ISO 180/1A
Izod notched impact strength	**2**	kJ/m²	ISO 180/1A
Temperature	**-30**	°C	-
ASTM Data			
Tensile Modulus	**3210**	MPa	ASTM D 638
Tensile Strength at Yield	**103**	MPa	ASTM D 638
Tensile Strength at Break	**85**	MPa	ASTM D 638
Elongation at Yield	**7**	%	ASTM D 638
Elongation at Break	**80**	%	ASTM D 638
Flexural Modulus	**3320**	MPa	ASTM D 790
Izod Impact notched, 1/8 in	**32**	J/m	ASTM D 256
Izod Impact notched, Low-Temperature	**35**	J/m	ASTM D 256
Temperature	**-30**	°C	-
Izod Impact unnotched, 1/8 in	**N**	J/m	ASTM D 256

Thermal properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load, 1.80 MPa	**168**	°C	ISO 75-1/-2
Vicat softening temperature, B	**192**	°C	ISO 306
Coeff. of linear therm. expansion, parallel	**55**	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	**55**	E-6/K	ISO 11359-1/-2
ASTM Data			
Coefficient of Thermal Expansion, MD	**60**	E-6/K	ASTM D 696
Coefficient of Thermal Expansion, TD	**60**	E-6/K	ASTM D 696
DTUL @ 264 psi	**173**	°C	ASTM D 648
Vicat Temperature	**192**	°C	ASTM D 1525

Other properties	Value	Unit	Test Standard
Water absorption	**0.36**	%	Sim. to ISO 62
Humidity absorption	**0.08**	%	Sim. to ISO 62
Density	**1280**	kg/m³	ISO 1183
Density	**1280**	kg/m³	ASTM D 792

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	**135**	°C	-
Pre-drying - Time	**4 - 6**	h	-
Processing humidity	**≤0.02**	%	-

Melt temperature	**330 - 355**	°C	-
Mold temperature	**95 - 135**	°C	-
Zone 1	**310 - 330**	°C	-
Zone 2	**320 - 345**	°C	-
Zone 3	**330 - 355**	°C	-
Nozzle temperature	**325 - 350**	°C	-
Screw speed	**40 - 70**	rpm	-
Back pressure	**0.3 - 0.7**	MPa	-

Characteristics

Processing
Injection Molding

Additives
Release agent

Special Characteristics
Flame retardant, Heat stabilized or stable to heat, Transparent

Features
Amorphous, Creep Resistance, Ductile, Good Adhesion, Low Smoke

Chemical Resistance
General Chemical Resistance, Hydrolytically Stable

Applications
Electrical and Electronical

Regional Availability
North America, Europe, Asia Pacific, South and Central America