Celanese
The chemistry inside innovation™

PIBIFLEX® 2560 - TPC

Description

PIBIFLEX® 2560 is a nominal 27 Shore D thermoplastic polyester elastomer with low modulus and improved flow for injection molding applications and use as a performance modifier for TPE compounding.

Physical properties

ISO	Value	Unit	Test Standard
Density	**1090**	kg/m³	ISO 1183
Melt volume rate, MVR	**20**	cm³/10min	ISO 1133
MVR temperature	**220**	°C	ISO 1133
MVR load	**2.16**	kg	ISO 1133
Molding shrinkage, parallel	**0.6**	%	ISO 294-4, 2577
Molding shrinkage, normal	**1.1**	%	ISO 294-4, 2577
Humidity absorption, 23°C/50%RH	**0.95**	%	ISO 62

Mechanical properties

ISO	Value	Unit	Test Standard
Tensile stress at break, 50mm/min	**16**	MPa	ISO 527-2/1A
Tensile strain at break, 50mm/min	**>500**	%	ISO 527-2/1A
Flexural modulus, 23°C	**35**	MPa	ISO 178
Charpy notched impact strength, 23°C	**NB**	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	**NB**	kJ/m²	ISO 179/1eA
Izod impact notched, 23°C	**NB**	kJ/m²	ISO 180/1A
Izod impact notched, -30°C	**NB**	kJ/m²	ISO 180/1A
Shore D hardness, 15s	**27**	-	ISO 868

Thermal properties

ISO	Value	Unit	Test Standard
Melting temperature, 10°C/min	**185**	°C	ISO 11357-1/-3
Glass transition temperature, 10°C/min	**-75**	°C	ISO 11357-1,-2,-3
Limiting oxygen index (LOI)	**20**	%	ISO 4589-1/-2

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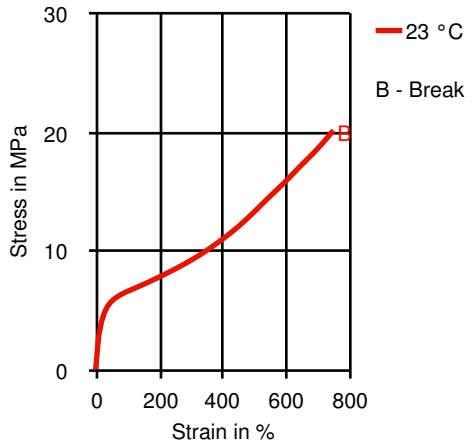
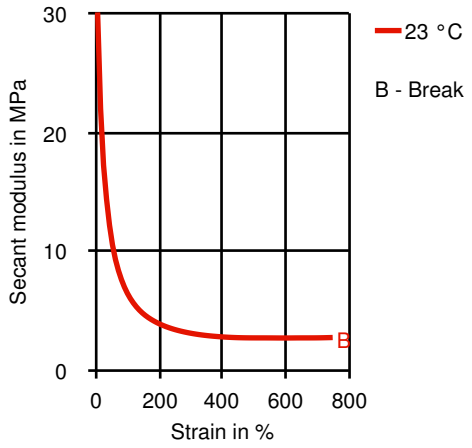
Diagrams

Stress-strain



Secant modulus-strain



Typical injection moulding processing conditions

Pre Drying

	LowMaxRes	DryTime	DryTemp
max	0.05 %	4 h	110 °C
min			100 °C

Temperature

	HRTemp	CavTemp	MTemp	Nozzle Temp	Z4Temp	Z3Temp	Z2Temp	Z1Temp	FeedTemp	Hopper
max	190 °C	55 °C	190 °C	190 °C	190 °C	180 °C	180 °C	180 °C	170 °C	50 °C
min	170 °C	20 °C	170 °C	170 °C	170 °C	170 °C	170 °C	170 °C	155 °C	20 °C

Speed	Value	Unit	Test Standard
Injection speed	**medium-fast**	-	-

Other text information

Pre-drying

To avoid hydrolytic degradation during processing, PIBIFLEX TPC resins have to be dried to a moisture level equal to or less than 0.02%. Drying should be done in a dehumidifying hopper dryer capable of dewpoints <-40°F (-40°C) at 225°F (107°C) for 4 hours.

Longer pre-drying times/storage

For subsequent storage of the material in the dryer until processed (<= 24h) it is necessary to lower the temperature to 80° C.

Characteristics

Product Categories

Unfilled

Delivery Form

Pellets