Celanese
The chemistry inside innovation™

PIBIFLEX® B5050MWR - TPC

Description

PIBIFLEX® B5050MWR is a nominal 40 Shore D thermoplastic polyester elastomer with medium modulus. It is designed for blow molding or processing techniques requiring high viscosity. It shows excellent mechanical properties at elevated temperatures, superior fatigue, abrasion, and grease resistance. Typical application CVJ Boots.

Physical properties

ISO	Value	Unit	Test Standard
Density	**1140**	kg/m³	ISO 1183
Humidity absorption, 23°C/50%RH	**0.6**	%	ISO 62

Mechanical properties

ISO	Value	Unit	Test Standard
Flexural modulus, 23°C	**90**	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	**41**	-	ISO 868

Mechanical properties (TPE)

ISO	Value	Unit	Test Standard
Tear strength	**110**	kN/m	ISO 34-1

Thermal properties

ISO	Value	Unit	Test Standard
Melting temperature, 10°C/min	**200**	°C	ISO 11357-1/-3
Limiting oxygen index (LOI)	**20**	%	ISO 4589-1/-2

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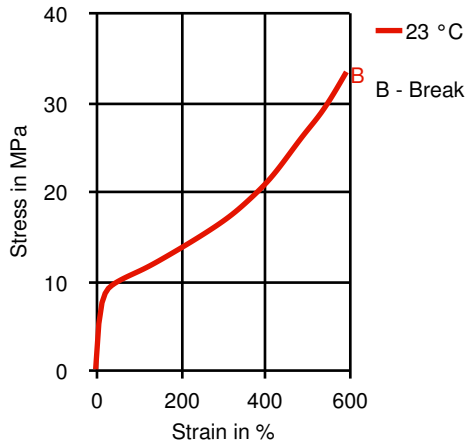
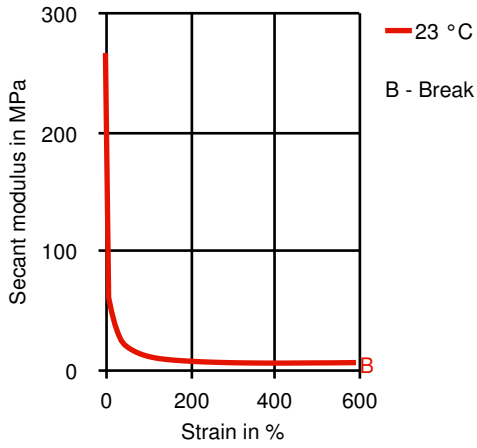
Diagrams

Stress-strain



Secant modulus-strain



Typical injection moulding processing conditions

Pre Drying

	LowMaxRes	DryTime	DryTemp
max	0.08 %	4 h	100 °C
min		3 h	

Temperature

	HRTemp	CavTemp	MTemp	Nozzle Temp	Z4Temp	Z3Temp	Z2Temp	Z1Temp	FeedTemp	Hopper
max	240 °C	50 °C	245 °C	260 °C	250 °C	240 °C	240 °C	230 °C	230 °C	50 °C
min	230 °C	30 °C	235 °C	250 °C	240 °C	230 °C	230 °C	220 °C	220 °C	20 °C

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

Other text information

Pre-drying

To avoid hydrolytic degradation during processing, Riteflex resins have to be dried to a moisture level equal to or less than 0.05%. Drying should be done in a dehumidifying hopper dryer capable of dewpoints <-40°F (-40°C) at 225°F (107°C) for 4 hours.

Characteristics

Special Characteristics

High viscosity, Hydrolysis resistant

Processing

Blow molding, Other extrusion

Product Categories

Unfilled

Regional Availability

North America, Europe, Asia Pacific, South and Central America, Near East/Africa