Celanese
The chemistry inside innovation™

RITEFLEX® XFR 440 - TPC

Description

Riteflex XFR 440 is a nominal 40 Shore D thermoplastic polyester elastomer featuring a halogen-free flame retardant system. It is UL certified to be V-0 at 1.5 mm in all colors. It exhibits an excellent balance of flexibility, flame retardance and processability.

Physical properties	Value	Unit	Test Standard
Density	**1200**	kg/m³	ISO 1183
Melt flow rate, MFR	**7.1**	g/10min	ISO 1133
MFR temperature	**250**	°C	ISO 1133
MFR load	**2.16**	kg	ISO 1133
Melt volume rate, MVR	**15**	cm³/10min	ISO 1133
MVR temperature	**250**	°C	ISO 1133
MVR load	**2.16**	kg	ISO 1133

Mechanical properties	Value	Unit	Test Standard
Tensile modulus	**100**	MPa	ISO 527-2/1A
Tensile nominal strain at break, 50mm/min	**>50**	%	ISO 527-2/1A
Tensile stress at break, 50mm/min	**10**	MPa	ISO 527-2/1A
Tensile strain at break, 50mm/min	**500**	%	ISO 527-2/1A
Charpy notched impact strength, 23°C	**25**	kJ/m²	ISO 179/1eA

Mechanical properties (TPE)	Value	Unit	Test Standard
Shore D hardness, 15s	**40**	-	ISO 868
Tear strength, Die C/parallel	**40**	kN/m	ISO 34-1

Thermal properties	Value	Unit	Test Standard
Melting temperature, 10°C/min	**195**	°C	ISO 11357-1/-3
Limiting oxygen index (LOI)	**32**	%	ISO 4589-1/-2
Flammability at thickness h	**V-0**	class	UL 94
thickness tested (h)	**1.50**	mm	UL 94

Electrical properties	Value	Unit	Test Standard
Electric strength	**14**	kV/mm	IEC 60243-1
Comparative tracking index	**PLC 0**	-	IEC 60112

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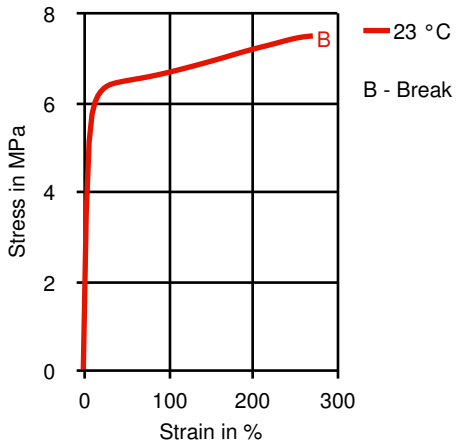
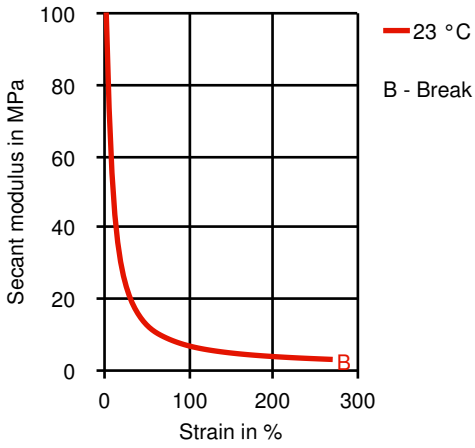
Diagrams

Stress-strain



Secant modulus-strain



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.

Injection molding

Rear Temperature 370-390(185-200) deg F (deg C)
Center Temperature 390-410(200-210) deg F (deg C)
Front Temperature 390-420(200-215) deg F (deg C)
Nozzle Temperature 390-420(200-215) deg F (deg C)
Melt Temperature 390-420(200-215) deg F (deg C)
Mold Temperature 75-125(20-55) deg F (deg C)
Back Pressure 0-50 psi
Screw Speed Medium
Injection Speed Fast

Injection speed, injection pressure and holding pressure have to be optimized to the individual article geometry. To avoid material degradation during processing low back pressure and minimum screw speed have to be used. Overheating of the material has to be avoided, in particular for flame retardant grades. Up to 25% clean and dry regrind may be used.

Characteristics

Special Characteristics

Flame retardant

Delivery Form

Pellets

Product Categories

Unfilled

Additives

Flame retarding agent

Processing

Injection molding, Other extrusion