Celanese
The chemistry inside innovation™

RITEFLEX® XFR 655 - TPC

Description

Riteflex XFR 655 is a thermoplastic polyester elastomer featuring a halogen-free flame retardant system and is UL certified to be V-0 at 1.5 mm in all colors. It has shore D hardness of 55 and an excellent balance of mechanical properties, flame retardant efficiency and processability.

Physical properties	Value	Unit	Test Standard
Density	**1230**	kg/m³	ISO 1183
Melt flow rate, MFR	**8.7**	g/10min	ISO 1133
MFR temperature	**250**	°C	ISO 1133
MFR load	**2.16**	kg	ISO 1133
Melt volume rate, MVR	**20**	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	**360**	MPa	ISO 527-2/1A
Tensile nominal strain at break, 50mm/min	**>50**	%	ISO 527-2/1A
Tensile stress at 50% strain, 50mm/min	**14**	MPa	ISO 527-2/1A
Tensile stress at break, 50mm/min	**16**	MPa	ISO 527-2/1A
Tensile strain at break, 50mm/min	**250**	%	ISO 527-2/1A
Charpy notched impact strength, 23°C	**13**	kJ/m²	ISO 179/1eA

Mechanical properties (TPE)	Value	Unit	Test Standard
Shore D hardness, 15s	**55**	-	ISO 868
Tear strength, Die C/parallel	**55**	kN/m	ISO 34-1

Thermal properties	Value	Unit	Test Standard
Melting temperature, 10°C/min	**200**	°C	ISO 11357-1/-3
Limiting oxygen index (LOI)	**37**	%	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	**15**	kV/mm	IEC 60243-1
Comparative tracking index	**PLC 0**	-	IEC 60112

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 390-420(200-215) deg F (deg C)
Center Temperature 420-450(215-230) deg F (deg C)
Front Temperature 420-460(215-235) deg F (deg C)
Nozzle Temperature 420-460(215-235) deg F (deg C)
Melt Temperature 430-460(220-235) 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

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flame retardant grades. Up to 25% clean and dry regrind may be used.

Characteristics

Special Characteristics	Delivery Form
Flame retardant	Pellets

Product Categories	Additives
Unfilled	Flame retarding agent

Processing

Injection molding, Other extrusion