

RITEFLEX® XFR 655 | TPC | Unfilled

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/m ³	ISO 1183
Melt volume rate (MVR) - 2nd value	20	cm ³ /10min	ISO 1133
MVR test temperature - 2nd value	250	°C	ISO 1133
MVR test load - 2nd value	2.16	kg	ISO 1133
Melt flow rate (MFR)	8.7	g/10 min	ISO 1133
MFR test temperature	250	°C	ISO 1133
MFR test load	2.16	kg	ISO 1133

Mechanical properties	Value	Unit	Test Standard
Tensile modulus (1mm/min)	360	MPa	ISO 527-2/1A
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	13.0	kJ/m ²	ISO 179/1eA
Shore hardness D scale 15 sec value	55	-	ISO 868

Thermal properties	Value	Unit	Test Standard
Melting temperature (10°C/min)	200	°C	ISO 11357-1,-2,-3
Limiting oxygen index (LOI)	37.2	%	ISO 4589
Flammability at thickness h	V-0	class	UL94
thickness tested (h)	1.5	mm	UL94

Electrical properties	Value	Unit	Test Standard
Electric strength	15	kV/mm	IEC 60243-1
Comparative tracking index CTI	>600	-	IEC 60112

Mechanical-TPE properties	Value	Unit	Test Standard
Tear strength (Die C, parallel)	55	kN/m	ISO 34-1

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	

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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.

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General Disclaimer

NOTICE TO USERS: Values shown are based on testing of laboratory test specimens and represent data that fall within the standard range of properties for natural material. These values alone do not represent a sufficient basis for any part design and are not intended for use in establishing maximum, minimum, or ranges of values for specification purposes. Colorants or other additives may cause significant variations in data values.

Properties of molded parts can be influenced by a wide variety of factors including, but not limited to, material selection, additives, part design, processing conditions and environmental exposure. Any determination of the suitability of a particular material and part design for any use contemplated by the users and the manner of such use is the sole responsibility of the users, who must assure themselves that the material as subsequently processed meets the needs of their particular product or use.

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We strongly recommend that users seek and adhere to the manufacturer's current instructions for handling each material they use, and entrust the handling of such material to adequately trained personnel only. Please call the telephone numbers listed (+49 (0) 69 30516299 for Europe and +1 859-372-3244 for the Americas) for additional technical information. Call Customer Services for the appropriate Materials Safety Data Sheets (MSDS) before attempting to process our products.

The products mentioned herein are not intended for use in medical or dental implants.

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