PRODUCT INFORMATION

RITEFLEX 655A

RITEFLEX 655A is a thermoplastic polyester elastomer with nominal Shore D hardness of 55 and medium modulus.

ISO short ISO 18064: TPC-ET
Form Pellets

Key Features

- Unfilled
- Designed for injection moulding applications

Availability

- Natural and Black colours

Compliance

- GMW17327P-TPC-ET-Type 3M2H

Process

- INJECTION MOULDING

Property	Method	Unit	Value	Condition	State
ELECTRICAL					
Dielectric Strength +23 °C (AC)	IEC 60243-1	kV/mm	14		
Tracking Resistance CTI	UL 746	PLC	0		
Dielectric constant (Dk), 1 MHz	IEC 60250	-	4,4		
Volume resistivity, +23 °C	IEC 62631-3-1	Ohm*m	4E10		
Surface resistivity, +23 °C	IEC 62631-3-2	Ohm	4E15		
PHYSICAL					
Density (+23 °C)	ISO 1183	g/cm^3	1,19		
Water absorption (24 h/+23 °C)	ISO 62	%	0,6		
Melting temperature (10 °C/min)	ISO 11357	°C	200		
Melt Flow Rate MFR (220 °C - 2,16 kg)	ISO 1133	g/10 min	10		
Molding shrinkage (parallel)	ISO 294	%	1,6 - 1,9		
Molding shrinkage (perpendicular)	ISO 294	%	1,7 - 2,1		
MECHANICAL					
Shore D hardness, 15 s	ISO 868	Shore D	55		
Tensile strain at break, 1BA	ISO 527	%	> 300		
Tensile stress at 5% strain, 1BA	ISO 527	MPa	8		

The listed data are in the normal range of product properties, they should not be used to establish specification nor as the basis of design. Values are valid for natural coloured version only.

Unless specified to the contrary, the given values have been established on standardized test specimens at room temperature. These values are for natural colour only. The figures should be regarded as guide values only and not as binding minimum values. Please note that, under certain conditions, the properties can be affected to a considerable extent by the design of the mold/die, the processing conditions, pigments and any other additives.

All information, recommendation or technical advice provided by TARO PLAST S.p.A. are given in good faith but without warranty, to the best of its knowledge and based on current procedures in effect. Our advice does not release you from the obligation to check its validity and to test our products as to their suitability for the intended processes and uses. The application, use and processing methods and conditions of our products and the products manufactured by you on the basis of our technical advice are beyond our control and, therefore, entirely under your own responsibility.

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Tensile stress at 10% strain, 1BA	ISO 527	MPa	12
Tensile stress at 50% strain, 1BA	ISO 527	MPa	15
Tensile modulus	ISO 527	MPa	170
Tensile stress at yield, speed 50 mm/min	ISO 527	MPa	14
Tensile strain at yield, speed 50 mm/min	ISO 527	%	26
Tensile stress at 50% strain, speed 50 mm/min	ISO 527	MPa	15
Tensile strain at break, speed 50 mm/min	ISO 527	%	> 500
Tensile stress at break, speed 50 mm/min	ISO 527	MPa	30
Flexural modulus (-40 °C)	ISO 178	MPa	700
Flexural modulus (+100 °C)	ISO 178	MPa	86
Flexural modulus (+23 °C)	ISO 178	MPa	165
Flexural stress (+23 °C)	ISO 178	MPa	10
Flexural stress at 3,5% strain	ISO 178	MPa	7
CHARPY notched impact (+23 °C)	ISO 179/1eA	kJ/m^2	150
CHARPY unnotched impact (+23 °C)	ISO 179/1eU	kJ/m^2	NB
CHARPY notched impact (-30 °C)	ISO 179/1eA	kJ/m^2	65
CHARPY unnotched impact (-30 °C)	ISO 179/1eU	kJ/m^2	NB
Tear strength, Die C, parallel	ISO 34-1	kN/m	124
Bayshore resilience	ASTM D2632	%	48
Ross flex	ASTM D1052	cycles	> 1000000

THERMAL

Softening temperature - 1 kg (VST/A/50)	ISO 306	°C	176
Deflection temperature 0,45 MPa (HDT B)	ISO 75/B	°C	75
Deflection temperature 1,8 MPa (HDT B)	ISO 75/B	°C	48
Coefficient of linear thermal expansion (parallel)	ISO 11359-1,-2	K^-1	2x10(-4)
Coefficient of linear thermal expansion (transversal)	ISO 11359-1,-2	K^-1	1,7x10(-4)

FLAMMABILITY

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Flame rate (1,5 mm)	UL94	Class	HB

INJECTION MOULDING	Value
Drying Temperature (Desiccant Dryer)	100 - 110°C
Drying Time (Desiccant Dryer)	2 - 4 h
Suggested Max Moisture	< 0,05%
Suggested Max Regrind	< 20%
Melt Temperature	205 - 235°C
Hopper Temperature	20 - 50°C
Feed Temperature	200 - 215°C
Rear Temperature	200 - 215°C
Middle Temperature	210 - 230°C
Front Temperature	210 - 235°C
Nozzle Temperature	210 - 235°C
Hot runner temperature	210 - 235°C
Mould Temperature	20 - 55°C

Notes All TPC-ET (Pibiflex/Riteflex) compounds must be stored indoors at a temperature below 50°C / 120°F avoiding humidity and direct sunlight as well. Despite a longer shelf storage life without loss of properties, we recommend using the material within 6 months from the production date. During processing, a dehumidifying hopper dryer is recommended at a temperature of 60 to 80°C. The processing parameters like processing temperatures are a recommendation and can be adjusted in function of injection machine or extruder size, part geometry and design. To avoid hydrolytic degradation during processing,all TPC-ET (Pibiflex/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°C (-40°F) at 107°C (225°F) for 4 hours. For subsequent storage of the material in the dryer until processed (<= 60 h) it is necessary to lower the temperature to 100°C.

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