Celanese
The chemistry inside innovation™

RITEFLEX® 672A - TPC

Experimental Grade. Please contact your Celanese representative for further information.

Description

Riteflex 672A is a 72 Shore D Hardness thermoplastic polyester elastomer with a high modulus.

Physical properties	Value	Unit	Test Standard
Molding shrinkage, parallel	**1.7 - 2.2**	%	ISO 294-4, 2577
Molding shrinkage, normal	**1.7 - 2.2**	%	ISO 294-4, 2577

Mechanical properties	Value	Unit	Test Standard
Tensile nominal strain at break, 50mm/min	**>50**	%	ISO 527-2/1A
Tensile stress at break, 50mm/min	**22**	MPa	ISO 527-2/1A
Charpy notched impact strength, 23°C	**19**	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	**5**	kJ/m²	ISO 179/1eA

Thermal properties	Value	Unit	Test Standard
Melting temperature, 10°C/min	**215**	°C	ISO 11357-1/-3
DTUL at 0.45 MPa	**95**	°C	ISO 75-1, -2
Vicat softening temperature, 50°C/h 10N	**205**	°C	ISO 306

Typical injection moulding processing conditions

Pre Drying	Value	Unit	Test Standard
Necessary low maximum residual moisture content	**0.05**	%	-
Drying time	**4**	h	-
Drying temperature	**100 - 110**	°C	-
Temperature	**Value**	**Unit**	**Test Standard**
Hopper temperature	**20 - 50**	°C	-
Feeding zone temperature	**200 - 215**	°C	-
Zone1 temperature	**215 - 230**	°C	-
Zone2 temperature	**215 - 230**	°C	-
Zone3 temperature	**215 - 230**	°C	-
Zone4 temperature	**215 - 230**	°C	-
Nozzle temperature	**215 - 230**	°C	-
Melt temperature	**220 - 235**	°C	-
Mold temperature	**20 - 55**	°C	-
Hot runner temperature	**220 - 235**	°C	-
Speed	**Value**	**Unit**	**Test Standard**
Injection speed	**medium-fast**	-	-

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 230°F (110°C) for 4 hours.

Longer pre-drying times/storage

For subsequent storage of the material in the dryer until processed (<= 60 h) it is necessary to lower the temperature to 100° C.

Injection molding

Rear Temperature 390-420(200-215) deg F (deg C)
Center Temperature 420-450(215-230) deg F (deg C)
Front Temperature 420-450(215-230) deg F (deg C)
Nozzle Temperature 420-450(215-230) deg F (deg C)
Melt Temperature 430-460(220-235) deg F (deg C)
Mold Temperature 75-125(20-55) deg F (deg C)

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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

Product Categories	Processing
Unfilled	Injection molding