Celanese
The chemistry inside innovation™

RITEFLEX® 655HS - TPC

Description

55 Shore D Hardness heat stabilized

Physical properties	Value	Unit	Test Standard
Density	1190	kg/m³	ISO 1183
Melt flow rate, MFR	9	g/10min	ISO 1133
MFR temperature	220	°C	ISO 1133
MFR load	2.16	kg	ISO 1133
Molding shrinkage, parallel	1.6 - 1.9	%	ISO 294-4, 2577
Molding shrinkage, normal	1.7 - 2.1	%	ISO 294-4, 2577

Mechanical properties	Value	Unit	Test Standard
Flexural modulus, 23°C	205	MPa	ISO 178
Flexural stress at 3.5% strain	7	MPa	ISO 178
Charpy impact strength, 23°C	NB	kJ/m²	ISO 179/1eU
Charpy notched impact strength, 23°C	65[P]	kJ/m²	ISO 179/1eA

P: Partial Break

Mechanical properties (TPE)	Value	Unit	Test Standard
Tensile stress at 10% strain, 1BA	10	MPa	ISO 527-1, -2
Tensile strain at break (TPE)	>300	%	ISO 37

Thermal properties	Value	Unit	Test Standard
DTUL at 1.8 MPa	45	°C	ISO 75-1, -2
DTUL at 0.45 MPa	75	°C	ISO 75-1, -2

Electrical properties	Value	Unit	Test Standard
Relative permittivity, 1MHz	4	-	IEC 60250
Dissipation factor, 1MHz	400	E-4	IEC 60250
Volume resistivity	2E13	Ohm*m	IEC 60093
Electric strength	14	kV/mm	IEC 60243-1
Comparative tracking index	PLC 0	-	IEC 60112

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	200 - 215	°C	-
Zone2 temperature	205 - 230	°C	-
Zone3 temperature	205 - 230	°C	-
Zone4 temperature	205 - 235	°C	-
Nozzle temperature	205 - 235	°C	-
Melt temperature	205 - 235	°C	-
Mold temperature	20 - 55	°C	-
Hot runner temperature	205 - 235	°C	-
Speed	**Value**	**Unit**	**Test Standard**
Injection speed	medium-fast	-	-

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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.

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 420-460(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 flame retardant grades. Up to 25% clean and dry regrind may be used.

Characteristics

Product Categories

Unfilled