

CELANEX® 1401USFDA - PBT

Physical properties	Value	Unit	Test Standard
Density	1310	kg/m³	ISO 1183
Melt flow rate, MFR	54	g/10min	ISO 1133
MFR temperature	250	°C	ISO 1133
MFR load	2.16	kg	ISO 1133
Molding shrinkage, parallel	1.7	%	ISO 294-4, 2577
Molding shrinkage, normal	1.6	%	ISO 294-4, 2577

Mechanical properties	Value	Unit	Test Standard
Tensile modulus	2530	MPa	ISO 527-2/1A
Tensile stress at yield, 50mm/min	58	MPa	ISO 527-2/1A
Tensile nominal strain at break, 50mm/min	25	%	ISO 527-2/1A
Charpy notched impact strength, 23°C	3.1	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	2.9	kJ/m²	ISO 179/1eA
Rockwell hardness (M-Scale)	80	M-Scale	ISO 2039-2

Thermal properties	Value	Unit	Test Standard
Melting temperature, 10°C/min	224	°C	ISO 11357-1/-3
DTUL at 1.8 MPa	55	°C	ISO 75-1, -2
DTUL at 0.45 MPa	128	°C	ISO 75-1, -2
Coeff. of linear therm expansion, parallel	1.1	E-4/°C	ISO 11359-2

Typical injection moulding processing conditions

Pre Drying	Value	Unit	Test Standard
Necessary low maximum residual moisture content	0.02	%	-
Drying time	4	h	-
Drying temperature	120 - 130	°C	-
Temperature	Value	Unit	Test Standard
Hopper temperature	20 - 50	°C	-
Feeding zone temperature	230 - 240	°C	-
Zone1 temperature	230 - 240	°C	-
Zone2 temperature	235 - 250	°C	-
Zone3 temperature	235 - 250	°C	-
Zone4 temperature	240 - 260	°C	-
Nozzle temperature	250 - 260	°C	-
Melt temperature	235 - 260	°C	-
Mold temperature	65 - 93	°C	-
Hot runner temperature	250 - 260	°C	-
Pressure	Value	Unit	Test Standard
Back pressure max.	3.5	bar	-
Speed	Value	Unit	Test Standard
Injection speed	medium-fast	-	-

Other text information

Pre-drying

To avoid hydrolytic degradation during processing, CELANEX® resins have to be dried to a moisture level equal to or less than 0.02% prior to processing. Drying should be done in a dehumidifying hopper dryer capable of dewpoints < -40°F (-40°C). Typical drying conditions are 250°F (121°C) for 4 hours. For subsequent storage of material in the dryer until processed, drying temperature should be lowered to 80-100°C and material should not be kept in the dryer for more than 60 hours.

Injection molding

Injection speed, injection pressure and holding pressure should be optimized for individual article geometry. To avoid material degradation during processing, low back pressure and minimum screw speed should be used. Overheating of material should be avoided. Up to 25% clean and dry



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regrind may be used.

Characteristics

Special Characteristics	Processing
High flow	Injection molding
Product Categories	Delivery Form
Unfilled	Pellets

