

CELANEX® 4022 | PBT | Specialty
Description

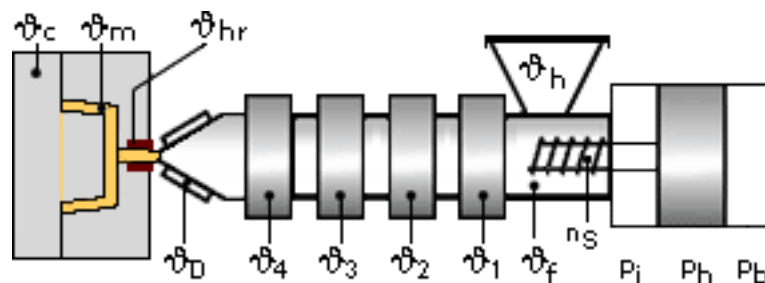
A white PBT resin typically used for applications requiring very opaque parts.

Physical properties	Value	Unit	Test Standard
Density	1460	kg/m ³	ISO 1183
Mold shrinkage - parallel	1.8-2.0	%	ISO 294-4

Mechanical properties	Value	Unit	Test Standard
Tensile modulus (1mm/min)	3200	MPa	ISO 527-2/1A
Tensile stress at break (5mm/min)	58	MPa	ISO 527-2/1A
Tensile strain at break (5mm/min)	8	%	ISO 527-2/1A
Flexural strength (23°C)	86	MPa	ISO 178
Charpy impact strength @ 23°C	33.0	kJ/m ²	ISO 179/1eU
Charpy notched impact strength @ 23°C	3.5	kJ/m ²	ISO 179/1eA
Rockwell hardness	155	M-Scale	ISO 2039-2

Thermal properties	Value	Unit	Test Standard
DTUL @ 1.8 MPa	63	°C	ISO 75-1/-2
thickness tested (h)	0.79	mm	UL94

Electrical properties	Value	Unit	Test Standard
Comparative tracking index CTI	400	-	IEC 60112

Typical injection moulding processing conditions

Temperature:

	$\vartheta_{\text{Manifold}}$	ϑ_{Mold}	ϑ_{Melt}	$\vartheta_{\text{Nozzle}}$	ϑ_{Zone4}	ϑ_{Zone3}	ϑ_{Zone2}	ϑ_{Zone1}	ϑ_{Feed}	$\vartheta_{\text{Hopper}}$
min (°C)	250	65	235	250	240	235	235	230	230	20
max (°C)	260	93	260	260	260	250	250	240	240	50

Injection Molding

Rear Temperature	450-470(230-240)	deg F (deg C)
Center Temperature	460-480(235-250)	deg F (deg C)
Front Temperature	470-500(240-260)	deg F (deg C)
Nozzle Temperature	480-500(250-260)	deg F (deg C)

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Melt Temperature	460-500(235-260)	deg F (deg C)
Mold Temperature	150-200(65-93)	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.

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