



Makrolon DP1-1265

Speciality grades / Optical storage media

Global grade; Developmental product; MFR 73 g/10 min; Optical storage media; Low viscosity; Easy release; Injection molding; Available in natural color only; Digital Versatile Disc (DVD)

ISO Shortname

ISO 7391-PC,DR,46-24-9

Property	Test Condition	Unit	Standard	Value
Rheological properties				
Melt flow rate	300 °C / 1.2 kg	g/(10 min)	ASTM D 1238	73
Mold shrinkage, flow/cross to flow		in/in	ASTM D 955	0.0055
Mechanical properties (23 °C/50 % r.h.)				
Tensile modulus	1 mm/min	lb/in ²	ASTM D 638	350000
Tensile stress at yield	-	lb/in ²	ASTM D 638	9400
Tensile elongation at yield	-	%	ASTM D 638	6.0
Tensile elongation at break	-	%	ASTM D 638	95
Tensile stress at break	-	lb/in ²	ASTM D 638	7200
Izod notched impact strength	73 °F, 0.125 in	ft·lb/in	ASTM D 256	2.0
Flexural modulus	-	lb/in ²	ASTM D 790	340000
Thermal properties				
Deflection temperature under load, Unannealed	264 psi; 0.250 in	°F	ASTM D 648	252
Deflection temperature under load, Unannealed	66 psi; 0.250 in	°F	ASTM D 648	277
Vicat softening temperature	50 N, 50 °C/h	°F	ASTM D 1525	289
Coefficient of linear thermal expansion, flow/cross-flow		in/in/°F	ASTM D 696	3.34E-05
Thermal conductivity		Btu·in/(h·ft ² ·°F)	ASTM C 177	1.39
Specific heat		Btu/(lb·°F)	ASTM D 2766	0.28
Other properties (23 °C)				
Water absorption	73 °F; immersion to saturation	%	ASTM D 570	0.3
Water absorption	73 °F; immersion 24 h	%	ASTM D 570	0.12
Density		lb/in ³	ASTM D 792	0.043
Specific volume		in ³ /lb	ASTM D 792	23.1
Specific gravity		-	ASTM D 792	1.2
Material specific properties				
Refractive index		-	ASTM D 542	1.584
Luminous transmittance (clear transparent materials)	0.125 in	%	ASTM D 1003	89
Haze for transparent materials	0.125 in	%	ASTM D 1003	< 0.5