

CP PRYME® Polycarbonate PC100RUL-18M

Clear

Polycarbonate

Chase Plastics Services Inc.

Message:

CP PRYME® Polycarbonate PC100RUL-18M Clear is a Polycarbonate (PC) product. It is available in North America.

General Information			
UL YellowCard	E313980-101021869		
Appearance	Clear/Transparent		
Forms	Pellets		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.20	g/cm ³	ASTM D792
Specific Volume	0.835	cm ³ /g	ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	18	g/10 min	ASTM D1238
Molding Shrinkage - Flow (3.20 mm)	0.50 to 0.70	%	ASTM D955
Water Absorption			ASTM D570
24 hr	0.15	%	
Equilibrium, 23°C	0.35	%	
Equilibrium, 100°C	0.58	%	
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			ASTM D785
M-Scale	70		
R-Scale	118		
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ¹			ASTM D638
Yield	62.1	MPa	
Break	68.9	MPa	
Tensile Elongation ²			ASTM D638
Yield	7.0	%	
Break	130	%	
Flexural Modulus ³ (50.0 mm Span)	2340	MPa	ASTM D790
Flexural Strength ⁴ (Yield, 50.0 mm Span)	96.5	MPa	ASTM D790
Taber Abrasion Resistance (1000 Cycles, 1000 g, CS-17 Wheel)	10.0	mg	ASTM D1044
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁵			ISO 179/1eA
-30°C	12	kJ/m ²	
23°C	65	kJ/m ²	

Charpy Unnotched Impact Strength ⁶			ISO 179/1eU
-30°C	No Break		
23°C	No Break		
Notched Izod Impact			
23°C	690	J/m	ASTM D256
-30°C ⁷	11	kJ/m²	ISO 180/1A
23°C ⁸	65	kJ/m²	ISO 180/1A
Unnotched Izod Impact			
23°C	3200	J/m	ASTM D256
-30°C ⁹	No Break		ISO 180/1U
23°C ¹⁰	No Break		ISO 180/1U
Instrumented Dart Impact (23°C, Total Energy)	62.1	J	ASTM D3763
Gardner Impact (23°C)	169	J	ASTM D3029
Tensile Impact Strength ¹¹	546	kJ/m²	ASTM D1822
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed, 6.40 mm	138	°C	
1.8 MPa, Unannealed, 6.40 mm	129	°C	
Vicat Softening Temperature	154	°C	ASTM D1525 ¹²
CLTE - Flow (-40 to 95°C)	6.8E-5	cm/cm/°C	ASTM E831
Specific Heat	1260	J/kg/°C	ASTM C351
Thermal Conductivity	0.25	W/m/K	ASTM C177
Optical	Nominal Value	Unit	Test Method
Refractive Index	1.586		ASTM D542
Transmittance (2540 μm)	88.0	%	ASTM D1003
Haze (2540 μm)	1.0	%	ASTM D1003
NOTE			
1.	Type I, 51 mm/min		
2.	Type I, 51 mm/min		
3.	1.3 mm/min		
4.	1.3 mm/min		
5.	80*10*3 sp=62mm		
6.	80*10*3 sp=62mm		
7.	80*10*3		
8.	80*10*3		
9.	80*10*3		
10.	80*10*3		
11.	Type S		
12.	Rate B (120°C/h), Loading 2 (50 N)		

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