



POLYLAC® PA-777E

CHI MEI CORPORATION - Acrylonitrile Butadiene Styrene

Sunday, November 3, 2019

General Information

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• High Heat Resistance		
RoHS Compliance	• RoHS Compliant		
Resin ID (ISO 1043)	• >ABS<		

ASTM & ISO Properties¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity ²	1.07		ASTM D792
Density (73°F)	1.07	g/cm ³	ISO 1183
Melt Mass-Flow Rate (220°C/10.0 kg)	4.0	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (220°C/10.0 kg)	4.50	cm ³ /10min	ISO 1133
Molding Shrinkage	0.30 to 0.60	%	ISO 294-4

Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ³ (Yield)	6380	psi	ASTM D638
Tensile Stress (Yield)	6530	psi	ISO 527-2/50
Tensile Stress (Break)	4640	psi	ISO 527-2/50
Tensile Elongation ³ (Break)	10	%	ASTM D638
Tensile Strain (Break)	29	%	ISO 527-2/50
Flexural Modulus ⁴	320000	psi	ASTM D790
Flexural Modulus ⁵	334000	psi	ISO 178
Flexural Strength ⁴	9900	psi	ASTM D790
Flexural Stress ⁵	10700	psi	ISO 178

Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179
-22°F	2.9	ft·lb/in ²	
73°F	6.2	ft·lb/in ²	
Notched Izod Impact			ASTM D256
73°F, 0.126 in	2.2	ft·lb/in	
73°F, 0.252 in	2.0	ft·lb/in	
Notched Izod Impact Strength			ISO 180/1A
-22°F	2.9	ft·lb/in ²	
73°F	5.7	ft·lb/in ²	

Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	115		ASTM D785

Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
264 psi, Unannealed	228	°F	
Heat Deflection Temperature (264 psi, Unannealed)	214	°F	ISO 75-2/A
Deflection Temperature Under Load (264 psi, Annealed)	248	°F	ASTM D648

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Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (264 psi, Annealed)	250	°F	ISO 75-2/A
Vicat Softening Temperature	264	°F	ASTM D1525 ⁶
Vicat Softening Temperature			
--	264	°F	ISO 306/A50
--	250	°F	ISO 306/B50
CLTE - Flow	4.6E-5	in/in/°F	ISO 11359-2
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.06 in)	HB		UL 94

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	212 to 230	°F
Drying Time	3.0	hr
Rear Temperature	428 to 482	°F
Middle Temperature	464 to 518	°F
Front Temperature	464 to 518	°F
Mold Temperature	104 to 176	°F
Injection Pressure	711 to 996	psi
Holding Pressure	569 to 853	psi
Back Pressure	71.1 to 213	psi

Notes

¹ Typical properties: these are not to be construed as specifications.

² 23°C

³ 0.24 in/min

⁴ 0.11 in/min

⁵ 0.079 in/min

⁶ Rate A (50°C/h), Loading 1 (10 N)