

**POLYLAC® PA-757**  
**CHI MEI CORPORATION - Acrylonitrile Butadiene Styrene**

Unit System:

**Actions**

[Legend \(Open\)](#)



**General Information**

**General**

Material Status	<ul style="list-style-type: none"> <li>Commercial: Active</li> </ul>
Availability	<ul style="list-style-type: none"> <li>Africa</li> <li>Asia</li> <li>Australia</li> <li>Europe</li> <li>Latin America</li> <li>Middle East</li> <li>North America</li> <li>Pacific Rim</li> <li>South America</li> </ul>
Test Standards Available	<ul style="list-style-type: none"> <li>ASTM</li> <li>DIN</li> <li>ISO</li> </ul>
Features	<ul style="list-style-type: none"> <li>General Purpose</li> <li>Gloss, High</li> <li>Impact Resistance, Medium</li> <li>Rigidity, High</li> <li>RoHS Compliant</li> </ul>
Agency Ratings	<ul style="list-style-type: none"> <li>RoHS Compliant</li> </ul>
Forms	<ul style="list-style-type: none"> <li>Pellets</li> </ul>
Processing Method	<ul style="list-style-type: none"> <li>Injection Molding</li> </ul>

**ASTM and ISO Properties <sup>1</sup>**

Physical	Nominal Value	Unit	Test Method
Density -Specific Gravity	1.05	sp gr 23/23°C	ASTM D792
Density	1.05	g/cm <sup>3</sup>	ISO 1183
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	1.8	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (220°C/10.0 kg)	1.16	in <sup>3</sup> /10min	ISO 1133
Mold Shrink, Linear-Flow (0.125 in)	0.0030 to 0.0070	in/in	ASTM D955
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (73 °F)	425000	psi	ASTM D638
Tensile Strength @ Yield (73 °F)	6800	psi	ASTM D638
Tensile Stress at Yield <sup>2</sup>	7830	psi	ISO 527-1, -2
Tensile Stress at Break <sup>2</sup>	5370	psi	ISO 527-1, -2
Tensile Strain at Yield <sup>2</sup>	20	%	ISO 527-1, -2
Tensile Elongation @ Brk (73 °F)	20	%	ASTM D638
Flexural Modulus (73 °F)	380000	psi	ASTM D790
Flexural Modulus <sup>3</sup>	319000	psi	ISO 178
Flexural Strength <sup>3</sup>	11000	psi	ISO 178
Flexural Strength @ Yield (73 °F)	11200	psi	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength	7.14	ft-lb/in <sup>2</sup>	ISO 179
Charpy Unnotched Impact Strength	No Break	ft-lb/in <sup>2</sup>	ISO 179
Notched Izod Impact			ASTM D256
(73 °F, 0.125 in)	3.70	ft-lb/in	
(73 °F, 0.250 in)	3.30	ft-lb/in	
Notched Izod Impact Strength	6.66	ft-lb/in <sup>2</sup>	ISO 180
Unnotched Izod Impact Strength	No Break	ft-lb/in <sup>2</sup>	ISO 180
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	116		ASTM D785
Thermal	Nominal Value	Unit	Test Method
DTUL @66psi - Unannealed	208	°F	ASTM D648
DTUL @264psi - Unannealed	190	°F	ASTM D648
HDT A (1.80 MPa) Unannealed	180	°F	ISO 75A-1, -2
DTUL @264psi - Annealed	210	°F	ASTM D648
HDT A (1.80 MPa) Annealed	208	°F	ISO 75A-1, -2
Vicat Softening Point	221	°F	ASTM D1525
Vicat Softening Temperature			ISO 306
(A120 (120°C/h 10N))	221	°F	
(A50 (50°C/h 10N))	219	°F	
(B120 (120°C/h 50N))	210	°F	
(B50 (50°C/h 50N))	208	°F	
CLTE, Flow	0.000052	in/in/°F	ASTM D696
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.0E+15	ohm-cm	ASTM D257
Arc Resistance (PLC)	PLC 1		ASTM D495
Flammability	Nominal Value	Unit	Test Method

Flame Rating - UL (0.0591 in) (0.118 in)		HB HB	UL 94
UL File Number	E56070		
<b>UL 746</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
RTI Str			UL 746
(0.0591 in)	185	°F	
(0.118 in)	185	°F	
RTI Imp			UL 746
(0.0591 in)	176	°F	
(0.118 in)	176	°F	
RTI Elec			UL 746
(0.0591 in)	185	°F	
(0.118 in)	185	°F	
Comparative Tracking Index (CTI) (PLC)	PLC 0		UL 746
High Voltage Arc Tracking Rate (HVTR) (PLC)	PLC 1		UL 746
Hot-wire Ignition (HWI) (PLC)			UL 746
(0.0591 in)	PLC 4		
(0.118 in)	PLC 3		
High Amp Arc Ignition (HAI) (PLC)			UL 746
(0.0591 in)	PLC 0		
(0.118 in)	PLC 0		

#### Additional Properties

Melt Flow Rate, ASTM D-1238, Condition G: 1.8 g/10 min  
Volume Resistivity, ASTM D257: > 1E 15 ohm-cm  
Impact Flexural Test, ISO 179/2C, Notched: 11 kJ/m<sup>2</sup>  
Impact Flexural Test, ISO 179/2D, Unnotched: No Break  
Vicat Softening Temp, DIN 53460, 50°C/hr ; 1 kg: 104°C  
Vicat Softening Temp, DIN 53460, 50°C/hr ; 5 kg: 98°C  
Vicat Softening Temp, DIN 53460, 120°C/hr ; 1 kg: 105°C  
Vicat Softening Temp, DIN 53460, 120°C/hr ; 5 kg: 99°C  
DTUL @ 1.80 MPa, DIN 53461, Unannealed: 82°C  
DTUL @ 1.80 MPa, DIN 53461, Annealed: 98°C  
Impact Flexural Test, DIN 53453, Notched: 11 kJ/m<sup>2</sup>  
Impact Flexural Test, DIN 53453, Unnotched: No Break  
Tensile Strength @ Yield, DIN 53455, 50 mm/min: 54 MPa  
Tensile Strength @ Break, DIN 53455, 50 mm/min: 37 MPa  
Tensile Elongation, DIN 53455, 50 mm/min: 20%  
Flexural Strength, DIN 53452, 2 mm/min: 76 MPa  
Flexural Modulus, DIN 53452, 2 mm/min: 2.2 GPa  
Mass Density, DIN 53479-A, 23°C: 1.05 g/cm<sup>3</sup>

#### Processing Information

Injection	Nominal Value	Unit
Drying Temperature	175 to 185	°F
Drying Time	3.0	hr
Suggested Max Moisture	0.10	%
Suggested Shot Size	40 to 80	%
Suggested Max Regrind	20	%
Rear Temperature	355 to 390	°F
Middle Temperature	390 to 430	°F
Front Temperature	420 to 455	°F
Nozzle Temperature	410 to 445	°F
Processing (Melt) Temp	465	°F
Mold Temperature	120 to 140	°F
Injection Pressure	850 to 1000	psi
Injection Rate	Slow-Moderate	
Holding Pressure	710 to 850	psi
Back Pressure	70.0 to 140	psi
Screw Speed	50 to 90	rpm

#### Notes

- 1 Typical properties: these are not to be construed as specifications.
- 2 2.0 in/min
- 3 0.079 in/min