

POLYLAC® PA-707
Acrylonitrile Butadiene Styrene
 CHI MEI CORPORATION [Web](#)



Prospector

General			
Material Status	● Commercial: Active		
Literature ¹	● Approvals Document - UL (English)	● Technical Datasheet (English)	● Approvals Document - RoHS (English)
	● Technical Datasheet - ISO data (English)	● Processing (English)	
Availability	● Africa & Middle East	● Europe	● North America
	● Asia Pacific	● Latin America	● South America
Features	● General Purpose	● High Gloss	● High Rigidity
RoHS Compliance	● RoHS Compliant		
Forms	● Pellets		
Processing Method	● Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.06		ASTM D792
--	1.06	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	1.9	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (220°C/10.0 kg)	1.40	in ³ /10min	ISO 1133
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale, 0.500 in)			
	116		ASTM D785
Ball Indentation Hardness (H 358/30)			
	16700	psi	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			
Yield, 0.125 in ²	7090	psi	ASTM D638
Yield	8120	psi	ISO 527-2/50
Break	5510	psi	ISO 527-2/50
Tensile Elongation			
Break, 0.125 in ²	15	%	ASTM D638
Break	20	%	ISO 527-2/50
Flexural Modulus			
0.250 in ³	410000	psi	ASTM D790
-- ⁴	334000	psi	ISO 178
Flexural Strength			
0.250 in ³	12200	psi	ASTM D790
-- ⁴	11500	psi	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			
	5.23	ft·lb/in ²	ISO 179
Charpy Unnotched Impact Strength			
	No Break		ISO 179
Notched Izod Impact			
73°F, 0.125 in	2.60	ft·lb/in	ASTM D256
73°F, 0.250 in	2.60	ft·lb/in	ASTM D256
--	5.23	ft·lb/in ²	ISO 180/1A
Unnotched Izod Impact Strength			
	42.8	ft·lb/in ²	ISO 180/1U
Thermal	Nominal Value	Unit	Test Method

Deflection Temperature Under Load		
264 psi, Unannealed, 0.250 in	190 °F	ASTM D648
264 psi, Unannealed	190 °F	ISO 75-2/A
264 psi, Annealed, 0.250 in	210 °F	ASTM D648
264 psi, Annealed	208 °F	ISO 75-2/A
Vicat Softening Temperature		
--	221 °F	ASTM D1525 ⁵
--	219 °F	ISO 306/A50
--	223 °F	ISO 306/A120
--	212 °F	ISO 306/B50
--	216 °F	ISO 306/B120
Electrical	Nominal Value	Unit
Arc Resistance (PLC)	PLC 6	ASTM D495
Flammability	Nominal Value	Unit
Flame Rating - UL		UL 94
0.0591 in, All colors	HB	
0.118 in	HB	
UL File Number	E56070	
UL 746	Nominal Value	Unit
RTI Str		UL 746
0.0591 in	140 °F	
0.118 in	140 °F	
RTI Imp		UL 746
0.0591 in	140 °F	
0.118 in	140 °F	
RTI Elec		UL 746
0.0591 in	140 °F	
0.118 in	140 °F	
Comparative Tracking Index (CTI) (PLC)	PLC 0	UL 746
High Voltage Arc Tracking Rate (HVTR) (PLC)	PLC 2	UL 746
Hot-wire Ignition (HWI) (PLC)		UL 746
0.0591 in	PLC 4	
0.118 in	PLC 4	
High Amp Arc Ignition (HAI) (PLC)		UL 746
0.0591 in	PLC 0	
0.118 in	PLC 0	
Additional Information		
Impact Flexural Test, ISO 179/2C, Notched: 9 kJ/m ²		
Impact Flexural Test, ISO 179/2D, Unnotched: No Break		
Injection	Nominal Value	Unit
Drying Temperature	176	°F
Drying Time	2.0 to 3.0	hr
Rear Temperature	356 to 428	°F
Middle Temperature	374 to 446	°F
Nozzle Temperature	374 to 446	°F
Mold Temperature	86.0 to 158	°F
Notes		
¹ These links provide you with access to supplier literature. We work hard to keep them up to date, however you may find the most current literature from the supplier.		
² 0.24 in/min		
³ 0.11 in/min		
⁴ 0.079 in/min		
⁵ Rate A (50°C/h)		



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The information presented on this datasheet was acquired by IDES from the producer of the material. IDES makes substantial efforts to assure the accuracy of this data. However, IDES assumes no responsibility for the data values and strongly encourages that upon final material selection, data points are validated with the material supplier.

Revision History

Added to Prospector: November, 1995
Last Updated: 1/7/2009

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Component - Plastics

E56070

CHI MEI CORPORATION

59-1 SAN CHIA, JEN TE, TAINAN HSIEN 717 TW

PA-707(+)**Acrylonitrile Butadiene Styrene (ABS), "Polylac", furnished as pellets**

Color	Min Thk (mm)	Flame Class	HWI	HAI	RTI		RTI Str
					Elec	Imp	
ALL	1.5	HB	4	0	60	60	60
	3.0	HB	4	0	60	60	60

Comparative Tracking Index (CTI): **0**

Dimensional Stability (%): -

High-Voltage Arc Tracking Rate
(HVTR): **2**High Volt, Low Current Arc Resis (D495): **6**

Dielectric Strength (kV/mm): -

Volume Resistivity (10^x ohm-cm) : -**(+) - Optional prefix or suffix; may be used to denote usage of 0-0.5 percent acid scavengers.**

ANSI/UL 94 small-scale test data does not pertain to building materials, furnishings and related contents. ANSI/UL 94 small-scale test data is intended solely for determining the flammability of plastic materials used in the components and parts of end-product devices and appliances, where the acceptability of the combination is determined by UL.

Report Date:1983-06-23

Last Revised:2007-09-20

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**IEC and ISO Test Methods**

Test Name	Test Method	Units	Thickness	
			Tested (mm)	Value
Flammability	IEC 60695-11-10	Class (color)	1.5	HB75 (ALL)
			3.0	HB40 (ALL)
Glow-Wire Flammability (GWFI)	IEC 60695-2-12	C	-	-
Glow-Wire Ignition (GWIT)	IEC 60695-2-13	C	-	-
IEC Comparative Tracking Index	IEC 60112	Volts (Max)	-	-
IEC Ball Pressure	IEC 60695-10-2	C	-	-
ISO Heat Deflection (1.80 MPa)	ISO 75-2	C	-	-
ISO Tensile Strength	ISO 527-2	MPa	-	-
ISO Flexural Strength	ISO 178	MPa	-	-
ISO Tensile Impact	ISO 8256	kJ/m ²	-	-
ISO Izod Impact	ISO 180	kJ/m ²	-	-
ISO Charpy Impact	ISO 179-2	kJ/m ²	-	-

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