POLYLAC® PA-746

Acrylonitrile Butadiene Styrene **CHI MEI CORPORATION**



Technical Data

Product Description

POLYLAC® PA-746 is an Acrylonitrile Butadiene Styrene (ABS) product. It is available in Africa & Middle East, Asia Pacific, Europe, Latin America, or North America.

Characteristics include:

- Flame Rated
- RoHS Compliant
- High Flow
- Impact Resistant

Impact Resistant			
General			
Material Status	Commercial: Active		
Literature ¹	 Processing (English) Technical Datasheet - AST Technical Datasheet - AST Technical Datasheet - ISO 	M (English)	
UL Yellow Card ²	• E56070-245714		
Search for UL Yellow Card	CHI MEI CORPORATIONPOLYLAC®		
Availability	Africa & Middle EastAsia Pacific	EuropeLatin America	North America
Features	High Flow	 Medium Impact Resista 	ance
RoHS Compliance	 RoHS Compliant 		
Resin ID (ISO 1043)	>ABS		

Physical	Nominal Value Unit	Test Method
Density / Specific Gravity		
4	1.03 g/cm ³	ASTM D792
23°C	1.03 g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	3.0 g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (220°C/10.0 kg)	29 cm³/10min	ISO 1133
Molding Shrinkage	0.40 to 0.70 %	ISO 294-4
Mechanical	Nominal Value Unit	Test Method
Tensile Strength		
Yield ⁵	40.6 MPa	ASTM D638
Yield	39.0 MPa	ISO 527-2/50
Break	29.0 MPa	ISO 527-2/50
Tensile Elongation		
Break ⁵	30 %	ASTM D638
Break	30 %	ISO 527-2/50
Flexural Modulus		
6	2140 MPa	ASTM D790
7	1800 MPa	ISO 178
Flexural Strength		
6	63.4 MPa	ASTM D790
7	60.0 MPa	ISO 178



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Charpy Notched Impact Strength ISO 179 -30°C 14 kJ/m² 23°C 30 kJ/m² Notched Izod Impact 320 J/m 23°C, 3.20 mm 320 J/m ASTM D256 23°C, 6.40 mm 260 J/m ASTM D256 -30°C 12 kJ/m² ISO 180/1A 23°C, 6.40 mm 28 kJ/m² ISO 180/1A 23°C 28 kJ/m² ISO 180/1A 1ardness Nominal Value Unit Test Method Rockwell Hardness (R-Scale) 118 ASTM D785 Thermal Nominal Value Unit Test Method Deflection Temperature Under Load 85.0 °C ASTM D648 1.8 MPa, Unannealed 85.0 °C ASTM D648 1.8 MPa, Unannealed 82.0 °C ISO 75-2/A 1.8 MPa, Annealed 96.0 °C ISO 75-2/A Vicat Softening Temperature 105 °C ASTM D1525 ° - 94.0 °C ISO 306/B50 - 103 °C ISO 306/B50 - 9.2E-5 cm/cm/°C ISO 11359-2 Clammability Nominal		N	T (14 ())	
-30°C	Impact	Nominal Value Unit	Test Method	
Notched Izod Impact S2°C, 3.20 mm 320 J/m ASTM D256 23°C, 3.20 mm 260 J/m ASTM D256 23°C, 6.40 mm 260 J/m ASTM D256 23°C, 6.40 mm 260 J/m ASTM D256 23°C 12 kJ/m² ISO 180/1A 23°C 28 kJ/m² ISO 180/1A 24 kJ/m² ISO 180/1A 24 kJ/m² ISO 180/1A 25 kJ/m² ISO 306/1A 25 kJ/m²			ISO 179	
Notched Izod Impact 23°C, 3.20 mm 320 J/m ASTM D256 23°C, 6.40 mm 260 J/m ASTM D256 23°C, 6.40 mm 260 J/m ASTM D256 23°C, 6.40 mm 260 J/m ASTM D256 23°C 28 kJ/m² ISO 180/1A 23°C ISO 7552 ASTM D785 28 kJ/m² ISO 180/1A 28 kJ/m²				
23°C, 3.20 mm 320 J/m ASTM D256 23°C, 6.40 mm 260 J/m ASTM D256 -30°C 12 kJ/m² ISO 180/1A 23°C 28 kJ/m² ISO 180/1A 23°C 28 kJ/m² ISO 180/1A 4ardness Nominal Value Unit Test Method Rockwell Hardness (R-Scale) 118 ASTM D785 Thermal Nominal Value Unit Test Method Deflection Temperature Under Load 85.0 °C ASTM D648 1.8 MPa, Unannealed 85.0 °C ASTM D648 1.8 MPa, Unannealed 82.0 °C ISO 75-2/A 1.8 MPa, Annealed 95.0 °C ASTM D648 1.8 MPa, Annealed 95.0 °C ASTM D1525 ° 105 °C ASTM D1525 ° 94.0 °C ISO 306/B50 103 °C ISO 306/B50 103 °C ISO 306/B50 103 °C ISO 306/B50 103 °C ISO 306/B50 100 °C ISO 306/B50	23°C	30 kJ/m²		
23°C, 6.40 mm 260 J/m ASTM D256 -30°C 12 kJ/m² ISO 180/1A 23°C 28 kJ/m² ISO 180/1A Bardness Nominal Value Unit Test Method Rockwell Hardness (R-Scale) 118 ASTM D785 Inermal Nominal Value Unit Test Method Deflection Temperature Under Load 85.0 °C ASTM D648 1.8 MPa, Unannealed 85.0 °C ASTM D648 1.8 MPa, Annealed 95.0 °C ASTM D648 1.8 MPa, Annealed 95.0 °C ASTM D648 1.8 MPa, Annealed 96.0 °C ISO 75-2/A Vicat Softening Temperature 96.0 °C ISO 306/B50 - 105 °C ASTM D1525 °C - 94.0 °C ISO 306/B50 - 92.E-5 cm/cm/°C ISO 306/B50 - 103 °C ISO 306/B50 - 92.E-5 cm/cm/°C ISO 11359-2 Exammability Nominal Value Unit Test Method Injection Nominal Value Unit Test Method Drying Temperature	·			
12 kJ/m² 150 180/1A 23°C 28 kJ/m² 150 180/1A 23°C 28 kJ/m² 150 180/1A 24 kJ/m² 150 180/1A 25	23°C, 3.20 mm	320 J/m	ASTM D256	
23°C 28 kJ/m² ISO 180/1A Bardness Nominal Value Unit Test Method Rockwell Hardness (R-Scale) 118 ASTM D785 Thermal Nominal Value Unit Test Method Deflection Temperature Under Load 85.0 °C ASTM D648 1.8 MPa, Unannealed 85.0 °C ASTM D648 1.8 MPa, Unannealed 82.0 °C ISO 75-2/A 1.8 MPa, Annealed 95.0 °C ASTM D648 1.8 MPa, Annealed 96.0 °C ISO 75-2/A Vicat Softening Temperature Test Method - 105 °C ASTM D1525 °C - 94.0 °C ISO 306/A50 - 103 °C ISO 306/A50 CLTE - Flow 9.2E-5 cm/cm/°C ISO 11359-2 Islammability Nominal Value Unit Test Method Flame Rating (1.8 mm) HB UL 94 Drying Temperature 80 to 85 °C Test Method Drying Time 2.0 to 3.0 hr Rear Temperature 180 to 220 °C Middle Temperature 190 to 230 °C Test Method	23°C, 6.40 mm	260 J/m	ASTM D256	
Mardness Nominal Value Unit Test Method Rockwell Hardness (R-Scale) 118 ASTM D785 Thermal Nominal Value Unit Test Method Deflection Temperature Under Load 85.0 °C ASTM D648 1.8 MPa, Unannealed 82.0 °C ISO 75-2/A 1.8 MPa, Annealed 95.0 °C ASTM D648 1.8 MPa, Annealed 96.0 °C ISO 75-2/A Vicat Softening Temperature 105 °C ASTM D1525 °C 94.0 °C ISO 306/B50 103 °C ISO 306/A50 CLTE - Flow 9.2E-5 cm/cm/°C ISO 11359-2 Elammability Nominal Value Unit Test Method Flame Rating (1.8 mm) HB UL 94 Injection Nominal Value Unit Test Method Drying Temperature 80 to 85 °C Test Method Drying Time 2.0 to 3.0 hr Test Method Rear Temperature 180 to 220 °C Test Method Middle Temperature 190 to 230 °C Test Method	-30°C	12 kJ/m²	ISO 180/1A	
Rockwell Hardness (R-Scale) 118 ASTM D785 Thermal Nominal Value Unit Test Method Deflection Temperature Under Load 85.0 °C ASTM D648 1.8 MPa, Unannealed 82.0 °C ISO 75-2/A 1.8 MPa, Annealed 95.0 °C ASTM D648 1.8 MPa, Annealed 96.0 °C ISO 75-2/A Vicat Softening Temperature 105 °C ASTM D1525 8 94.0 °C ISO 306/B50 103 °C ISO 306/B50 CLTE - Flow 9.2E-5 cm/cm/°C ISO 11359-2 Elammability Nominal Value Unit Test Method Flame Rating (1.8 mm) HB UL 94 Injection Nominal Value Unit Test Method Drying Temperature 80 to 85 °C Drying Time 2.0 to 3.0 hr Rear Temperature 180 to 220 °C Middle Temperature 190 to 230 °C	23°C	28 kJ/m²	ISO 180/1A	
Thermal Nominal Value Unit Test Method Deflection Temperature Under Load 85.0 °C ASTM D648 1.8 MPa, Unannealed 82.0 °C ISO 75-2/A 1.8 MPa, Annealed 95.0 °C ASTM D648 1.8 MPa, Annealed 96.0 °C ISO 75-2/A Vicat Softening Temperature TO5 °C ASTM D1525 8 94.0 °C ISO 306/B50 94.0 °C ISO 306/B50 103 °C ISO 306/A50 CLTE - Flow 9.2E-5 cm/cm/°C ISO 11359-2 Elammability Nominal Value Unit Test Method Flame Rating (1.8 mm) HB UL 94 Drying Temperature 80 to 85 °C Drying Time 2.0 to 3.0 hr Rear Temperature 180 to 220 °C Middle Temperature 190 to 230 °C	Hardness	Nominal Value Unit	Test Method	
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1.8 MPa, Unannealed 85.0 °C ASTM D648 1.8 MPa, Unannealed 82.0 °C ISO 75-2/A 1.8 MPa, Annealed 95.0 °C ASTM D648 1.8 MPa, Annealed 96.0 °C ISO 75-2/A Vicat Softening Temperature 105 °C ASTM D1525 8 94.0 °C ISO 306/B50 103 °C ISO 306/A50 CLTE - Flow 9.2E-5 cm/cm/°C ISO 11359-2 Clammability Nominal Value Unit Test Method Flame Rating (1.8 mm) HB UL 94 Injection Nominal Value Unit Test Method Drying Temperature 80 to 85 °C C Drying Time 2.0 to 3.0 hr Test Method Rear Temperature 180 to 220 °C Test Method Middle Temperature 190 to 230 °C Test Method	Thermal	Nominal Value Unit	Test Method	
1.8 MPa, Unannealed 82.0 °C ISO 75-2/A 1.8 MPa, Annealed 95.0 °C ASTM D648 1.8 MPa, Annealed 96.0 °C ISO 75-2/A Vicat Softening Temperature 105 °C ASTM D1525 °C 94.0 °C ISO 306/B50 103 °C ISO 306/A50 CLTE - Flow 9.2E-5 cm/cm/°C ISO 11359-2 Clammability Nominal Value Unit Test Method Flame Rating (1.8 mm) HB UL 94 Injection Nominal Value Unit Value Unit Drying Temperature 80 to 85 °C Value Unit Drying Time 2.0 to 3.0 hr Rear Temperature 180 to 220 °C Middle Temperature 190 to 230 °C	Deflection Temperature Under Load			
1.8 MPa, Annealed 95.0 °C ASTM D648 1.8 MPa, Annealed 96.0 °C ISO 75-2/A Vicat Softening Temperature 105 °C ASTM D1525 8 94.0 °C ISO 306/B50 103 °C ISO 306/A50 CLTE - Flow 9.2E-5 cm/cm/°C ISO 11359-2 Iammability Nominal Value Unit Test Method Flame Rating (1.8 mm) HB UL 94 Nominal Value Unit Drying Temperature 80 to 85 °C Drying Time 2.0 to 3.0 hr Rear Temperature 180 to 220 °C Middle Temperature 190 to 230 °C	1.8 MPa, Unannealed	85.0 °C	ASTM D648	
1.8 MPa, Annealed 96.0 °C ISO 75-2/A Vicat Softening Temperature 105 °C ASTM D1525 8 94.0 °C ISO 306/B50 103 °C ISO 306/A50 CLTE - Flow 9.2E-5 cm/cm/°C ISO 11359-2 Flammability Nominal Value Unit Test Method Flame Rating (1.8 mm) HB UL 94 Nigetion Nominal Value Unit Drying Temperature 80 to 85 °C Drying Time 2.0 to 3.0 hr Rear Temperature 180 to 220 °C Middle Temperature 190 to 230 °C	1.8 MPa, Unannealed	82.0 °C	ISO 75-2/A	
Vicat Softening Temperature 105 °C ASTM D1525 8 94.0 °C ISO 306/B50 103 °C ISO 306/A50 CLTE - Flow 9.2E-5 cm/cm/°C ISO 11359-2 Elammability Nominal Value Unit Test Method Flame Rating (1.8 mm) HB UL 94 njection Nominal Value Unit Drying Temperature 80 to 85 °C Drying Time 2.0 to 3.0 hr Rear Temperature 180 to 220 °C Middle Temperature 190 to 230 °C	1.8 MPa, Annealed	95.0 °C	ASTM D648	
105 °C	1.8 MPa, Annealed	96.0 °C	ISO 75-2/A	
94.0 °C ISO 306/B50 103 °C ISO 306/A50 CLTE - Flow 9.2E-5 cm/cm/°C ISO 11359-2 Flammability Nominal Value Unit Test Method Flame Rating (1.8 mm) HB UL 94 Injection Nominal Value Unit Drying Temperature 80 to 85 °C Drying Time 2.0 to 3.0 hr Rear Temperature 180 to 220 °C Middle Temperature 190 to 230 °C	Vicat Softening Temperature			
103 °C ISO 306/A50 CLTE - Flow 9.2E-5 cm/cm/°C ISO 11359-2 Flammability Nominal Value Unit Test Method Flame Rating (1.8 mm) Nominal Value Unit UL 94 Drying Temperature 80 to 85 °C Drying Time 2.0 to 3.0 hr Rear Temperature 180 to 220 °C Middle Temperature 190 to 230 °C		105°C	ASTM D1525 8	
CLTE - Flow 9.2E-5 cm/cm/°C ISO 11359-2 Flammability Nominal Value Unit Test Method Flame Rating (1.8 mm) HB UL 94 Injection Nominal Value Unit Drying Temperature 80 to 85 °C Drying Time 2.0 to 3.0 hr Rear Temperature 180 to 220 °C Middle Temperature 190 to 230 °C		94.0°C	ISO 306/B50	
Flammability Flame Rating (1.8 mm) Nominal Value Unit HB UL 94 Nominal Value Unit Drying Temperature 80 to 85 °C Drying Time 2.0 to 3.0 hr Rear Temperature 180 to 220 °C Middle Temperature 190 to 230 °C		103 °C	ISO 306/A50	
Flame Rating (1.8 mm) HB UL 94 njection Nominal Value Unit Drying Temperature 80 to 85 °C Drying Time 2.0 to 3.0 hr Rear Temperature 180 to 220 °C Middle Temperature 190 to 230 °C	CLTE - Flow	9.2E-5 cm/cm/°C	ISO 11359-2	
njection Nominal Value Unit Drying Temperature 80 to 85 °C Drying Time 2.0 to 3.0 hr Rear Temperature 180 to 220 °C Middle Temperature 190 to 230 °C	Flammability	Nominal Value Unit	Test Method	
Drying Temperature80 to 85 °CDrying Time2.0 to 3.0 hrRear Temperature180 to 220 °CMiddle Temperature190 to 230 °C	Flame Rating (1.8 mm)	НВ	UL 94	
Drying Time 2.0 to 3.0 hr Rear Temperature 180 to 220 °C Middle Temperature 190 to 230 °C	Injection	Nominal Value Unit		
Rear Temperature 180 to 220 °C Middle Temperature 190 to 230 °C	Drying Temperature	80 to 85 °C	80 to 85 °C	
Middle Temperature 190 to 230 °C	Drying Time	2.0 to 3.0 hr		
· · · · · · · · · · · · · · · · · · ·	Rear Temperature	180 to 220 °C		
Front Temperature 190 to 230 °C	Middle Temperature	190 to 230 °C		
	Front Temperature	190 to 230 °C		

Notes

30 to 60 °C

Mold Temperature

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 A UL Yellow Card contains UL-verified flammability and electrical characteristics. UL Prospector continually works to link Yellow Cards to individual plastic materials in Prospector, however this list may not include all of the appropriate links. It is important that you verify the association between these Yellow Cards and the plastic material found in Prospector. For a complete listing of Yellow Cards, visit the UL Yellow Card Search.

³ Typical properties: these are not to be construed as specifications.

⁴ 23°C

⁵ 6.0 mm/min

⁶ 2.8 mm/min

⁷ 2.0 mm/min

⁸ Rate A (50°C/h), Loading 1 (10 N)

CHI MEI CORPORATION



Where to Buy

Supplier

CHI MEI CORPORATION

Tainan County, Tainan County Taiwan Telephone: +886-6-266-3000 Web: http://www.chimeicorp.com/

Distributor

AMP FRANCE

Telephone: +33-3-8920-1390 Web: http://www.amp.fr/ Availability: France

AMP TUNISIA

Telephone: +216-52-27-21-73 Web: http://www.amp.fr/ Availability: Tunisia

Calsak Polymers

Telephone: 800-743-2595 Web: http://www.calsak.com/ Availability: North America

Distrupol Ltd

Distrupol Ltd is a Pan European distribution company. Contact Distrupol Ltd for availability of individual products by country.

Telephone: 08452003040 Web: http://www.distrupol.com/ Availability: Ireland, United Kingdom

Entec Polymers

Telephone: 833-319-0299

Web: https://www.entecpolymers.com/?utm_source=ul&utm_medium=paid%20association&utm_campaign=entec%20%7C%20entec%201&utm_term=ul%20%7C%20where%20to%20buy

Availability: North America

M. Holland Canada Company Telephone: 905-665-1168 Web: http://www.mholland.com/

Availability: Canada

M. Holland Company

Telephone: 855-497-1403 Web: http://www.mholland.com/ Availability: Mexico, United States

The Materials Group

Telephone: 616-863-6046

Web: http://thematerialsgroup.com/

Availability: North America



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