POLYLAC® PA-747S

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
RoHS Compliance	• RoHS Compliant		
Processing Method	• Extrusion		
Resin ID (ISO 1043)	• >ABS<		

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity [2]	1.03		ASTM D792
Density (73°F)	1.04	g/cm³	ISO 1183
Melt Mass-Flow Rate (200°C/5.0 kg)	0.50	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (220°C/10.0 kg)	2.50	cm³/10min	ISO 1133
Molding Shrinkage	0.40 to 0.70	%	ISO 294-4
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength [3] (Yield)	5530	psi	ASTM D638
Tensile Stress (Yield)	5950	psi	ISO 527-2/50
Tensile Stress (Break)	4350	psi	ISO 527-2/50
Tensile Elongation [3] (Break)	40	%	ASTM D638
Tensile Strain (Break)	25	%	ISO 527-2/50
Flexural Modulus [4]	300000	psi	ASTM D790
Flexural Modulus [5]	247000	psi	ISO 178
Flexural Strength [4]	8800	psi	ASTM D790
Flexural Stress [5]	8850	psi	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength			ISO 179
-22°F	13	ft·lb/in²	
73°F	19	ft·lb/in²	
Notched Izod Impact			ASTM D256
73°F, 0.126 in	7.5	ft·lb/in	
73°F, 0.252 in	6.5	ft·lb/in	
Notched Izod Impact Strength			ISO 180/1A
-22°F	12	ft·lb/in²	
73°F	18	ft·lb/in²	
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (R-Scale)	102		ASTM D785
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			ASTM D648
264 psi, Unannealed	185	°F	
Heat Deflection Temperature (264 psi, Unannealed)	181	°F	ISO 75-2/A
Deflection Temperature Under Load (264 psi, Annealed)	203	°F	ASTM D648

POLYLAC® PA-747S

CHI MEI CORPORATION - Acrylonitrile Butadiene Styrene

Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (264 psi, Annealed)	210	°F	ISO 75-2/A
Vicat Softening Temperature	217	°F	ASTM D1525 [6]
Vicat Softening Temperature			
--	223	°F	ISO 306/A50
--	214	°F	ISO 306/B50
CLTE - Flow	5.1E-5	in/in/°F	ISO 11359-2

Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.06 in)	HB		UL 94

Processing Information

Extrusion	Nominal Value	Unit
Drying Temperature	176 to 185	°F
Drying Time	2.0 to 4.0	hr
Cylinder Zone 1 Temp.	374 to 410	°F
Cylinder Zone 3 Temp.	410 to 464	°F
Cylinder Zone 5 Temp.	428 to 482	°F
Die Temperature	392 to 482	°F

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)