



POLYREX® PH-88S

CHI MEI CORPORATION - High Impact Polystyrene

Tuesday, November 5, 2019

General Information

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East	• Europe	• North America
RoHS Compliance	• RoHS Compliant		
Processing Method	• Extrusion		
Resin ID (ISO 1043)	• >PS-HI<		

ASTM & ISO Properties¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity ²	1.05		ASTM D792
Density (73°F)	1.05	g/cm ³	ISO 1183
Melt Mass-Flow Rate (200°C/5.0 kg)	2.6	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (200°C/5.0 kg)	3.00	cm ³ /10min	ISO 1133
Molding Shrinkage	0.40 to 0.70	%	ISO 294-4
Mechanical	Nominal Value	Unit	Test Method
Tensile Stress (Yield)	3630	psi	ISO 527-2/50
Tensile Strength ³ (Break)	3700	psi	ASTM D638
Tensile Stress (Break)	3480	psi	ISO 527-2/50
Tensile Elongation ³ (Break)	55	%	ASTM D638
Tensile Strain (Break)	60	%	ISO 527-2/50
Flexural Modulus ⁴	270000	psi	ASTM D790
Flexural Modulus ⁵	203000	psi	ISO 178
Flexural Strength ⁴	5110	psi	ASTM D790
Flexural Stress ⁵	4930	psi	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179
-22°F	4.3	ft·lb/in ²	
73°F	6.7	ft·lb/in ²	
Notched Izod Impact			ASTM D256
73°F, 0.126 in	2.8	ft·lb/in	
73°F, 0.252 in	2.0	ft·lb/in	
Notched Izod Impact Strength			ISO 180/1A
-22°F	3.8	ft·lb/in ²	
73°F	6.2	ft·lb/in ²	
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (L-Scale)	50		ASTM D785
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
264 psi, Unannealed	176	°F	
Heat Deflection Temperature (264 psi, Unannealed)	171	°F	ISO 75-2/A
Deflection Temperature Under Load (264 psi, Annealed)	201	°F	ASTM D648

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Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (264 psi, Annealed)	201	°F	ISO 75-2/A
Vicat Softening Temperature	212	°F	ASTM D1525 ⁶
Vicat Softening Temperature	212	°F	ISO 306/A50
--	192	°F	ISO 306/B50
CLTE - Flow	2.2E-5 to 3.3E-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	°F
Drying Time	2.0 to 3.0	hr
Cylinder Zone 1 Temp.	356 to 392	°F
Cylinder Zone 3 Temp.	392 to 428	°F
Cylinder Zone 5 Temp.	392 to 446	°F
Die Temperature	392 to 446	°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)