

POLYREX® PG-33

General Purpose Polystyrene

CHI MEI CORPORATION

Message:

POLYREX® PG-33 is a General Purpose Polystyrene product. It can be processed by injection molding and is available in Africa & Middle East, Asia Pacific, Europe, Latin America, or North America.

Characteristics include:

Flame Rated

RoHS Compliant

General Information			
UL YellowCard	E56070-245763		
RoHS Compliance	RoHS Compliant		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.05	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR)			ASTM D1238
200°C/5.0 kg	8.0	g/10 min	
220°C/10.0 kg	22	g/10 min	
Melt Volume-Flow Rate (MVR) (200°C/5.0 kg)	8.50	cm ³ /10min	ISO 1133
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	77		ASTM D785
Ball Indentation Hardness (H 358/30)	149	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Stress			
Yield	41.0	MPa	ISO 527-2/50
Break	37.0	MPa	ISO 527-2/50
3.00 mm ¹	45.1	MPa	ASTM D638
Tensile Elongation			
Break, 3.00 mm ²	2.0	%	ASTM D638
Break	5.0	%	ISO 527-2/50
Flexural Modulus			
6.00 mm ³	3040	MPa	ASTM D790
-- ⁴	2400	MPa	ISO 178
Flexural Strength			
6.00 mm ⁵	65.7	MPa	ASTM D790
-- ⁶	62.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength	2.0	kJ/m ²	ISO 179, ISO 179/2C
Charpy Unnotched Impact Strength			
--	9.0	kJ/m ²	ISO 179

--	17	kJ/m ²	ISO 179/2U
Notched Izod Impact			
23°C, 3.00 mm	17	J/m	ASTM D256
23°C, 6.00 mm	16	J/m	ASTM D256
--	2.0	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength	7.0	kJ/m ²	ISO 180/1U
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
1.8 MPa, Unannealed	79.0	°C	ASTM D648
1.8 MPa, Unannealed	76.0	°C	ISO 75-2/A
1.8 MPa, Annealed	87.0	°C	ASTM D648, ISO 75-2/A
Vicat Softening Temperature			
--	94.0	°C	ASTM D1525, ISO 306/A50 6 ⁷
--	96.0	°C	ISO 306/A120
--	89.0	°C	ISO 306/B50
--	95.0	°C	ISO 306/B120
Flammability	Nominal Value		Test Method
Flame Rating			UL 94
1.59 mm	HB		
1.60 mm	HB		
Injection	Nominal Value	Unit	
Drying Temperature	80.0	°C	
Drying Time	2.0 to 3.0	hr	
Rear Temperature	150 to 170	°C	
Middle Temperature	175 to 195	°C	
Front Temperature	185 to 205	°C	
Mold Temperature	40.0 to 70.0	°C	
NOTE			
1.	6.0 mm/min		
2.	6.0 mm/min		
3.	2.8 mm/min		
4.	2.0 mm/min		
5.	2.8 mm/min		
6.	2.0 mm/min		
7.	Rate A (50°C/h)		

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