

Dow INSPIRE™ 112 Performance Polymer

Category : Polymer , Film , Thermoplastic , Polypropylene (PP)

Material Notes:

INSPIRE™ 112 Performance Polymer is a propylene-based resin intended for use in film and sheet extrusion. Information provided by Dow

Order this product through the following link:

http://www.lookpolymers.com/polymer_Dow-INSPIRE-112-Performance-Polymer.php

Physical Properties	Metric	English	Comments
Density	0.900 g/cc	0.0325 lb/in ³	ISO 1183
Melt Flow	0.40 g/10 min @Load 2.16 kg, Temperature 230 °C	0.40 g/10 min @Load 4.76 lb, Temperature 446 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	61	61	ISO 868
Tensile Strength, Ultimate	24.0 MPa	3480 psi	ISO 527
Film Tensile Strength at Yield, MD	29.0 MPa	4210 psi	ISO 527-3
Film Tensile Strength at Yield, TD	24.0 MPa	3480 psi	ISO 527-3
Tensile Strength, Yield	28.0 MPa	4060 psi	ISO 527
Film Elongation at Break, MD	600 %	600 %	ISO 527-3
Film Elongation at Break, TD	710 %	710 %	ISO 527-3
Elongation at Break	25 %	25 %	ISO 527
Elongation at Yield	14 %	14 %	ISO 527
Tensile Modulus	1.15 GPa	167 ksi	ISO 527
Flexural Modulus	1.35 GPa	196 ksi	ISO 527
Secant Modulus, MD	1.10 GPa	160 ksi	1% Secant; ISO 527-3
Secant Modulus, TD	0.950 GPa	138 ksi	1% Secant; ISO 527-3
Izod Impact, Notched (ISO)	12.0 kJ/m ² @Temperature -20.0 °C	5.71 ft-lb/in ² @Temperature -4.00 °F	ISO 180
	23.0 kJ/m ² @Temperature -10.0 °C	10.9 ft-lb/in ² @Temperature 14.0 °F	ISO 180

Mechanical Properties	46.0 kJ/m ² Metric	21.9 ft-lb/in ² English	Comments
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Dart Drop Test	170 g	0.375 lb	Method A; ISO 7765-1
Film Tensile Strength at Break, MD	52.0 MPa	7540 psi	ISO 527-3
Film Tensile Strength at Break, TD	39.0 MPa	5660 psi	ISO 527-3

Thermal Properties	Metric	English	Comments
Melting Point	164 °C	327 °F	Dow Method (DSC)
Deflection Temperature at 0.46 MPa (66 psi)	91.0 °C	196 °F	ISO 75B
Vicat Softening Point	148 °C	298 °F	ISO 306A
Shrinkage	1.5 %	1.5 %	ISO 2577

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