

Propex Fabrics Curv™ C100A Polypropylene/Polypropylene Thermoformable Composite

Category : Polymer , Thermoplastic , Polypropylene (PP)

Material Notes:

Curv™ key features include weight savings, total recyclability, no glass content, thermoformable, high impact strength, inertness, and abrasion resistance. Data provided by BP Amoco; Curv was spun off from BP Amoco in 2004 and is now a product of Propex Fabrics.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Propex-Fabrics-Curv-C100A-PolypropylenePolypropylene-Thermoformable-Composite.php

Physical Properties	Metric	English	Comments
Density	0.920 g/cc	0.0332 lb/in ³	ASTM D792
	0.920 g/cc	0.0332 lb/in ³	ISO 1183
Water Absorption	<= 0.10 %	<= 0.10 %	DIN 53495
	<= 0.10 %	<= 0.10 %	20°C; ASTM D570-81
	<= 0.10 %	<= 0.10 %	100°C; ASTM D570-81

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	35.0 MPa	5080 psi	EN ISO 2039-1
Tensile Strength, Ultimate	120 MPa	17400 psi	MD; DIN EN ISO 527
	120 MPa	17400 psi	CD; DIN EN ISO 527
	180 MPa	26100 psi	ASTM D638M-92
Elongation at Break	16.6 %	16.6 %	ASTM D638M-92
	20 %	20 %	MD; DIN EN ISO 527
	20 %	20 %	CD; DIN EN ISO 527
Tensile Modulus	4.20 GPa	609 ksi	MD; DIN EN ISO 527
	4.20 GPa	609 ksi	CD; DIN EN ISO 527
	5.00 GPa	725 ksi	ASTM D638M-93
Flexural Strength	80.0 MPa	11600 psi	MD; DIN EN ISO 178
	80.0 MPa	11600 psi	CD; DIN EN ISO 178
	107.7 MPa	15620 psi	ASTM D790M-93
Flexural Modulus	3.50 GPa	508 ksi	MD; DIN EN ISO 178

Mechanical Properties	Metric Pa	English	Comments
	3.60 GPa	522 ksi	ASTM D790M-93
Compressive Strength	>= 300 MPa	>= 43500 psi	Normal to Plane; EN ISO 604
Izod Impact, Notched	47.5 J/cm	89.0 ft-lb/in	ASTM D256-93a
	75.0 J/cm	141 ft-lb/in	ASTM D256-93a
	@Temperature -40.0 °C	@Temperature -40.0 °F	
Izod Impact, Notched (ISO)	400 kJ/m ²	190 ft-lb/in ²	22 J; EN ISO 180/2 ep b
	600 kJ/m ²	286 ft-lb/in ²	22 J; EN ISO 180/2 ep b
	@Temperature -40.0 °C	@Temperature -40.0 °F	
Izod Impact, Unnotched (ISO)	NB	NB	22 J; EN ISO 180/2 ep
Charpy Impact Unnotched	NB	NB	EN ISO 179/2 ep
	NB	NB	Low Temp; EN ISO 179/2 ep
Charpy Impact, Notched	12.0 J/cm ²	57.1 ft-lb/in ²	EN ISO 179/2 ep b
Tensile Impact Strength	1000 kJ/m ²	476 ft-lb/in ²	MD; EN ISO 8256
	1000 kJ/m ²	476 ft-lb/in ²	CD; EN ISO 8256
Puncture Energy	17.6 J	13.0 ft-lb	70°C High Speed Puncture Energy; ASTM D3763-97a
	21.6 J	15.9 ft-lb	100°C High Speed Puncture Energy; ASTM D3763-97a
	40.0 J	29.5 ft-lb	Puncture Impact; 52 J; 2.1 mm; ISO 6603
	14.1 J	10.4 ft-lb	High Speed Puncture Energy; ASTM D3763-97a
	@Temperature -40.0 °C	@Temperature -40.0 °F	
Torsional Stiffness	1200 MPa	174000 psi	DIN EN ISO 6721

Thermal Properties	Metric	English	Comments
CTE, linear	41.0 µm/m-°C	22.8 µin/in-°F	Temp range not reported; ASTM D696
	@Temperature 20.0 °C	@Temperature 68.0 °F	
	68.0 µm/m-°C	37.8 µin/in-°F	DIN 53752
	@Temperature 20.0 - 80.0 °C	@Temperature 68.0 - 176 °F	
Deflection Temperature at 0.46 MPa (66 psi)	160 °C	320 °F	flatwise; EN ISO 75-2B

Thermal Properties	Metric	English	Comments
	102 °C	216 °F	ASTM D648-82/88
Deflection Temperature at 1.8 MPa (264 psi)	102 °C	216 °F	ASTM D648-82/88
	102 °C	216 °F	flatwise; EN ISO 75-2A
Vicat Softening Point	175 °C	347 °F	50K/h; DIN EN ISO 306

Descriptive Properties	Value	Comments
Fire Behavior of Building Materials	Passed B 2	DIN 4102

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