

Arkema Group Pebax® Rnew 40R53 SP 01 Polyether Block Amide (PEBA)

Category : Polymer , Renewable/Recycled Polymer , Thermoplastic , Polyether Block Amide (PEBA)

Material Notes:

Polyether block amide Pebax® 40R53 SP 01 is a thermoplastic elastomer made of flexible polyether and rigid polyamide based on renewable resources. This SP grade has been developed to be heat and UV resistant. Information provided by Arkema Group

Order this product through the following link:

http://www.lookpolymers.com/polymer_Arkema-Group-Pebax-Rnew-40R53-SP-01-Polyether-Block-Amide-PEBA.php

Physical Properties	Metric	English	Comments
Density	1.03 g/cc	0.0372 lb/in ³	ISO 1183
Water Absorption	1.4 % @Temperature 23.0 °C, Time 86400 sec	1.4 % @Temperature 73.4 °F, Time 24.0 hour	ISO 62
Moisture Absorption at Equilibrium	0.50 % @Temperature 20.0 °C	0.50 % @Temperature 68.0 °F	50% RH; ISO 62
Linear Mold Shrinkage, Flow	0.0060 cm/cm @Thickness 4.00 mm, Time 86400 sec	0.0060 in/in @Thickness 0.157 in, Time 24.0 hour	
Linear Mold Shrinkage, Transverse	0.0070 cm/cm @Thickness 4.00 mm, Time 86400 sec	0.0070 in/in @Thickness 0.157 in, Time 24.0 hour	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	42	42	Instantaneous, Conditioned 15 days at 23°C - 50% RH; ISO 868
	39 @Time 15.0 sec	39 @Time 0.00417 hour	Conditioned 15 days at 23°C - 50% RH; ISO 868
Tensile Strength at Break	45.0 MPa	6530 psi	Conditioned 15 days at 23°C - 50% RH; ASTM D638
Elongation at Break	>= 600 %	>= 600 %	Conditioned 15 days at 23°C - 50% RH; ASTM D638
Flexural Modulus	0.0750 GPa	10.9 ksi	Conditioned 15 days at 23°C - 50% RH; ISO178
Charpy Impact Unnotched	NB @Temperature 23.0 °C	NB @Temperature 73.4 °F	ISO 179
	NB @Temperature -30.0 °C	NB @Temperature -22.0 °F	ISO 179

Mechanical Properties	Metric	English	Comments
Charpy Impact, Notched	@Temperature 23.0 °C	@Temperature 73.4 °F	ISO 179
	NB	NB	ISO 179
	@Temperature -30.0 °C	@Temperature -22.0 °F	

Thermal Properties	Metric	English	Comments
Melting Point	148 °C	298 °F	ISO 11357
Vicat Softening Point	121 °C	250 °F	ISO 306
	@Load 1.02 kg	@Load 2.25 lb	

Component Elements Properties	Metric	English	Comments
Carbon, C	44 - 48 %	44 - 48 %	Renewable; ASTM 6866

Processing Properties	Metric	English	Comments
Processing Temperature	220 °C	428 °F	Recommended Extrusion Temperature
	210 - 230 °C	410 - 446 °F	Extrusion Range
Nozzle Temperature	200 - 270 °C	392 - 518 °F	
	240 °C	464 °F	Recommended
Mold Temperature	10.0 - 30.0 °C	50.0 - 86.0 °F	
Drying Temperature	60.0 - 70.0 °C	140 - 158 °F	
Dry Time	4.00 - 6.00 hour	4.00 - 6.00 hour	

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