

# PEBAX<sup>®</sup> RNEW<sup>®</sup> 80R53 SP 02

Polyether block **Pebax<sup>®</sup> Rnew<sup>®</sup> 80R53 SP 02 resin** 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.

According to ASTM D6866, the biobased carbon content is measured at 92%.

PROPERTIES	DRY / COND	UNIT	TEST STANDARD
MECHANICAL PROPERTIES			
Tensile Modulus	- / 944	MPa	ISO 527-1/-2
	- / 137000	psi	
Yield Stress	- / 33	MPa	ISO 527-1/-2
	- / 4790	psi	
Yield Strain	- / 24	%	ISO 527-1/-2
Nominal Strain at Break	- / >50	%	ISO 527-1/-2
Shore D Hardness, after 15 s	67 / *	-	ISO 868
Charpy Impact Strength, +23°C	- / No Break	kJ/m²	ISO 179/1eU
Charpy Impact Strength, -30°C	- / No Break	kJ/m²	ISO 179/1eU
Charpy Notched Impact Strength, +23°C	- / 43	kJ/m²	ISO 179/1eA
	- / 20.5	ftlb/in²	
Charpy Notched Impact Strength, -30°C	- / 16	kJ/m²	ISO 179/1eA
	- / 7.61	ftlb/in²	
THERMAL PROPERTIES			
Melting Temperature, 10°C/min	188 / *	°C	ISO 11357-1/-3
OTHER PROPERTIES			
%Bio-Based	92	-	ASTM D6866
Water Absorption, 23°C, immersion, equilibrium	0.7 / *	%	ISO 62
Humidity Absorption, 23°C, RH50%, equilibrium	0.8 / *	%	ISO 62
Density	1020 / 1020	kg/m³	ISO 1183
	1.02 / 1.02	g/cm³	

## MAIN APPLICATIONS:

- Ski shoes
- Athletic foot wear components

## PACKAGING:

This grade is delivered dried in sealed packaging (25 kg bags) ready to be processed.

## SHELF LIFE:

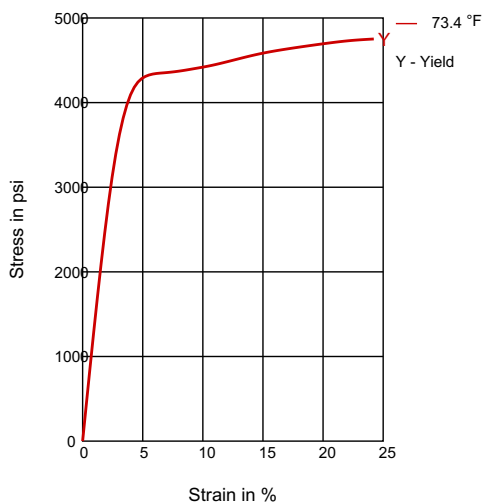
Two years from the delivery. For any use above this limit, please refer to our technical services.

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Source: automatically generated TDS from Material Database on 20-02-2024

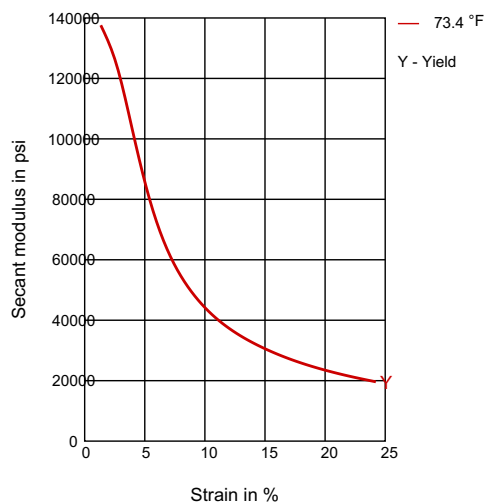
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## DIAGRAMS

### STRESS-STRAIN



### SECANT MODULUS-STRAIN



#### Processing conditions:

- Typical melt temperature (Min / Recommended / Max) : 230°C / 260°C / 290°C.
- Typical mold temperature : 25 – 60°C.
- Drying time and temperature (only necessary for bags opened for more than two hours) : 5-7 hours at 70-80°C.

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<b>PROCESSING</b> Injection Molding, Other Extrusion	Headquarters:  Arkema France 420 rue d'Estienne d'Orves 92705 Colombes Cedex France T +33 (0)1 49 00 80 80 hpp.arkema.com
<b>DELIVERY FORM</b> Pellets	
<b>SPECIAL CHARACTERISTICS</b> Bio-Based, Heat Stabilized, Light Stabilized	
<b>REGIONAL AVAILABILITY</b> North America, Europe, Asia Pacific, South and Central America, Near East/Africa	

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