PEBAX®
RNEW® 40R53 SP 01

Polyether block **Pebax® Rnew® 40R53 SP 01 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.

The percentage of **renewable carbon measured** according to ASTM D6866 is 45 %.

PROPERTIES	DRY / COND	UNIT	TEST STANDARD
RHEOLOGICAL PROPERTIES			
Molding Shrinkage, parallel	0.5 / *	%	ISO 294-4, 2577
Molding Shrinkage, normal	1.2 / *	%	ISO 294-4, 2577
MECHANICAL PROPERTIES			
Tensile Modulus	- / 75	MPa	ISO 527-1/-2
	- / 10900	psi	
Stress at 50% Strain	- / 8.2	MPa	ISO 527-1/-2
	- / 1190	psi	
Strain at Break	- / >50	%	ISO 527-1/-2
Strain at Break TPE	>300 / *	%	ISO 527-1/-2
Stress at Break TPE	45 / *	MPa	ISO 527-1/-2
	6530 / *	psi	
Shore D Hardness, after 15 s	39 / *	-	ISO 868
Charpy Impact Strength, +23°C	No Break / No Break	kJ/m²	ISO 179/1eU
Charpy Impact Strength, -30°C	No Break / No Break	kJ/m²	ISO 179/1eU
Charpy Notched Impact Strength, +23°C	No Break / No Break	kJ/m²	ISO 179/1eA
Charpy Notched Impact Strength, -30°C	No Break / No Break	kJ/m²	ISO 179/1eA
THERMAL PROPERTIES			
Melting Temperature, 10°C/min	148 / *	°C	ISO 11357-1/-3
OTHER PROPERTIES			
%Bio-Based	45	-	ASTM D6866
Water Absorption, 23°C, immersion, equilibrium	1.4 / *	%	ISO 62
Humidity Absorption, 23°C, RH50%, equilibrium	0.5 / *	%	ISO 62
Density	1030 / 1030	kg/m³	ISO 1183
	1.03 / 1.03	g/cm³	

MAIN APPLICATIONS:

- Flexible injected parts

PACKAGING:

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

ARKEMA

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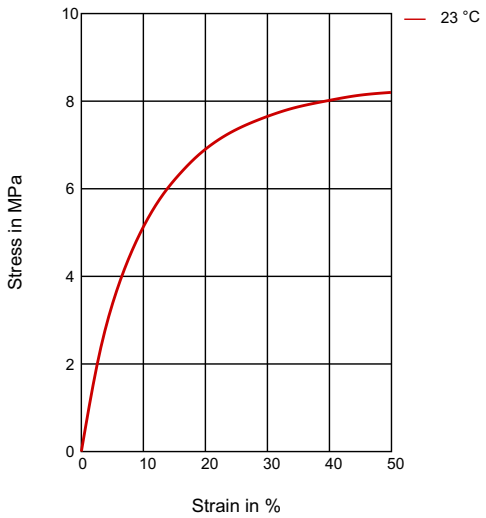
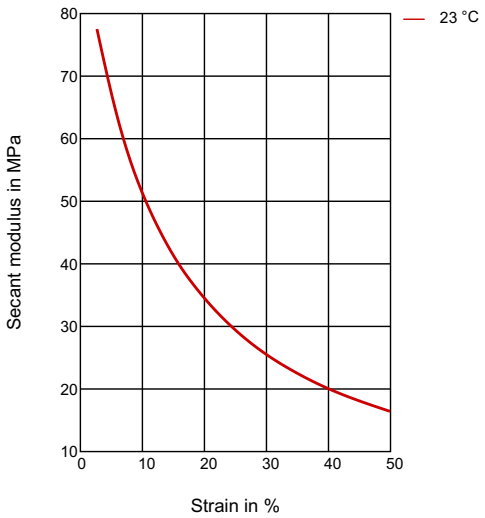
SHELF LIFE:
Two years from the delivery. For any use above this limit, please refer to our technical services.

DIAGRAMS

STRESS-STRAIN



SECANT MODULUS-STRAIN



Processing conditions (injection molding):
- Typical melt temperature (Min / Recommended / Max) : 200°C / 240°C / 270°C.
- Typical mold temperature : 10 – 30°C.
- Drying time and temperature (only necessary for bags opened for more than two hours) : 4-8 hours at 60-70°C.

Processing conditions (extrusion):
- Typical melt temperature (Min / Recommended / Max): 210°C / 220°C / 230°C.
- Drying time and temperature (only necessary for bags opened for more than two hours): 4-8 hours at 60-70°C.

PROCESSING
Injection Molding, Film Extrusion, Profile Extrusion, Other Extrusion, Transfer Molding, Casting, Thermoforming

DELIVERY FORM
Pellets

SPECIAL CHARACTERISTICS
Bio-Based, Heat Stabilized, Light Stabilized

REGIONAL AVAILABILITY
North America, Europe, Asia Pacific, South and Central America, Near East/Africa

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