

# PEBAX<sup>®</sup> RNEW<sup>®</sup> 40R53 SP 01

Polyether block **Pebax<sup>®</sup> Rnew<sup>®</sup> 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 is 45%** (calculated value, based on ASTM D6866).

PROPERTIES	DRY / COND	UNIT	TEST STANDARD
<b>RHEOLOGICAL PROPERTIES</b>			
Molding Shrinkage, parallel	0.6 / *	%	ISO 294-4, 2577
Molding Shrinkage, normal	0.7 / *	%	ISO 294-4, 2577
<b>MECHANICAL PROPERTIES</b>			
Tensile Modulus	- / 75	MPa	ISO 527-1/-2
	- /	psi	
Stress at 50% Strain	10900 - / 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	39 / *	-	ISO 868
Charpy Impact Strength, +23°C	No Break / No Break	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy Impact Strength, -30°C	No Break / No Break	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy Notched Impact Strength, +23°C	No Break / No Break	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy Notched Impact Strength, -30°C	No Break / No Break	kJ/m <sup>2</sup>	ISO 179/1eA
<b>THERMAL PROPERTIES</b>			
Melting Temperature, 10°C/min	148 / *	°C	ISO 11357-1/-3
<b>OTHER PROPERTIES</b>			
Water Absorption	1.4 / *	%	Sim. to ISO 62
Humidity Absorption	0.5 / *	%	Sim. to ISO 62
Density	1030 / 1030	kg/m <sup>3</sup>	ISO 1183
	1.03 / 1.03	g/cm <sup>3</sup>	
%Bio-Based	45	-	ASTM D6866

## MAIN APPLICATIONS:

- Flexible injected parts

## PACKAGING:

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

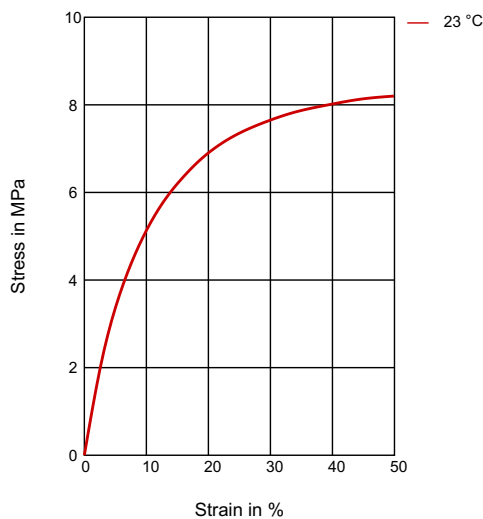
# PEBAX<sup>®</sup> RNEW<sup>®</sup> 40R53 SP 01

## SHELF LIFE:

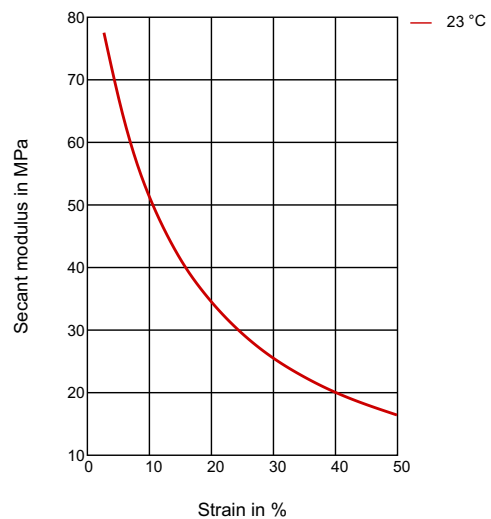
Two years from the delivery. For any use above this limit, please refer to our technical services.

## 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.

# PEBAX<sup>®</sup> RNEW<sup>®</sup> 40R53 SP 01

<p><b>PROCESSING</b></p> <p>Injection Molding, Film Extrusion, Profile Extrusion, Other Extrusion, Transfer Molding, Casting, Thermoforming</p>	<p>Headquarters:</p> <p>Arkema France 420 rue d'Estienne d'Orves 92705 Colombes Cedex France</p>
<p><b>DELIVERY FORM</b></p> <p>Pellets</p>	<p>T +33 (0)1 49 00 80 80 arkema.com</p>
<p><b>SPECIAL CHARACTERISTICS</b></p> <p>Bio-Based, Heat Stabilized, Light Stabilized</p>	<p>Arkema Inc. – High Performance Polymers</p> <p>900 First Avenue King of Prussia, PA 19406</p>
<p><b>REGIONAL AVAILABILITY</b></p> <p>North America, Europe, Asia Pacific, South and Central America, Near East/Africa</p>	<p>Tel.: +1 610 205 7000 hpp.arkema.com</p>

The statements, technical information and recommendations contained herein are believed to be accurate as of the date hereof. Since the conditions and methods of use of the product and of the information referred to herein are beyond our control, ARKEMA expressly disclaims any and all liability as to any results obtained or arising from any use of the product or reliance on such information; NO WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, IS MADE CONCERNING THE GOODS DESCRIBED OR THE INFORMATION PROVIDED HEREIN. The information provided herein relates only to the specific product designated and may not be applicable when such product is used in combination with other materials or in any process. The user should thoroughly test any application before commercialization. Nothing contained herein constitutes a license to practice under any patent and it should not be construed as an inducement to infringe any patent and the user is advised to take appropriate steps to be sure that any proposed use of the product will not result in patent infringement.