

**Product Texts**

**Pebax® Rnew® 55R53 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 66%.

**Main applications:**

- Flexible injected parts
- Athletic foot wear components

**Packaging:**

This grade is delivered dried in sealed packaging (20 and 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.

<b>Mechanical properties</b>	<b>dry / cond</b>	<b>Unit</b>	<b>Test Standard</b>
<b>ISO Data</b>			
<sup>[C]</sup> Tensile Modulus	- / <b>160</b>	MPa	ISO 527
<sup>[C]</sup> Stress at 50% strain	- / <b>13.4</b>	MPa	ISO 527
<sup>[C]</sup> Strain at break	- / <b>&gt;50</b>	%	ISO 527
<sup>[C]</sup> Stress at break TPE	<b>45 / *</b>	MPa	ISO 527
<sup>[C]</sup> Strain at break TPE	<b>&gt;300 / *</b>	%	ISO 527
<sup>[C]</sup> Shore D hardness	<b>51 / *</b>	-	ISO 7619-1

[C]: CAMPUS

<b>Thermal properties</b>	<b>dry / cond</b>	<b>Unit</b>	<b>Test Standard</b>
<b>ISO Data</b>			
<sup>[C]</sup> Melting temperature, 10°C/min	<b>167 / *</b>	°C	ISO 11357-1/-3
<sup>[C]</sup> Vicat softening temperature, B	<b>156 / *</b>	°C	ISO 306

[C]: CAMPUS

<b>Other properties</b>	<b>dry / cond</b>	<b>Unit</b>	<b>Test Standard</b>
<sup>[C]</sup> Water absorption	<b>1.5 / *</b>	%	Sim. to ISO 62
<sup>[C]</sup> Humidity absorption	<b>0.7 / *</b>	%	Sim. to ISO 62
<sup>[C]</sup> Density	<b>1030 / 1030</b>	kg/m <sup>3</sup>	ISO 1183
Biobased content	<b>66</b>	%	-

[C]: CAMPUS

<b>Processing Recommendation Injection Molding</b>	<b>Value</b>	<b>Unit</b>	<b>Test Standard</b>
Pre-drying - Temperature	<b>65 - 75</b>	°C	-
Pre-drying - Time	<b>4 - 8</b>	h	-
Melt temperature	<b>210 - 230</b>	°C	-
Mold temperature	<b>25 - 60</b>	°C	-

**Characteristics**

**Processing**

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

**Certifications**

Contains renewable resources

**Regional Availability**

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

**Delivery form**

Pellets

**Special Characteristics**

Light stabilized or stable to light, U.V. stabilized or stable to weather, Heat stabilized or stable to heat

**Other text information****Injection molding****Processing conditions (injection):**

- Typical melt temperature (Min / Recommended / Max) : 200°C / 240°C / 270°C.
- Typical mold temperature : 25 – 60°C.
- Drying time and temperature (only necessary for bags opened for more than two hours) : 4-8 hours at 65-75°C.

**Other extrusion****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 65-75°C.