Pebax® 4533 SP 01

TPA ARKEMA

Product Texts

Polyether block amide **Pebax® 4533 SP 01 resin** is a thermoplastic elastomer made of flexible polyether and rigid polyamide.
This SP grade has been developed to be heat and UV resistant.

Main applications:

- Flexible injected parts
- High performance power trasmission belts
- Silent gears

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.

Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
[C] Tensile Modulus	**88 / 81**	MPa	ISO 527
[C] Stress at 50% strain	**9 / 9**	MPa	ISO 527
[C] Strain at break	**>50 / >50**	%	ISO 527
[C] Stress at 10% elongation	**6 / ***	MPa	ISO 527
[C] Stress at 100% elongation	**9 / ***	MPa	ISO 527
[C] Stress at break TPE	**42 / ***	MPa	ISO 527
[C] Strain at break TPE	**>300 / ***	%	ISO 527
[C] Compression set at 23 °C, 24h	**37 / ***	%	ISO 815
[C] Tear strength	**77 / ***	kN/m	ISO 34-1
[C] Abrasion resistance	**40 / ***	mm³	ISO 4649
[C] Shore A hardness	**90 / ***	-	ISO 7619-1
[C] Shore D hardness	**41 / ***	-	ISO 7619-1

[C]: CAMPUS

Thermal properties	dry / cond	Unit	Test Standard
ISO Data			
[C] Melting temperature, 10°C/min	**147 / ***	°C	ISO 11357-1/-3
[C] Temp. of deflection under load, 0.45 MPa	**52 / ***	°C	ISO 75-1/-2
[C] Coeff. of linear therm. expansion, parallel	**200 / ***	E-6/K	ISO 11359-1/-2

[C]: CAMPUS

Electrical properties	dry / cond	Unit	Test Standard
ISO Data			
[C] Relative permittivity, 100Hz	**9 / -**	-	IEC 62631-2-1
[C] Relative permittivity, 1MHz	**6 / -**	-	IEC 62631-2-1
[C] Dissipation factor, 100Hz	**2090 / -**	E-4	IEC 62631-2-1
[C] Dissipation factor, 1MHz	**1120 / -**	E-4	IEC 62631-2-1
[C] Volume resistivity	**1.6E11 / -**	Ohm*m	IEC 62631-3-1
[C] Surface resistivity	*** / 3E12**	Ohm	IEC 62631-3-2
[C] Electric strength	**43 / -**	kV/mm	IEC 60243-1
[C] Comparative tracking index	*** / 600**	-	IEC 60112

[C]: CAMPUS

Other properties	dry / cond	Unit	Test Standard
[C] Water absorption	**1.2 / ***	%	Sim. to ISO 62
[C] Humidity absorption	**0.4 / ***	%	Sim. to ISO 62
[C] Density	**1010 / 1010**	kg/m³	ISO 1183

[C]: CAMPUS

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	**60 - 70**	°C	-
Pre-drying - Time	**4 - 6**	h	-
Melt temperature	**200 - 270**	°C	-
Mold temperature	**10 - 30**	°C	-

Characteristics

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

Special Characteristics
Platable, Light stabilized or stable to light, U.V. stabilized or stable to weather, Heat stabilized or stable to heat, Transparent

Delivery form
Pellets

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

Other text information

Injection molding

Processing conditions:
- 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) : 4-6 hours at 60-70°C.

Other extrusion

Processing conditions:
- 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) : 4-6 hours at 60-70°C.