

Pebax® 4533 SA 01

TPA

Pebax® 4533 SA 01 resin

Polyether block amide **Pebax® 4533 SA 01 resin** is a thermoplastic elastomer made of flexible polyether and rigid polyamide. This SA grade is specially designed to food uses.

Main applications:

- Flexible injected parts.
- Silent gears.
- TPU processing aid.

Note: this grade is not recommended by Arkema for usage in medical applications. For such applications Pebax® SA 01 MED should be used.

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.

Rheological properties

	dry / cond	Unit	Test Standard
Molding shrinkage, parallel	0.4 / *	%	ISO 294-4, 2577
Molding shrinkage, normal	1.1 / *	%	ISO 294-4, 2577

Mechanical properties

	dry / cond	Unit	Test Standard
Tensile Modulus	88 / 81	MPa	ISO 527-1/-2
Stress at 50% strain	9 / 9	MPa	ISO 527-1/-2
Strain at break	>50 / >50	%	ISO 527-1/-2
Charpy impact strength, +23°C	- / N	kJ/m ²	ISO 179/1eU
Charpy impact strength, -30°C	- / N	kJ/m ²	ISO 179/1eU
Charpy notched impact strength, +23°C	- / N	kJ/m ²	ISO 179/1eA
Charpy notched impact strength, -30°C	- / N	kJ/m ²	ISO 179/1eA

Thermal properties

	dry / cond	Unit	Test Standard
Melting temperature, 10°C/min	147 / *	°C	ISO 11357-1/-3
Vicat softening temperature, 50°C/h 50N	111 / *	°C	ISO 306

Other properties

	dry / cond	Unit	Test Standard
Water absorption	1.2 / *	%	Sim. to ISO 62
Humidity absorption	0.4 / *	%	Sim. to ISO 62
Density	1010 / 1010	kg/m ³	ISO 1183

Test specimen production

	Value	Unit	Test Standard
Injection Molding, melt temperature	240	°C	ISO 294
Injection Molding, mold temperature	30	°C	ISO 10724

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Mechanical properties (TPE)

	dry / cond	Unit	Test Standard
Shore A hardness, 3s	92 / *	-	ISO 7619-1
Shore D hardness, 15s	41 / *	-	ISO 7619-1

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

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.

Characteristics

Processing

Injection Molding, Other Extrusion

Delivery form

Pellets

Special Characteristics

Light stabilized or stable to light, Heat stabilized or stable to heat

Regional Availability

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