

PROCESSING GUIDE

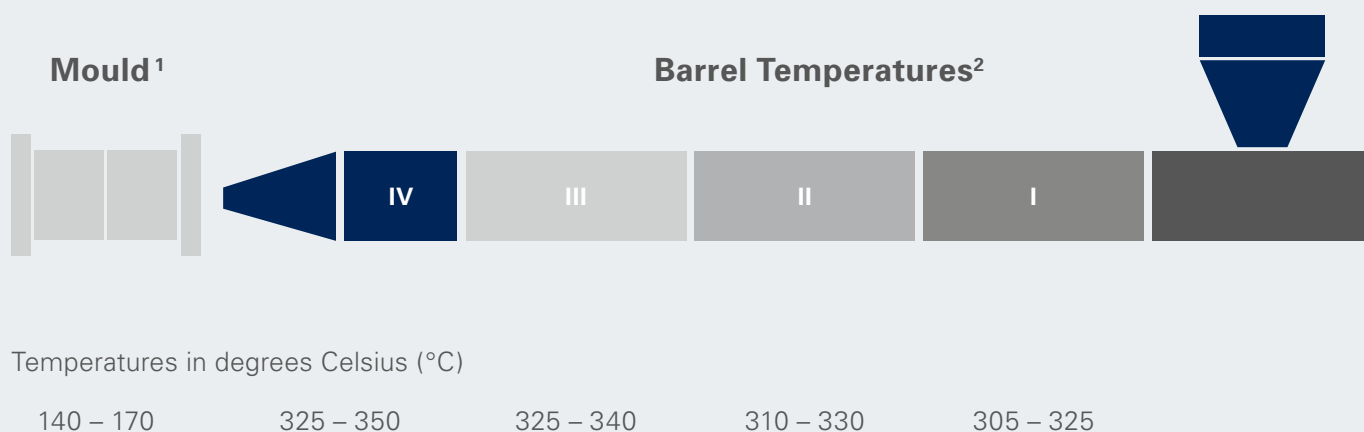
TEDUR[®] PPS is a semi crystalline high-performance thermoplastic, based on a linear Polyphenylene Sulphide (PPS) resin, reinforced with glass fibre and/or mineral.

PRE-TREATMENT

TEDUR[®] PPS is a non-hygroscopic polymer. Original packed granules are protected against humidity and do not require special treatment. Due to external conditions, such as climate or storage, humidity may condense on the surface of the granules and therefore pre-drying is recommended. Storage at ambient temperature before use will minimise condensation risk.

PROCESSING

TEDUR[®] PPS may be processed on all standard injection molding machines. For the cylinder and the screw, it is recommended to use friction-resistant, anticorrosive coatings or linings.



¹ Minimum 140°C is essential to achieve full mechanical properties.

² Guide values. Standard starting profile might be in the middle.

	Unit	Notes
Properties		
Polymer abbreviation		PPS
Density (ISO 1183)	g/cm ³	ca. 1.60 – 2.00 (see Technical Data Sheet)
Injection Machinery		
Screw stroke		Metering stroke between 1 x D and 3 x D
Screw type		Three zone screw with L/D ratio 18:1 to 22:1
Nozzle type		Shut-off nozzle recommended
Hopper type		Standard (Heated recommended)
Pre-processing		
Storage		Dry, protected from heat and light
Dryer type		Dry air
Drying time	h	2 – 4
Drying temperature	°C	130 – 140
Permissible moisture content	%	< 0.05
Processing Conditions		
Melt temperature range	°C	320 – 340
Mould temperature range	°C	140 – 170
Coolant		Oil
Throughput coolant		To ensure turbulent flow
Peripheral screw speed	mm/s	50 – 300, e.g. screw speed of 40rpm with a screw diameter of 50mm
Back pressure (specific)	bar	50 – 150
Residence time	min	< 10
Injection speed		Slow to medium (according to part size)
Shrinkage (ISO 294-4)³		
Shrinkage (parallel)	%	0.1 – 0.4
Shrinkage (across)	%	0.3 – 0.8

³ Shrinkage is influenced by the part geometry, the wall thickness of the moulding, the position and size of the gate and the processing parameters.

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