

PROCESSING GUIDE

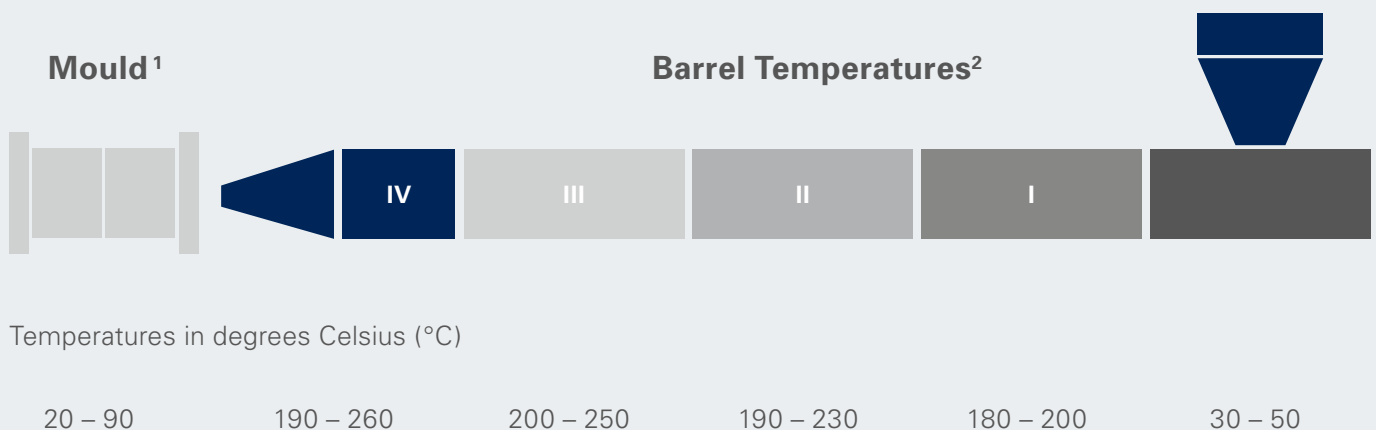
ALTECH[®] PP is a semi crystalline thermoplastic, unfilled or reinforced with glass fibre, glass beads and/or mineral. ALTECH[®] PP-H is a Polypropylene Homopolymer and ALTECH[®] PP-B is a Polypropylene Copolymer.

PRE-TREATMENT

ALTECH[®] PP 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 then pre-drying is recommended. Storage at ambient temperature before use will minimise condensation risk. Specific reinforced products will require pre-drying. See corresponding Technical Data Sheet.

PROCESSING

ALTECH[®] PP may be processed on all standard injection moulding machines. Wear protected plasticising units for reinforced compounds are advised.



Temperatures in degrees Celsius (°C)

20 – 90

190 – 260

200 – 250

190 – 230

180 – 200

30 – 50

¹ Depending on filler type and amount. See Technical Data Sheet for details.

² Guide values. Standard starting profile might be in the middle; for filled PP slightly higher, for unfilled PP slightly lower temperature profiles.

		Unit	Notes		
Properties					
Polymer abbreviation		PP			
Density (ISO 1183)	g/cm ³	0.9 – 1.3 (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	Open or shut-off possible				
Hopper type	Standard				
Pre-processing					
Storage	Dry, protected from heat and light				
Dryer type		Air circulating	Dry air		
Drying time ³	h	2 – 4	2 – 3		
		Unfilled	Glass Filled	Mineral Filled	
Drying temperature ³	°C	80 – 100	80 – 120	60 – 90	
Permissible moisture content	%	< 0.1			
Processing Conditions					
Melt temperature range	°C	200 – 270			
Mould temperature range	°C	20 – 90 (depending on filler content)			
Coolant	Water				
Throughput coolant	To ensure turbulent flow				
Peripheral screw speed	mm/s	< 300			
Back pressure (specific)	bar	50 – 150			
Residence time	minutes	< 8			
Injection speed	Medium to fast (according to part size)				
Shrinkage⁴					
		Unfilled	Glass Filled	Mineral Filled	
Shrinkage range (ISO 294-4)	%	1.0 – 2.0	0.3 – 1.2	0.7 – 1.5	

³ When stored at ambient temperature before processing, pre-drying is usually not necessary. Pre-drying of filled ALTECH PP grades can improve surface quality (especially for mineral filled grades).

⁴ 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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