

## PROCESSING GUIDE

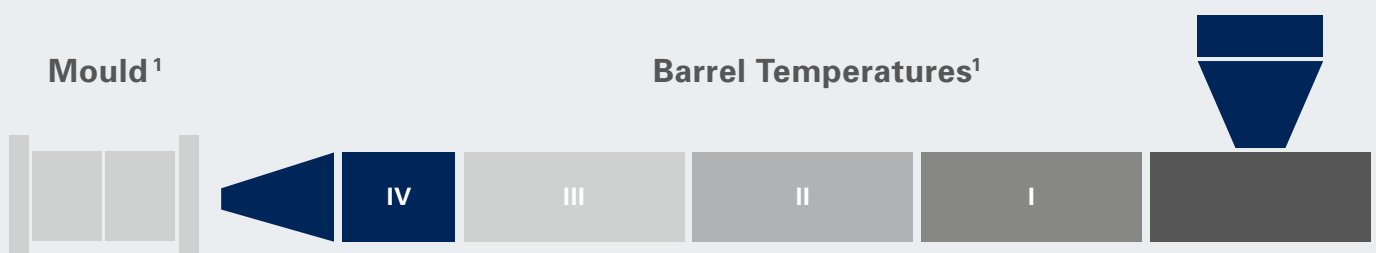
ALTECH<sup>®</sup> PC is an amorphous thermoplastic, unfilled or reinforced with glass fibre.

### PRE-TREATMENT

ALTECH<sup>®</sup> PC is a hygroscopic polymer. Due to absorption of moisture from the air, pre-drying is mandatory in order to avoid material degradation and surface defects. For specific filled products see corresponding Technical Data Sheet.

### PROCESSING

ALTECH<sup>®</sup> PC may be processed on all standard injection moulding machines. Wear protected plasticising units for reinforced compounds are advised. For longer production interruptions, set cylinder heaters to about 170 °C and ensure heating.



Temperatures in degrees Celsius (°C)

#### PC unreinforced

80 – 110	270 – 300	290 – 310	290 – 300	270 – 290	70 – 90
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#### PC reinforced

80 – 130	300 – 320	300 – 330	300 – 320	270 – 290	70 – 90
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<sup>1</sup> Guide values. Standard starting profile might be in the middle.

	Unit	Notes	
<b>Properties</b>			
Polymer abbreviation		PC	
Density (ISO 1183)	g/cm <sup>3</sup>	1.20 – 1.45 (see Technical Data Sheet)	
<b>Injection Machinery</b>			
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	
<b>Pre-processing</b>			
Storage		Dry, protected from heat and light	
Dryer type		Air circulating	Dry air
Drying time	h	4 – 12	3 – 4
Drying temperature	°C	120	
Permissible moisture content	%	< 0.02	
<b>Processing Conditions</b>			
		Unfilled	Glass Fibre
Melt temperature range	°C	280 – 310	310 – 330
Mould temperature range	°C	80 – 110	80 – 130
Coolant		Water	
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	4 – 8	
Injection speed		Profile for constant flow front speed	
<b>Shrinkage<sup>2</sup></b>			
		PC Unfilled	PC Glass Fibre
Shrinkage range (ISO 294-4)	%	0.6 – 0.9	0.2 – 0.5

<sup>2</sup> 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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