

PROCESSING GUIDE

WIC PA66 is a semi crystalline thermoplastic, reinforced with carbon fibres.

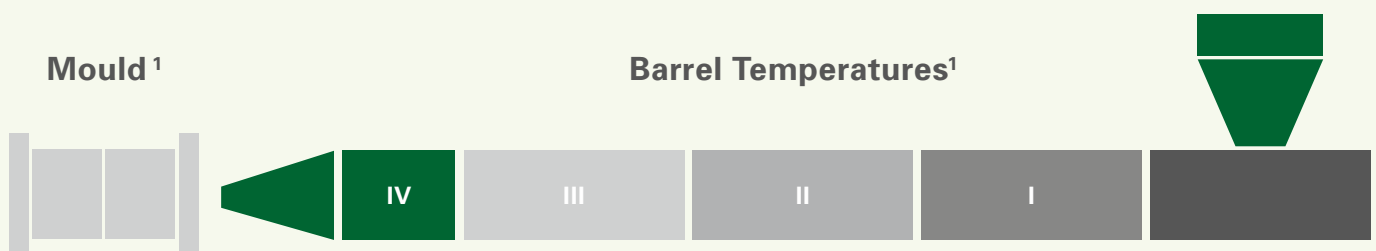
PRE-TREATMENT

Polyamide 66 is a hygroscopic polymer. Due to external conditions, such as climate or storage, humidity may be absorbed by the granules. Then, depending on humidity level, drying is recommended. Storage at ambient temperature before use will minimise condensation and humidity absorbance risk.

PROCESSING

WIC PA66 may be processed on all standard injection moulding machines. Wear protected plasticising units for carbon fibre reinforced compounds are advised.

In the suction conveying of carbon compounds, abrasion in the form of plastic particles, which include CF fibers, can occur. This abrasion / dust is electrically conductive due to the CF fibers. The conveying air should not escape unfiltered into the room. Special conveying air filters are to be used, which should be replaced once a week or according to susceptibility to soiling. If glass tube bends are used in the delivery piping, these are to be earthed.



PA66 reinforced

Temperatures in degrees Celsius (°C)

80 – 120

280 – 300

270 – 290

240 – 270

230 – 250

70 – 90

¹ Guide values. Standard starting profile might be in the middle.

	Unit	Notes	
Properties			
Polymer abbreviation		PA66	
Density (ISO 1183)	g/cm ³	1,17 – 1,33 (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		Dry air	
Drying temperature ²	°C	80	
Drying time ²	h	2 – 8	
Permissible moisture content		Max.	Optimum
	%	0,12	0,08
Processing Conditions			
Melt temperature range	°C	280 – 300	
Mould temperature range	°C	80 – 120	
Coolant		Water	
Throughput coolant		To ensure turbulent flow	
Peripheral screw speed	mm/s	< 300, e.g. screw speed of 40 rpm with a screw diameter of 50 mm	
Back pressure (specific)	bar	50 – 150	
Residence time	min	< 5	
Injection speed		Medium to fast (according to part size)	
Shrinkage³			
		Lengthwise	Crosswise
Shrinkage range (ISO 294-4)	%	0,1 – 0,2 (in mold direction)	0,5 – 0,9 (perpendicular in mold direction)

² Depends on the initial moisture content.

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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