

## PROCESSING GUIDE

**ALCOM<sup>®</sup> PC LD is a Polycarbonate, an amorphous thermoplastic, with special additives adjusted regarding transmission, colour and diffusion properties.**

### PRE-TREATMENT

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

### PROCESSING

ALCOM<sup>®</sup> PC LD may be processed on all standard injection moulding machines. Wear protected plasticising units for reinforced compounds are advised. Hot runner with torpedo or hot tip are not recommended. ALCOM<sup>®</sup> PC LD products are more sensible to shearing – try to avoid small gates and process without excessive stress. For longer production interruptions, set cylinder heaters to about 170 °C and ensure heating.



<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>	1.18 – 1.20 (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>			
Melt temperature range	°C	280 – 310	
Mould temperature range	°C	80 – 110	
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 50 mm	
Back pressure (specific)	bar	50 – 150	
Residence time	minutes	< 8	
Injection speed		Profile for constant flow front speed	
<b>Shrinkage<sup>2</sup></b>			
Shrinkage range (ISO 294-4)	%	0.5 – 0.9	

<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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