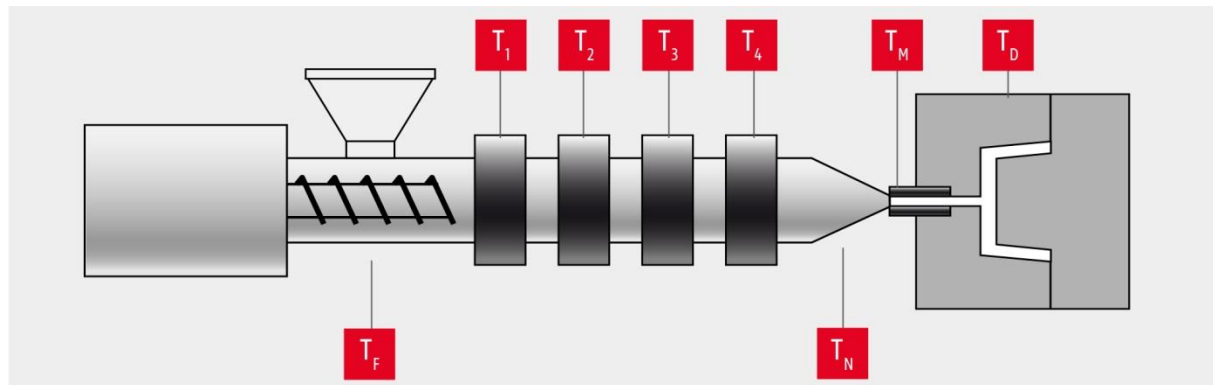


## TOPAS<sup>®</sup> 5013S-04

Cyclic Olefin Copolymer

### Processing Conditions for Injection Molding



#### Processing Temperatures

$T_F$	$T_1$	$T_2$	$T_3$	$T_4$	$T_N$	$T_M$	$T_D$
< 100 °C	230-260 °C	240-270 °C	250-280 °C	260-290 °C	240-300 °C	240-300 °C	95-125 °C
< 212 °F	446-500 °F	464-518 °F	482-536 °F	500-554 °F	464-572 °F	464-572 °F	203-257 °F

Max. Residence Time	< 15 min; short interruption to cycle: reduce $T_x = 170$ °C   338 °F !
Injection Pressure	$P_{Sp} = 500 - 1100$ bar   7- 16 kpsi (specific)
Hold on Pressure	$P_N = 300 - 600$ bar   4- 9 kpsi (specific)
Back Pressure	$P_{St} = 150$ bar   2200 psi max. (specific)
Screw Speed	$n_s = 50 - 200$ rpm
Injection Speed	moderate to fast (50 mm/sec - 150 mm/sec)
Nozzle Type	free – flow
Pre Drying	100°C (212 °F) / 6hours

Note	<p>Shrinkage is dependent on processing conditions and part design. Typical shrinkage values are 0,4 - 0,7%</p> <p>TOPAS Advanced Polymers recommends only external heated hot runner systems.</p> <p>For molded parts with especially high requirements to the surface quality we recommend to choose the highest possible mold temperature.</p>
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**IMPORTANT:** This publication contains general advice for processing of our products. It indicates typical processing conditions, and is not intended to cover individual cases. The properties of our products may change as a result of processing conditions or the inclusion of additives. The information contained in this publication should not be construed as a promise or guarantee of specific properties of our products. We strongly recommend that users seek and adhere to the manufacturer's current instructions for handling each material they use, and to entrust the handling of such material to adequately trained personnel only. Please refer to the appropriate Safety Data Sheets before attempting to process our products.

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