

ZEONEX<sup>®</sup> 690R

**Injection Blow Molding Guide**

Molding Guide

Date Issued: Feb 2015

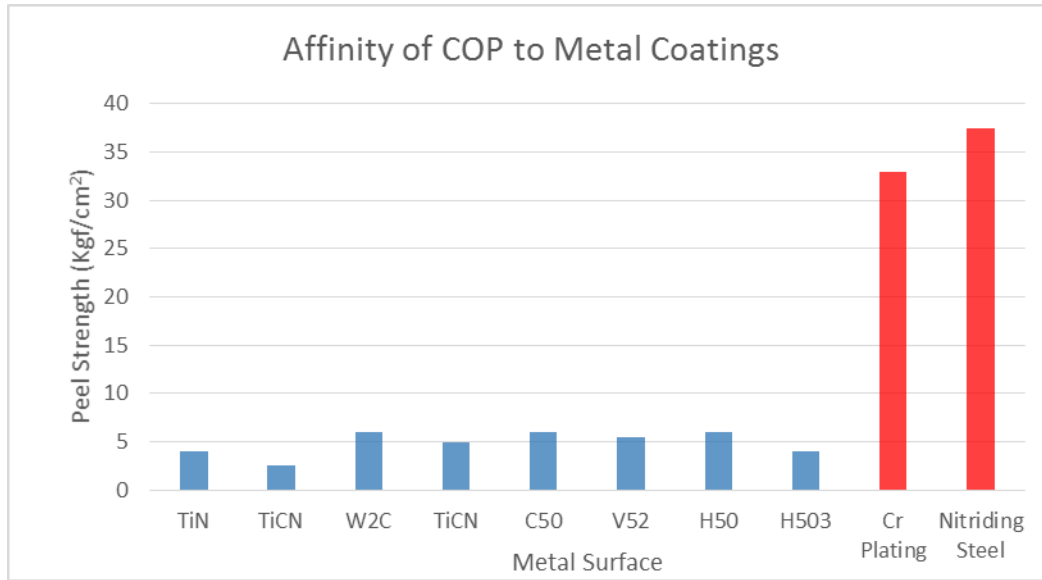
ZEONEX 690R can be processed using standard blow molding practices. The following molding guidelines are typical mid-point ranges for the material when processing with multi-cavity, single stage and integrated two stage (shuttle type) blow molding equipment.

Contact ZEON for more detailed information regarding processing, material flow characterization, or design considerations for ZEONEX 690R.

ZEONEX 690R	
Resin Preheat	4-12hr, 105°C
Injection Unit Temperatures	
Nozzle	270-290°C
Meter	280-300°C
Melt	260-280°C
Feed	Water Cooling
Manifold Temperature	270-290°C
Preform Mold Temperature	
Core	90-110°C
Cavity	100-120°C
Blow Mold Temperature	90-115°C
Injection Time	5-10s
Blow Time	3-10s
Cooling Time	12-20s
Typical Mold Shrink	0.5-0.7%
<b>Injection Pack Pressure:</b>	
It is recommended to use the minimal amount of pack pressure required to obtain correct part dimension. High pack pressure should be avoided in order to reduce molded in stress.	
<b>Preform shuttle transfer:</b>	
The transfer time from the injection molding cycle to the blow cycle should be kept to minimum in order to maintain high heat in preform. This aids in reducing molded in stress of the finished part.	
<b>Preform Design:</b>	
COP is suitable for blow molded parts with blow ratio of up to 2:1 in radial position. The axial blow or stretch ratio should be near to 1:1.	
<b>Nitrogen Sealing:</b>	
Nitrogen sealing at the injection feed throat is recommended to reduce chance of degradation during long residence time processes and to maintain the high optical qualities of COP.	
<b>Purge Recommendation:</b>	
Conventional olefin-type purge materials are suitable for use with COP.	

**Tooling Consideration:**

COP resin has an affinity to chrome and nitriding steel coatings; use of these materials on barrel, screw, or mold components should be avoided to reduce chance of resin or part sticking. Use of coatings which have low peel strength with COP, such as those shown in the chart below, are recommended for use on preform core surfaces.



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