

FAST FACT SHEET

HIGH FLOW MEDICAL PC

High flow medical PC to cope with the current trend towards thin wall thickness and long flow length of part and mold design, especially for Trocar application and multi-cavity injection molding.

BENEFITS

Medical grade resin. Tested according to ISO 10993

Produced in Taiwan. Shortens the lead time and minimizes the delivery cost to supply to Asia customers

Minimizes internal stress concentration on the parts

Enables part design with longer flow lengths, thinner walls, and multi-cavity tooling

Suitable for ETO and steam sterilization

Low injection molding temperature can be used

AUTOClave STERILIZATION

A steam autoclave process is typically used to sterilize multiple uses of medical devices. Standard autoclave sterilization is 30 minutes at 121°C and 8 minutes at 134°C. CALIBRE 2061-30 Polycarbonate Resin is suitable for autoclave sterilization. A study was performed on

two different autoclave conditions.

As shown in figures 1 and 2, tensile strength, tensile modulus, molecular weight, and melt flow rate remain consistent for up to 5 cycles.

Steam Autoclave 121°C @ 30 minutes

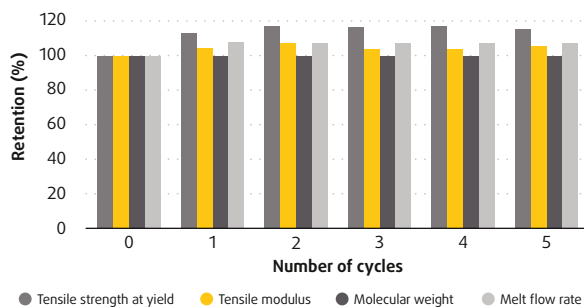


FIGURE 1

Steam Autoclave 134°C @ 8 minutes

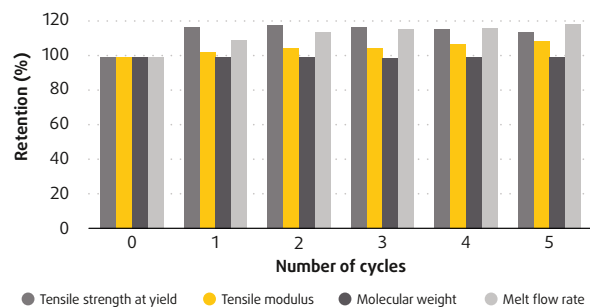


FIGURE 2


Noted

All testing was performed according to standard ASTM methods.

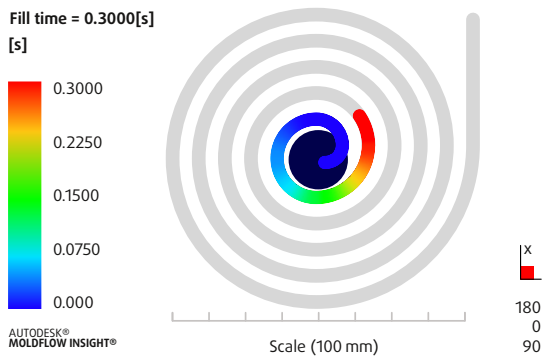
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SPIRAL FLOW

High flow PC resin enables longer flow lengths in your thin-wall part and makes multi-cavity filling possible. A mold flow software simulated the standard and high flow PC on both 1mm and 2mm wall thickness filling pattern.

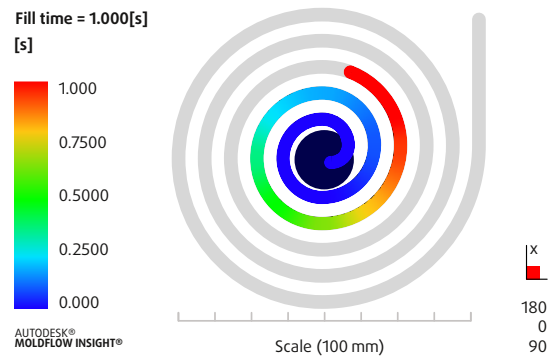
 **Standard**


0.3s fill time @ 1mm, 15 melt flow



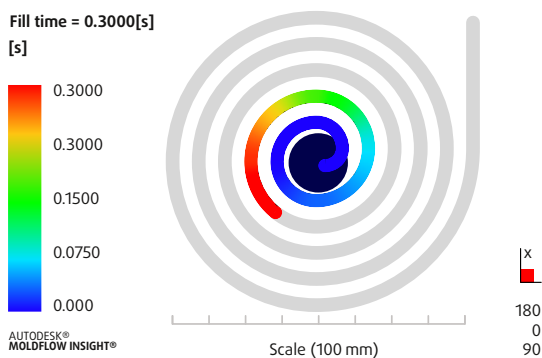
 **Standard**


1s fill time @ 2mm, 15 melt flow



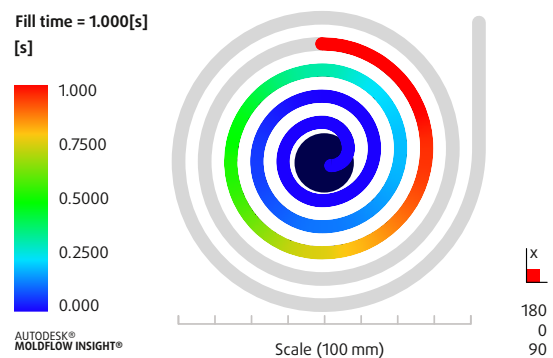
 **High flow**

0.3s fill time @ 1mm, 30 melt flow



 **High flow**

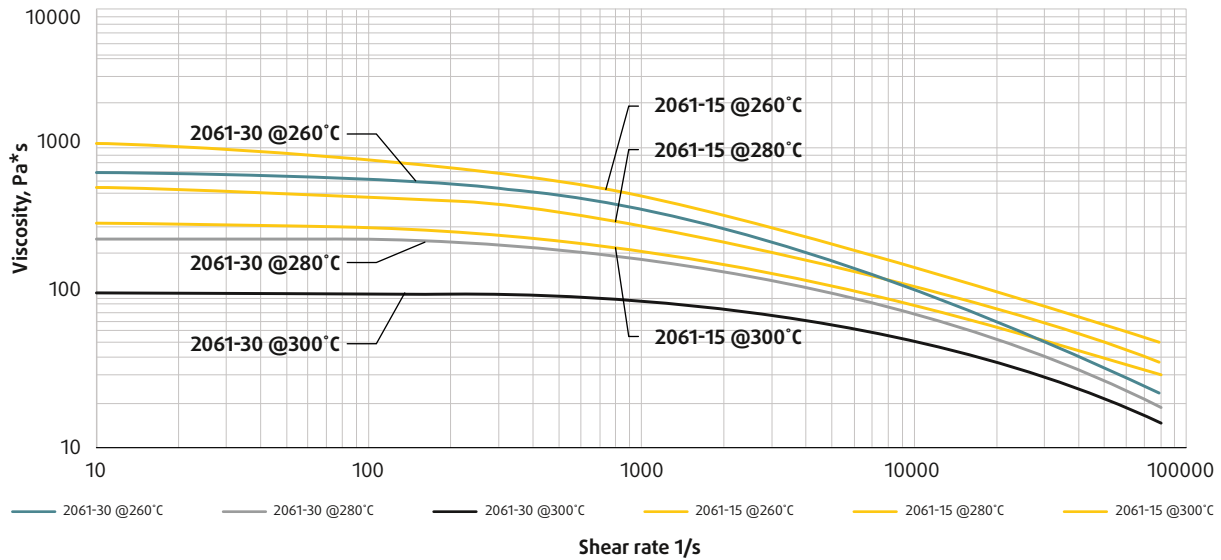
1s fill time @ 2mm, 30 melt flow



68% longer

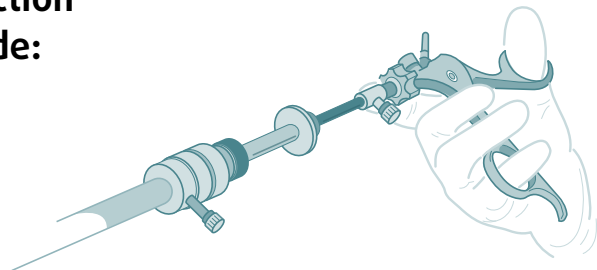
90% longer

RHEOLOGY



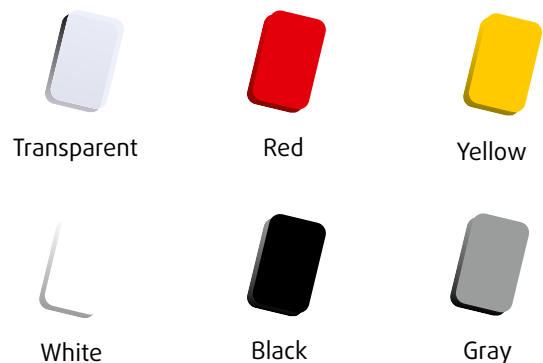
Trinseo CALIBRE™ 2061 & 2060 PC Resins are commonly used for injection molding. Typical applications include:

- Surgical instrument handles
- Medical equipment housing
- Safety syringes
- Stopcocks and luers
- Connectors
- Triple valves
- Trocar



Custom colors available

Trinseo offers an array of custom colors to meet varying industry needs and specifications. All pre-color resins are made with the same properties and attributes of clear resins, and are fully compliant with ISO 10993. Some of our popular color options include red, yellow, white, black, and gray.



trinseo.com

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