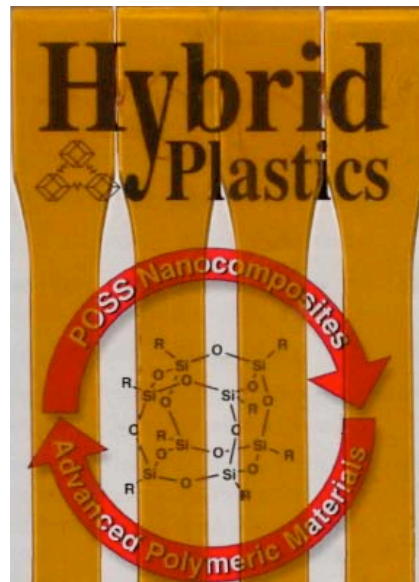


Nanoreinforced® Polyphenylene Oxide (PPO)

Before the development of POSS® Flow technology, injection molding grades of pure PPO / PPE were not available because the high melt viscosity of PPO made molding very difficult or impossible. PPO available on the market today, such as Noryl® and Xyron®, is typically mixed with polystyrene or other polymers to make it processable. However, these resins degrade the excellent mechanical and flammability properties of PPO. POSS® Flow incorporated into pure PPO resin dramatically decreases melt viscosity, making injection molding possible. Because no polymer diluents are used, the properties of PPO are retained. This resin is transparent, low density, has an exceptionally high heat distortion temperature, and very low flammability. This resin is a lower cost alternative to high temperature polymers such as PEEK and PPSU.



	Nanoreinforced® PPE	Typical PPE
Modulus	2.4 GPa	2.4 GPa
Tensile Strength	75 MPa	43 MPa
HDT	175 °C	113 °C
Transparent	Yes	No



Product name:	Nanoreinforced Polyphenylene Oxide
Product number:	PO6C81.01
Color:	Transparent, light amber color
Density:	1.09 g/cm ³
Melt flow index:	12.5 g/10 min
(300 °C / 5 kg)	
Modulus @ 40 °C:	2.4 GPa
Modulus @ 175 °C:	1.85 GPa
Stress @ yield:	75 MPa
Elongation @ yield:	6%
Elongation @ break:	14%
Glass Transition:	210 °C
Flammability @ 3.2mm:	V-0

Recommended Injection Molding Conditions

Drying:	150 °C / 4 hrs
Rear barrel temperature:	250 – 270 °C
Middle barrel temperature:	260 – 300 °C
Front barrel temperature:	300 – 350 °C
Nozzle temperature:	300 – 350 °C
Mold temperature:	150 – 200 °C