

## Properties of Plastic Components Used in PYREX® Glassware

The following tables are provided to serve as a general guideline for determining suitability of plastic resins used to make caps, o-rings, gaskets and other parts for some of Corning's laboratory glassware. The mechanical strength, flexibility, color, weight, and dimensional stability of these plastic components are affected to varying degrees by the chemicals with which they come in contact. Specific operating conditions, especially temperature and length of exposure will also affect their performance. It is strongly recommended that a trial run be performed under test conditions to evaluate the suitability of these parts for your applications.

**Table 1. Physical Properties of Plastic Components Used in Corning Glassware**

Property	Polypropylene	Polyethylene	Fortron	Viton	Teflon	PBT*
Recommended Working Temp.	0 - 40°C	0 - 40°C	0 - 40°C	0 - 40°C	0 - 121°C	0 - 180°C
Heat Distortion Temperature	135°C	121°C	200°C	200°C	121°C	180°C
Flexibility	Moderate	Moderate	Rigid	Mod. - Rigid	Rigid	Rigid
Transparency	Translucent	Opaque	Opaque	Opaque	Opaque	Opaque
Autoclavable	Yes	No	Yes	Yes	Yes	Yes

**Table 2. Chemical Resistance of Plastic Components Used in Corning Glassware\*\***

Chemical Class	Polypropylene	Polyethylene	Fortron	Viton	Teflon	PBT*
Acids, Weak	1	1	2	1	1	1
Acids, Strong	1	1	2	1	1	2
Alcohol	1	1	1	1	1	
Aldehydes	2a	1	1	1	1	1
Bases	1	1	2d	2	1	3
Esters	2	2	3e	2	1	2
Hydrocarbons, Aliphatic	2	3	1	1	1	2
Hydrocarbons, Aromatic	3b	3	1	1	1	2
Hydrocarbons, Halogen	3	3	1	1	1	-
Keytones	2c	2	3	3	1	3
<b>Key:</b> 1. Recommended 2. Suitable for most applications, however a trial run under specific operating conditions is recommended. 3. Not recommended				a. Rated 1 for formaldehyde. b. Rated 1 for phenol. c. Rated 1 for acetone. d. Rated 3 for ammonia. e. Rated 1 for acetates.		

\*PBT - Polybutylene Terephthalate; \*\*At room temperature for 24 hours

For additional product or technical information, please visit our web site at [www.corning.com/lifesciences](http://www.corning.com/lifesciences) or call at 1.800.492.1110. International customers can call at 978.635.2200.

**CORNING**