

Characteristics of Corning® Plasticware

CORNING

	Polystyrene	Polyethylene (High Density)	Polypropylene	Polycarbonate	Nylon	Polytetrafluoroethylene (PTFE)	Polyethylene Terephthalate (PET)
Physical Characteristics							
Basic Properties	Biologically inert, hard, excellent optical qualities	Biologically inert, high chemical resistance	Biologically inert, high chemical resistance, exceptional toughness	Clear, very tough, inert, high temperature resistance	Tough, heat resistant, machinable, high moisture vapor transmission	Biologically and chemically inert, high resistant slippery surface	Biologically inert, hard, tough, excellent optical qualities
Clarity	Clear	Opaque	Translucent	Clear	Opaque	Opaque	Clear
Autoclave Results	Melts	May distort	Withstands several cycles	Withstands one cycle	OK	OK	Melts
Heat Distortion Point	147-175°F 64-80°C	250°F 121°C	275°F 135°C	280-290°F 138-143°C	300-356°F 150-180°C	250°F 121°C	158°F 70°C
Burning Rate	Slow	Slow	Slow	Self-extinguishing	Self-extinguishing	None	–
Effects of Laboratory Reagents							
Weak Acids	None	None	None	None	None	None	None
Strong Acids	Oxidizing acids attack	Oxidizing acids attack	Oxidizing acids attack	May be attacked	Attacked	None	Oxidizing acids attack
Weak Alkalies	None	None	None	None	None	None	None
Strong Alkalies	None	None	None	Slowly attacked	None	None	Attacked
Organic Solvents	Soluble in aromatic chlorinated hydrocarbons	Resistant below 80°C	Resistant below 80°C	Soluble in chlorinated hydrocarbons; partly soluble in aromatics	Resistant	Resistant	Soluble in aromatic or chlorinated hydrocarbons
Gas Permeability of Thin Wall Products*							
O ₂	Low	High	High	Very low	Very low	–	Very low
N ₂	Very low	Low	Low	Very low	Very low	–	Very low
CO ₂	High	Very high	Very high	Low	–	–	Low

Portions of this table courtesy of Modern Plastics Encyclopedia. Most data are from tests by A.S.T.M. methods. Tables show averages or ranges. Many properties vary with manufacturer, formulation, testing laboratory, and the specific operating conditions.

*Obtained from a table which lists gas permeability in CC/100 sq. inches per 24 hrs./mil.

CORNING | FALCON® cellgro® AXIGEN® PYREX® GOSSELIN®

Corning Incorporated
Life Sciences
836 North St.
Building 300, Suite 3401
Tewksbury, MA 01876
t 800.492.1110, t 978.442.2200
f 978.442.2476
www.corning.com/lifesciences

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