

Sterilizing your reusable plastic labware

Chemicals and other sterilization methods can affect the strength, flexibility, surface appearance, color, dimensions or weight various plastics differently. These changes can include:

- 1 Stress on the polymer chain, with resultant reduction in physical properties
- 2 Physical change, including absorption of solvents
- 3 Stress cracking from internal and external stresses such as pressure or heat

Not all plastic can be sterilized in the same way. This chart will help you decide on a sterilization method to protect you, your Nalgene Labware, and your research.

Resin type	Abbreviation	Sterilization Method					UV light resistance
		Autoclaving	EtO gas	Dry Heat	Radiation	Disinfectants	
Ethylene Tetrafluoroethylene	ETFE	★	★		★	★	●
Fluorinated Ethylene Propylene	FEP	★	★	★		★	●
Fluorinated High-Density Polyethylene	FLPE		★		★	★	▲
High-Density Polyethylene	HDPE		★		★	★	▲
Low-Density Polyethylene	LDPE		★		★	★	■
Polycarbonate	PC	★	★		★	■	■
Polyethylene terephthalate copolymer	PETG		★		★	■	■
Perfluoroalkoxy	PFA	★	★	★		★	■
Polymethacrylate	PMMA				★	■	●
Polymethylpentene	PMP	★	★			★	■
Polypropylene	PP	★	★			★	■
Polypropylene Copolymer	PPCO	★	★			★	■
Polystyrene	PS		★		★	■	■
Polysulfone	PSF	★	★	★	★	★	■
ResMer™	ResMer™	★	★	▲	★	■	
Silicone Gaskets	SILI-g	★	★	★	★	★	
Thermoplastic Elastomer	TPE	★	★		★	■	
Silicone-Tubing 50/65	SILI-t 50/65	★	★	★	★	■	
Polyvinyl Chloride 180	NP PVC	★	★			■	■
Thermoplastic Polyurethane 280	PURS 280		★			■	
Low-Density Polyethylene 489	LLDPE 489		★			■	■
Polypropylene 689	PP 689	★	★			■	■
Perfluoroalkoxy 870	PFA 870	★	★	★		★	■
Fluorinated Ethylene Propylene 890	FEP 890	★	★	★		★	★
Polyvinyl Chloride 980	PVC 980		★				

★ Excellent ● Good ■ Fair ▲ Poor