

# Corning® Plastic Storage Bottles Selection and Use Guide

## Contents

Plastic Screw Cap Storage Bottles .....	2
Physical Properties of Corning Plastic Bottles .....	2
Comparison of Polystyrene and Polycarbonate Storage Bottles .....	3
Ordering Information .....	3, 4



CORNING

## Plastic Screw Cap Storage Bottles



Corning offers round polystyrene storage bottles in two designs (left and center) as well as new square polycarbonate storage bottles (right).

Corning's disposable polystyrene and polycarbonate storage bottles are designed for researchers who want to store sterile tissue culture media and sera, buffers, biological fluids and other aqueous solutions in convenient, disposable bottles. All plastic storage bottles offer:

- ▶ Convenience – sterile, ready to use with no clean up after
- ▶ 45 mm diameter caps provide an air tight seal and help minimize contamination and leaks

### ▶ Choice of three styles:

- Corning® square polycarbonate bottles are break resistant and autoclavable or microwavable
- Corning easy grip round polystyrene bottles have a low profile for easier gripping and greater stability
- Costar® traditional round bottles

## Physical Properties of Corning® Plastic Bottles

	CHEMICAL RESISTANCE		Sterilization	Thermal Durability
	Recommended	Not Recommended		
Polycarbonate Plastic Bottles	Weak acids, weak alkali, alcohols	Strong acids, strong alkali, ketones, aliphatic, aromatic and chlorinated hydrocarbons	Autoclave once	135°C
Polystyrene Plastic Bottles	Weak acids, strong alkali, alcohols	Strong acids, ketones, aliphatic, aromatic and chlorinated hydrocarbons	Do not autoclave	80°C
Polyethylene Caps	Acids, alkali, aldehydes, solvents, alcohol, oils	Aliphatic, aromatic, and chlorinated hydrocarbons, oxidizing acids	Do not autoclave	121°C

<sup>1</sup>Sterilization time should not exceed 15 minutes at 121°C (250°F). Drying time should not exceed 15 minutes at 110°C (230°F).

\*Thermal up shock or down shock may cause breakage.

## Comparison of Polystyrene and Polycarbonate Storage Bottles

	Costar® Round Polystyrene Storage Bottles	Corning® Easy Grip Round Polystyrene Storage Bottles	Corning Square Polycarbonate Storage Bottles
Bottle Material	Polystyrene	Polystyrene	Polycarbonate
Cap Color	Red	Orange	Orange
Cap Material (Maximum Temperature, C)	High Density Polyethylene (121°)	High Density Polyethylene (121°)	Polypropylene (140°)
Autoclavable† (121°C, 15 psi, 20 minutes)	No	No	Yes, once†
Maximum Recommended Working Temperature (C)	70°	70°	130°
Minimum Recommended Working Temperature (C)*	-20°*	-20°*	-80°*
Use with Corning Vacuum Filters	Recommended	Recommended	Not Recommended
Available sizes:	125 mL, 250 mL, 500 mL and 1L	150 mL, 250 mL, 500 mL and 1L	125 mL, 250 mL, 500 mL and 1L
Dry Heat Sterilization	No	No	No
Max Temp.	64-80°C	64-80°C	138-143°C
Freezing	OK to -20°C	OK to -20°C	OK To -80°C
CO <sub>2</sub> Gas Permeability	High	High	Medium
Shatter Resistance	Medium	Medium	High
Microwave with Aqueous Liquid	No	No	Yes
pH Stability	Short	Short	Medium

† Autoclaving will reduce mechanical strength.

\* Bottle performance in freezers depends on both the temperature and contents in the bottle. It is strongly recommended that a trial run be performed under actual conditions to test the suitability of the bottles for frozen storage.



## Corning® Plastic Storage Bottles Ordering Information

Cat. No.	Capacity (mL)	Shape	Bottle Material	Neck Dia. (mm)	Qty/ Bag	Qty/ Cs
431430	150	Square	Polycarbonate	45	1	24
431431	250	Square	Polycarbonate	45	1	24
431432	500	Square	Polycarbonate	45	1	24
431433	1000	Square	Polycarbonate	45	1	24
431175	150	Easy Grip Round	Polystyrene	45	2	24
430281	250	Easy Grip Round	Polystyrene	45	2	24
430282	500	Easy Grip Round	Polystyrene	45	2	24
430518	1000	Easy Grip Round	Polystyrene	45	2	24
8388	125	Round	Polystyrene	45	1	24
8390	250	Round	Polystyrene	45	1	12
8393	500	Round	Polystyrene	45	1	12
8396	1000	Round	Polystyrene	45	1	12

## Corning® Plastic Storage Bottles Ordering Information (Continued)

### Optional Caps and Septa



Cat No.	Description	Thread Finish	Qty/Cs
1395-45HTSC	Cap, open top PBT high temperature	GL45	10
1395-45SS	Septa, Silicone	NA	10
1395-45TS	Septa, PTFE-Faced Silicone	NA	10

Note: most GL45 threaded caps designed for glass storage bottles use a different sealing design and will not give a secure seal if used on these plastic bottles.

Caution: These square polycarbonate bottles should NOT be used with bottle top filter units, or in other applications involving vacuum pressure, as breakage may occur. DO NOT tighten caps immediately after autoclaving as the vacuum resulting from cooling can cause breakage.

### Bottle Top Vacuum Filters



- Individually packaged, sterile and certified nonpyrogenic
- Adaptors are color coded by membrane type
- Fit most glass and plastic media storage bottles with GL45 caps
- Do not use on square glass bottles or glass bottles larger than 2L

Cat. No.	Membrane	Volume (mL)	Neck Size (mm)	Pore Size (µm)	Color-Coded Adapter	Qty/Cs
<b>150 mL Capacity, 50 mm Diameter Membrane</b>						
430626	CA	150	45	0.22	Orange	48
430627	CA	150	45	0.45	Orange	48
431161	PES	150	45	0.22	Yellow	48
<b>500 mL Capacity, 70 mm Diameter Membrane</b>						
430049	NY	500	45	0.2	Red	12
430513	CA	500	45	0.22	Orange	12
430514	CA	500	45	0.45	Orange	12
431118	PES	500	45	0.22	Yellow	12
<b>1,000 mL Capacity, 90 mm Diameter Membrane</b>						
430015	CA	1,000	45	0.22	Orange	12
431174	PES	1,000	45	0.22	Yellow	12

PES = Polyethersulfone, CA = Cellulose Acetate, CN = Cellulose Nitrate, NY = Nylon.

For additional product, technical, or distributor information, please visit [www.corning.com/lifesciences](http://www.corning.com/lifesciences) or call 800.492.1110. Customers outside the United States, please call +1.978.442.2200 or contact your local Corning sales office listed below.

# CORNING

#### Corning Incorporated Life Sciences

Tower 2, 4th Floor  
900 Chelmsford St.  
Lowell, MA 01851  
t 800.492.1110  
t 978.442.2200  
f 978.442.2476

[www.corning.com/lifesciences](http://www.corning.com/lifesciences)

#### Worldwide Support Offices

##### ASIA / PACIFIC

**Australia**  
t 61 2-9416-0492  
f 61 2-9416-0493

**China**  
t 86 21-3222-4666  
f 86 21-6288-1575

**Hong Kong**  
t 852-2807-2723  
f 852-2807-2152

##### India

t 91-124-235 7850  
f 91-124-401 0207

##### Japan

t 81 (0) 3-3586 1996/1997  
f 81 (0) 3-3586 1291/1292

##### Korea

t 82 2-796-9500  
f 82 2-796-9300

##### Singapore

t 65 6733-6511  
f 65 6861-2913

##### Taiwan

t 886 2-2716-0338  
f 886 2-2716-0339

##### EUROPE

**France**  
t 0800 916 882  
f 0800 918 636

##### Germany

t 0800 101 1153  
f 0800 101 2427

##### The Netherlands

t 31 20 655 79 28  
f 31 20 659 76 73

##### United Kingdom

t 0800 376 8660  
f 0800 279 1117

##### All Other European Countries

t 31 (0) 20 659 60 51  
f 31 (0) 20 659 76 73

##### LATIN AMERICA

##### Brasil

t (55-11) 3089-7419  
f (55-11) 3167-0700

##### Mexico

t (52-81) 8158-8400  
f (52-81) 8313-8589