

Caps for Corning® and Costar® Plastic Labware

Technical Bulletin

CORNING



Vented caps allow faster gas exchange without risking contamination.



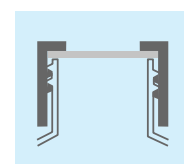
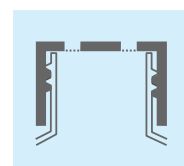
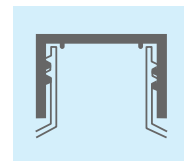
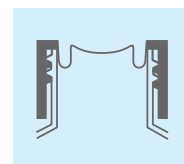
Corning 1L and 3L Disposable Spinner Flasks with the optional Aseptic Transfer Caps attached.



CentriStar caps offer an easy-on/easy-off flat top cap design for improved ergonomic handling and improve grip.

Corning features a variety of cap designs on our disposable plastic labware. Most of these caps are made from high density polyethylene and should not be autoclaved. Caps for the polycarbonate Erlenmeyer flasks and square polycarbonate storage bottles are made from polypropylene and can be autoclaved once. Due to their unique storage requirements, cryogenic vials are described in a section below.

- 1. Plug Seal Caps** feature flexible plugs designed to push against the inside rim of the vessel, providing a liquid- and gas-tight seal. These caps are available on some cell culture flasks, culture tubes, roller bottles, centrifuge tubes and all round plastic storage bottles. This cap design was a Corning innovation that was first used in 1974.
- 2. Solid Flat Top (Phenolic-Style) Caps** use a ring on the inside of the cap to seal against the inside rim of the vessel. These caps do not have liners and are available on some plastic cell culture flasks, roller bottles, CellSTACK® chambers, spinner flasks, Erlenmeyer flasks and all CentriStar™ centrifuge tubes.
- 3. Vented Caps** contain a 0.2 µm nonwetting (hydrophobic) membrane sealed to the cap, providing consistent, sterile gas exchange while minimizing the risk of contamination. These caps are highly recommended for use in all CO₂ incubators, especially for long-term use. They are available on cell culture flasks, roller bottles, Erlenmeyer flasks and CellSTACK chambers. They are available as an option for spinner flasks. Vented caps were a Corning innovation first used in 1988.
- 4. Septum Caps** allow for adding or removing cells and medium with a blunt tip cannula while maintaining a closed sterile environment. The septum is presplit to prevent coring by the cannula and is validated for multiple entries. They are available on RoboFlask™ vessels.
- 5. Aseptic Transfer Caps** are for filling disposable 1L, 2L and 3L Erlenmeyer flasks, 500 mL and 1L spinner flasks and CellSTACK chambers. These transfer caps will both reduce contamination and enhance the productivity of your cell culture operations.



Cap Availability for Plastic Corning Vessels

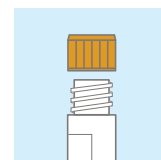
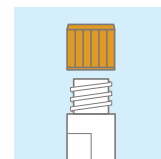
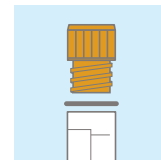
Type of Cap	Solid Flat Top Caps	Plug Seal Caps	Vented Caps	Septum Caps	Aseptic Transfer Caps
Cell Culture Flasks	■	■	■		
Roller Bottles	■	■	■		
Culture Tubes		■			
CellSTACK Chambers	■				■*
Spinner Flasks	■		■*		■*
Erlenmeyer Flasks	■		■		■*
RoboFlask Vessels	■			■	
Centrifuge Tubes	■	■			
Round Storage Bottles		■			
Square Storage Bottles	■				

*Optional – These caps must be purchased separately.

Caps for Corning® and Costar® Plastic Labware

There are three types of polypropylene caps used on Corning cryogenic vials:

- 1. Internal threaded stopper style caps** are leak-free when properly tightened. The silicone rubber washers are designed to seal best when only slightly compressed. Excessive tightening of the cap will cause the washer to bulge, resulting in poor sealing. These caps are not leak proof when used submerged in liquid nitrogen and should not be used in this manner due to the danger of explosion.
- 2. External threaded rim seal caps** also use silicone rubber washers for sealing. The silicone rubber washers are designed to seal best when only slightly compressed. Excessive tightening of the cap will cause the washer to bulge, resulting in poor sealing. These caps are not leak proof when used submerged in liquid nitrogen and should not be used in this manner due to the danger of explosion.
- 3. External threaded plug seal caps** feature flexible plugs designed to push against the inside rim of the vial. These caps are not leak proof when used submerged in liquid nitrogen and should not be used in this manner due to the danger of explosion.



Cryogenic Vial Safety Tip

Appropriate safety equipment (gloves, face shields, biological safety cabinets, hoods, etc.) should always be used to protect personnel when removing plastic vials or glass ampules from cryogenic storage systems.

Cap Availability for Corning Cryogenic Vials

Cap Style	1.2 mL	2.0 mL	4.0 mL	5.0 mL
External Threaded Rim Seal Caps with Washer	■	■	■	■
Internal Threaded Stopper Style Caps with Washer	■	■	■	■
External Threaded Plug Seal Caps, no Washer		■		

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