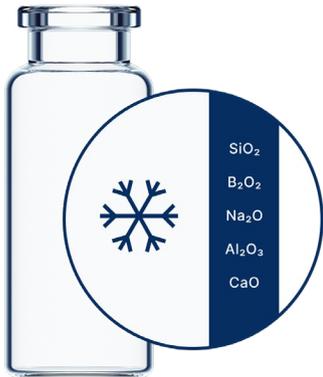




EVERIC[®] freeze

Pharmaceutical glass vials for deep-cold temperature applications



- Applications such as gene therapies or mRNA vaccines require deep-cold storage. In many cases this increases the risk for breakage.
- Influencing factors are filling height, freeze-thaw procedure parameters, and the container itself: its dimensional and cosmetic quality. During freezing, the container must withstand a higher internal pressure, for which it ideally needs to be defect-free and optimized for the greater impact.
- EVERIC[®] freeze combines the highest level of dimensional accuracy and cosmetic quality, as seen with EVERIC[®] strong, with geometrical optimization to improve strength for frozen applications.



FIOLAX[®] OS (Optimized Strength) glass tubing with tighter scratch and fissure specification



Unchanged glass composition – Type I Borosilicate Glass



Outer geometry and CCI-relevant parameters 100 % within ISO specification



Improved forming process (tighter tolerances in critical areas) and specialized inspection (100 % bottom inspection via camera and sensor)



Higher wall thickness improves resistance to internal pressure



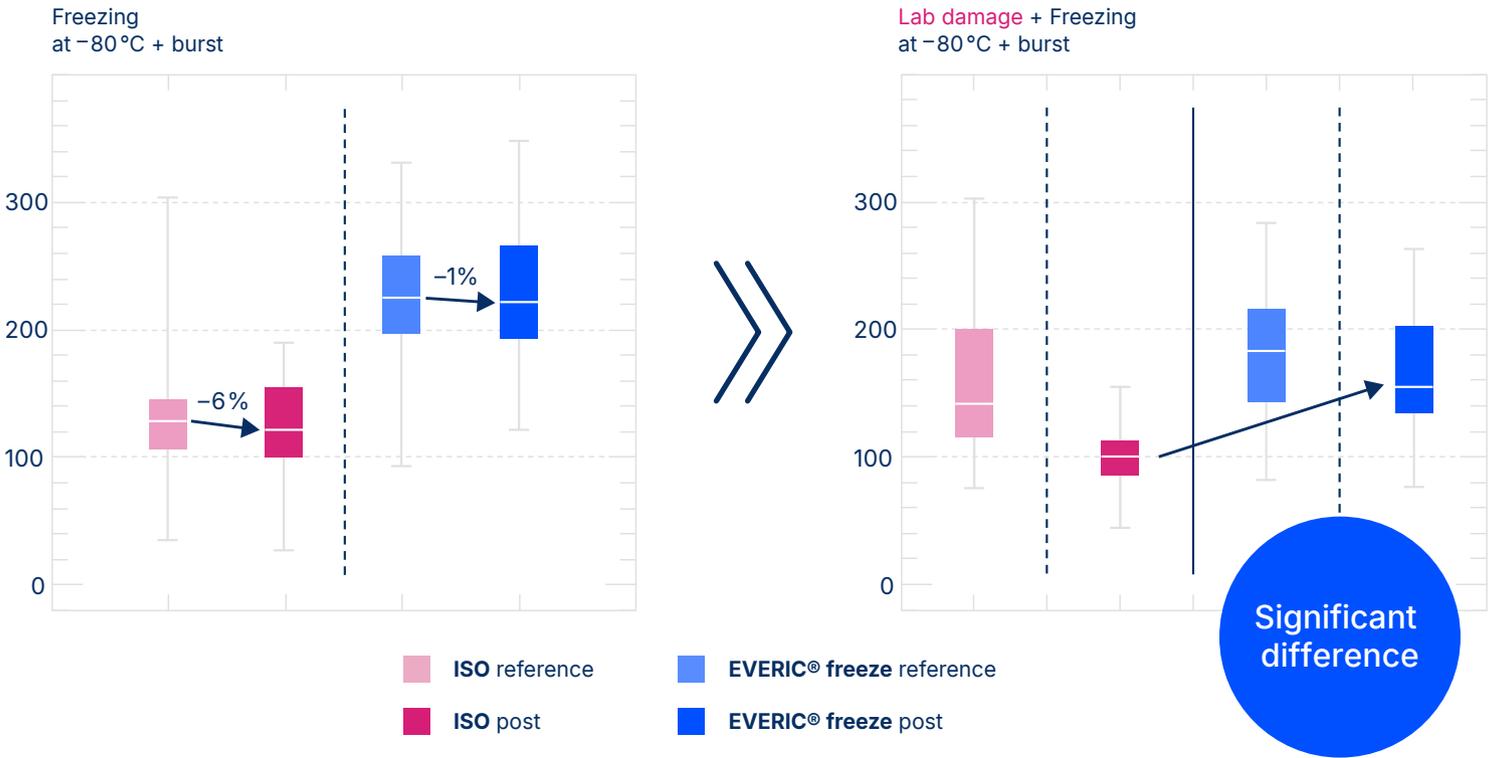
“Flawless” processing: no glass-to-glass contact, automated back-end (packaging robot), packaged with separator

Optimized strength within existing outer ISO tolerances with unchanged glass matrix

No re-registration necessary

Verification: EVERIC® freeze shows improved burst strength performance after fill-and-finish process and storage at -80 °C

Results burst pressure 2 mL: ISO (TopLine) vs EVERIC® freeze – Box-whisker plot



General ordering information											
Quality level	TopLine										
Packaging	Tray with divider										
Possible combinations	EVERIC® freeze can be combined with EVERIC® smooth										
Palletizing	Standard Euro pallet (1200 x 800 mm) contains 15–27 layers of 12 trays each										
Formats	2 mL	3 mL	4 mL	6 mL	8 mL	10 mL	15 mL	20 mL	25 mL	30 mL	
Pieces per tray (non sterile)	187	187	187	126	126	104	104	77	77	77	

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