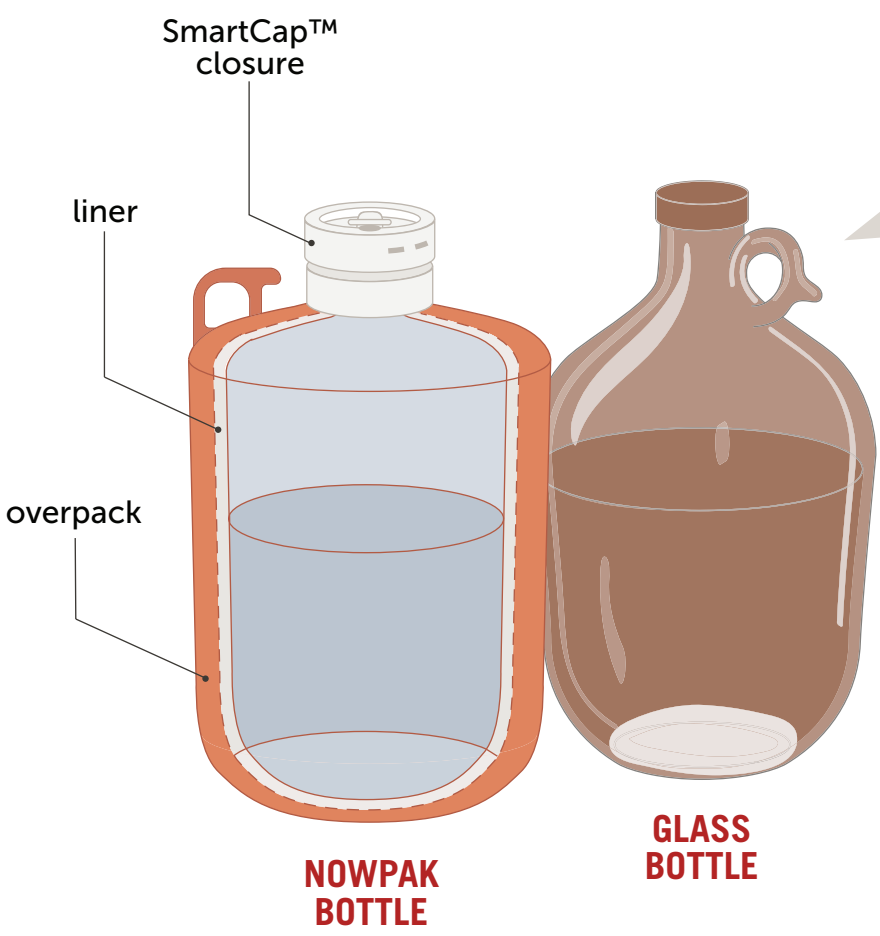
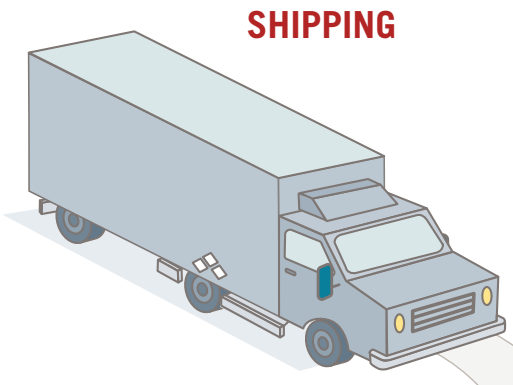
Entegris NOWPak® Liner-based Bottle Systems:
A Safe Alternative to Glass Bottles

Glass bottles have been used ubiquitously for chemical delivery and storage for decades. However, they present problems in safety and integrity of the chemistries they contain, particularly for semiconductor fabs manufacturing modern devices. Entegris' NOWPak liner-based bottle systems provide a safe, cost-effective alternative to glass. Here's how:

BENEFITS OF NOWPAK BOTTLES VS. GLASS BOTTLES



SHIPPING



NOWPak bottles are lighter and cheaper to transport, and also will not break.

INSPECTION

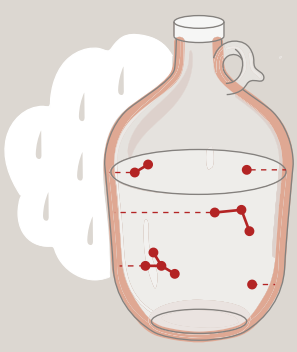
NOWPak containers arrive clean and ready to use.

MAJOR PROBLEMS WITH GLASS BOTTLES

BREAKAGE

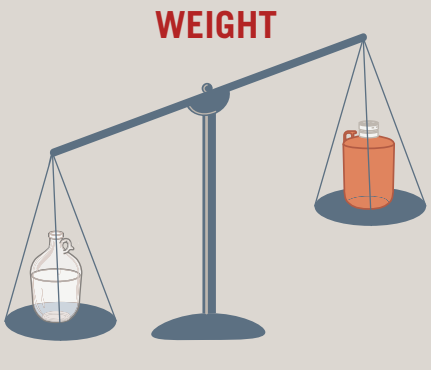
Glass bottles break easily, leading to costly spills and possible fab shutdowns.

CONTAMINATION



Trace metals from silicon-based glass can leach into chemistries. Also, glass bottles that must be vented invite environmental contamination.

WEIGHT

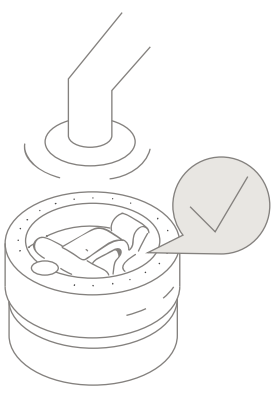


Glass containers are 20% heavier than NOWPak bottles, increasing shipping costs and user fatigue.

NOWPAK BOTTLE POINT-OF-USE BENEFITS

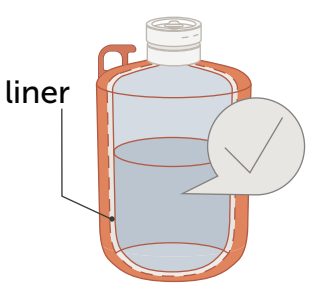
UNBREAKABLE

Shatterproof polyethylene external shell is lighter and stronger than glass. Spill hazards from breakage are eliminated.



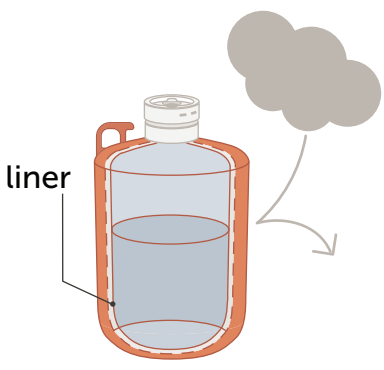
SMARTCAP CLOSURE

To ensure the correct chemical is dispensed, unique key code will only mate with matching key code connector.



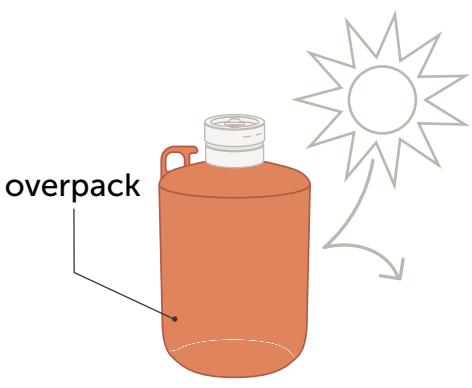
CHEMICAL COMPATIBILITY

PTFE liner material is fully inert and will not react with most production chemicals.



ENVIRONMENTAL PROTECTION

PTFE liner has a barrier feature that isolates chemistry from external gases. There is no need for a second pressure vessel.



UV PROTECTION

Outer shell provides superior protection from ultraviolet exposure, protecting photoresist chemicals from permanent damage.

WASTE REDUCTION

Outer shell is fully recyclable material, and the inner liner is lightweight and easily disposed of.