

Cesa™ Solvent Barrier Technology for HDPE

Blended barrier technology for extrusion blow molding (EBM) bottles with validated performance at 12–20% let-down ratio (LDR).

SAMPLE	TOLUENE: 7 DAYS	MINERAL SPIRITS: 90 DAYS
12–20% Avient Solution	2–6x barrier improvement over control	5–10x barrier improvement over control

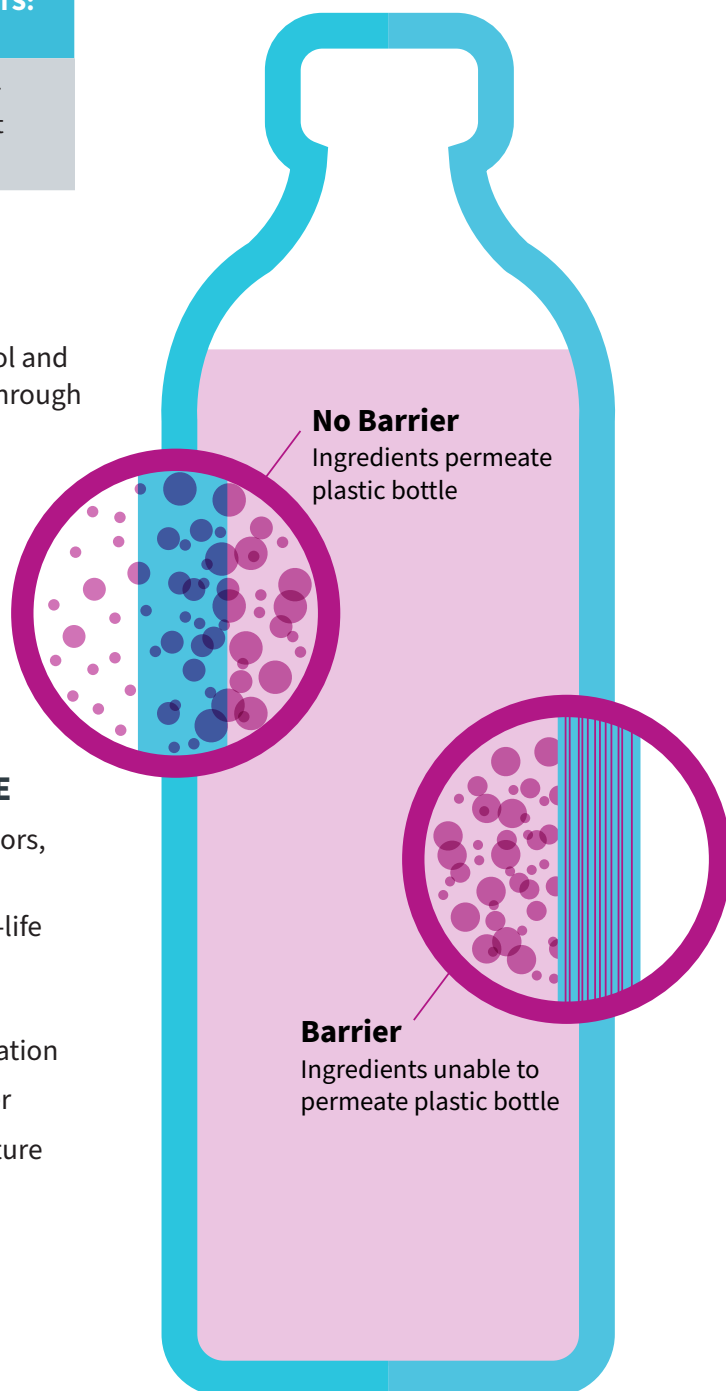
Internal testing using ASTM D2684-10

KEY CHARACTERISTICS

- Barrier performance consistently outperforms control and commercial solution at comparable LDR (validated through internal screening and customer trials)
- Flexibility to run on multiple machines without major adjustments
- Application Development Technical Service (ADTS) support for trials and scale up
- FDA pending
- Color is dosed separately

FACTORS IMPACTING BARRIER PERFORMANCE

- **Formulation ingredients:** Emulsifiers, solvents, flavors, and fragrances
- **Shelf-life requirements:** Products with higher shelf-life expectations require greater barrier protection
- **Packaging shape:** Packages designed with a higher surface area often lose more content through permeation
- **Wall thickness:** Thicker walls provide a better barrier
- **Processing:** Recommend 435°F processing temperature and screw design with fewer mixing elements





PRODUCT BENEFITS

- **Ease of use**
 - Works in monolayer HDPE bottles
 - Requires no specialized equipment
 - Compatible with regrind
- **Non-PFAS* solution**
 - Compliant with emerging regulations
- **Excellent barrier performance**
 - Prevents container paneling
 - Maintains label adhesion
 - Extends shelf life
- **Operations & design**
 - Low LDR for cost efficiency
 - Safe to handle during processing
 - Potential for lightweighting
 - Design freedom for brand aesthetics
- **Internal prescreening capability for customer formulations**

* manufactured without the use of PFAS-based materials

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