



Continuum[™]
bimodal polyethylene resins by 

**USING DOW
CONTINUUM[™]
TO INCREASE
PCR CONTENT IN
BLOW MOLDED
CONTAINERS**

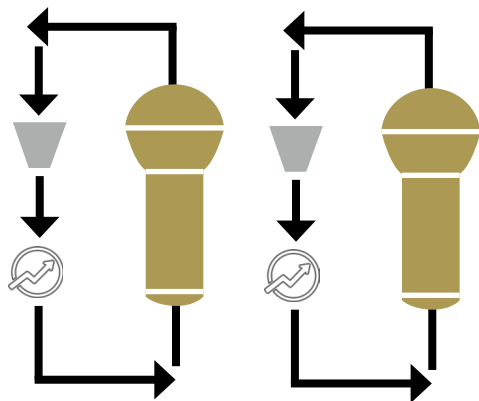


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DOW CONTINUUM™ resins are bimodal HDPE products produced with a unique dual reactor gas phase process. CONTINUUM™ bimodal resins are essentially a combination of a high molecular weight polymer and a low molecular weight polymer, and the dual reactor process allows for more of the comonomer to be incorporated into the high molecular polymer, where it can provide the most benefit and improvement on physical properties. These bimodal resins offer substantial improvements in environmental stress crack resistance (ESCR), drop impact performance, top load strength, and the ability to lightweight blow molded containers. CONTINUUM™ bimodal polyethylene can provide improved performance and longer life in blow molded bottles and containers, even in demanding environments where ESCR is critical.

DUAL REACTOR TECHNOLOGY



Because sustainability and the circular economy is critical to most processors, brand owners, and end users, being able to incorporate higher levels of post-consumer recycled material (PCR) is a definite advantage. DOW CONTINUUM™ bimodal polyethylene can help blow molders to utilize higher levels of PCR while maintaining, or even increasing, properties and performance, especially as it relates to Environmental Stress Cracking Resistance. In addition, DOW CONTINUUM™ can offer the ability to lightweight, offering additional sustainability opportunities by reducing the amount of material being used in the containers.

- Low levels of PCR content (20% to 25%) in unimodal HDPE can result in containers just barely meeting minimum Environmental Stress Cracking Resistance (ESCR) performance requirements.
- Adding high levels of PCR content (75% to 80%) to traditional, unimodal HDPE very negatively affected the Environmental Stress Cracking Resistance (ESCR).
- Using Dow CONTINUUM™ bimodal HDPE resin in place of unimodal HDPE allows for high levels of PCR content (80%) while increasing Environmental Stress Cracking Resistance (ESCR) by over 25%.
 - In addition:
 - Top load performance of the container was maintained.
 - The white bottle appearance was preserved.
 - Processing speeds and output were maintained.
 - Drop-impact strength was preserved.

DOW CONTINUUM™ products are available in a range of grades with a Melt Index of 0.04 to 0.28 g/10 minutes (High Load Melt Index of 13 to 27 g/10 minutes) as well as grades with a Melt Index of 1.5 and 2.5 g/10 minutes. Density values range from 0.949 g/cm³ to 0.963 g/cm³ so there is a product to meet virtually any requirement.

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