COMPARING SUSTAINABLE PACKAGING OPTIONS

Sustainability is top of mind for today's consumers, and savvy brands will leverage primary packaging to tell their story. Every brand will have unique goals. At TricorBraun, we help our customers navigate this journey by evaluating various materials and methods in order to provide the most sustainable packaging solution for their product.

DISCLAIMER: This is meant to be a general guide. Pricing scale is extremely relative to the size of the package, tooling, and any material adders for compatibility. Contact us for the most up-to-date information.

	MATERIAL SOLUTIONS	CONSIDERATIONS
$\widehat{}$	NON-PLASTIC	
MOST EXPENSIVE LEAST EXPENSIVE	PAPER	 Breaks down faster and is compostable in some forms Can be 100% recyclable if no coatings or films are required for the formula
		PCR (POST-CONSUMER RESIN)
	PET	 Easily recyclable Natural color has gray tint Odor can be present
	PE	 Maintains barrier properties of virgin PE Limited supply available in natural color Odor can be present
	PP	 Limited supply Works best with dark colorant Odor can be present
	NON-PLASTIC	
	GLASS	100% recyclable and reusableFragile and heavier to ship
	ALUMINUM	 100% recyclable, durable and ideal for reuse Requires higher MOQs Limited supply
	CHEMICALLY RECYCLED RESINS	
		100% recycled contentComparable in quality and color to virgin resin
	ALTERNATIVE RESINS	
	OCEAN BOUND	 Reduces plastic waste bound for the ocean Limited supply available Cost is typically 2X virgin resin
	BIO-RESINS	 Reduces use of petroleum-based resins Can be added in increments as low as 5% > 5% bio-resin is coded as #7 (non-recyclable) Requires extensive stability and compatibility testing Cost is typically 3X virgin resin
	BIODEGRADABLE ADDITIVES	
	FLEXIBLES	
	HDPE	 Can improve biodegradability or compostability Low durability and barrier properties > 5% bio-resin coded as #7 (non-recyclable) Supply and scalability can be a limiting factor
	LDPE	
\checkmark	PP	

OTHER SOLUTIONS	CONSIDERATIONS
MONO-MATERIAL	 Made with 1 resin, or a combination of resins from the same family Optimal for single-stream recycling Limited supply available for multi-component products
ALL PLASTIC	 All components made of plastic, but resins types can differ No metal May be easier to recycle than mixed-material products (validate with testing) Pricing can be higher than mixed-materials products Major retailers are trending towards all-plastic requirements
LIGHTWEIGHTED	 Reduces unnecessary plastic More efficient to ship Testing required to assure package integrity
REFILLABLE & REUSABLE	Reduces single-use packaging materialsShould be easy to clean
DESIGN OPTIMIZATION	 Improves pack out Reduces shipping emissions Increases filling line efficiency
OPERATIONAL IMPROVEMENTS	 Optimize logistics to reduce carbon footprint Reduce downtime and/or waste of unnecessary resources

Let's talk packaging!

Email us at <u>marketing@tricorbraun.com</u> to get started on your sustainable solution today.

