

Recycled Content

Recycled content is readily available in many packaging materials, including corrugated cartons, paperboard, molded pulp, newsprint and kraft paper void fills, aluminum, steel, glass and some plastics. In fact, it is standard practice for many of these materials to include some level of recycled content. Regardless, varying levels of recycled content are commonplace, so you may be able to increase the amount of recycled content in your packaging. The following are some issues to consider when evaluating recycled content as a packaging option:

Post-consumer vs. total recycled content. “Recycled content” can mean different things to different people.

- The term “post-consumer” refers to end products that have been used by the consumer and then separated from wastes for the purpose of recycling. Post-consumer materials include materials recycled both by both households as well as non-residential end-users such as offices, grocery stores, and restaurants. Examples include plastic bottles, block polystyrene foam, glass and aluminum containers, old newspapers, and old corrugated cartons.
- Distinct from post-consumer content is “pre-consumer” content, which includes waste left over from converting and printing processes, prior to use by an end-consumer.

When reporting recycled content, some manufacturers report total recycled content (combining pre- and post-consumer) while others report post-consumer only. Both pre-consumer and post-consumer recycled materials provide the environmental benefits of displacing virgin feedstocks (see below). Using post-consumer content has the added benefit of providing markets for materials separated for recycling by consumers.

Performance and cost considerations. Recycled packaging may perform differently in high-speed applications (such as printing and filling of consumer products) and so some equipment adjustments may be required. Performance differences vary by material but the fact that recycled content is used today by leading companies in all industry sectors indicates that performance challenges can be overcome.

Similarly, cost differentials vary by material and also are a function of virgin commodity prices as well as energy prices. The relationship is usually such that as virgin commodity or energy prices rise, recycled feedstocks are increasingly favored. Again, the widespread use of recycled content in packaging today indicates that financial barriers, when present, can be overcome.

Adding recycled content to paper- and plastic- packaging may necessitate an increase in packaging weight. For example, recycled paper fibers are usually shorter and therefore weaker than virgin fibers. However, many of the environmental burdens associated with increased weight (if small) are often made up for by the environmental benefits of using recycled feedstock.

Unfortunately, a few packaging suppliers create or perpetuate myths in order to discourage customers from increasing the use of recycled content in packaging. For example, a carton supplier told one company, with an order fulfillment center in the U.S. Southeast, that they “shouldn’t use post-consumer content in their carton, because it would decrease the structural integrity of cartons exposed to humidity.”

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However, this claim proved to be unsupported. Cartons with high post-consumer content are used throughout the U.S. without performance flaws. If a claim doesn't sound right, a second opinion may be in order.

Environmental benefits. Generally speaking, replacing virgin content with recycled feedstocks in packaging can reduce environmental burdens. Recycled feedstocks typically require less energy than virgin resources to make into packaging, and reduced energy use often translates into lower atmospheric and waterborne emissions. Using recycled content in packaging typically has greenhouse gas benefits as well. The specific environmental benefits and burdens of recycled vs. virgin feedstocks vary by material.

These generalities apply when comparing different levels of recycled content within the same material (for example, 30% recycled polyethylene vs. 0% recycled polyethylene). They do not always hold true when comparing competing materials (for example, 50% recycled aluminum vs. 0% recycled polyethylene). Just because a material is made with high levels of recycled content does not guarantee that it has lower environmental burdens than a different material made with little or no recycled content, particularly if the competing material weighs considerably less. [Click here](#) for an example.

Comparisons of energy requirements, production solid wastes, and 80 different atmospheric and waterborne emissions for low- vs. high- levels of recycled content in corrugated, unbleached kraft, newsprint, LDPE, LLDPE, and expanded polystyrene are included in Chapter 2 of [this report](#).

Be careful to avoid misleading marketing claims. Some customers will want to know whether your packaging contains post-consumer content. However, be aware that the Federal Trade Commission will enforce against [environmental marketing claims](#) that are deceptive.

Recycled content in food-contact packaging. Special care must be taken when using recycled content plastic in packaging that comes into direct contact with food. The U.S. Food and Drug Administration (FDA) considers each proposed use of recycled plastic on a case-by-case basis and issues informal advice as to whether the recycling process is expected to produce plastic suitable for food-contact applications. FDA has prepared a document entitled [Points to Consider for the Use of Recycled Plastics in Food Packaging: Chemistry Considerations](#) that will assist manufacturers of food packaging in evaluating processes for recycling plastic into food packaging.

Other information. The Alliance for Environmental Innovation has prepared a document specific to the benefits of using recycled content in paperboard, such as folding cartons. [Click here](#) for details.

Case study. One consumer products company that has made significant progress with recycled material use is [Aveda](#). The company reports that by working closely with its suppliers, it is generally able to purchase packaging using post-consumer recycled content at a cost equivalent to or lower than the cost of comparable packaging made of virgin materials.

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