Sustainability
Polymer Fusion Labeling = 100% Clean Recyclate

"To be profitable, recycling processors must make a product that when sold creates profit that supports the rest of the manufacturing chain."

Dave Cornell, technical consultant to the Association of Plastic Recyclers

As the most widely used plastics in the world today, it's fitting that polyolefin thermoplastics such as polyethylene and polypropylene *(including all subgroups and derivatives)* happen to be the most recycled. Polyolefins are not only used in commodity products such as milk jugs, shampoo bottles, laundry soaps and more, but also in the production of durable goods products within industries that serve Automotive, Reusable Packaging, Medical, Waste & Recycling, Consumer and Juvenile Products, and more.

While polyethylene isn't biodegradable, it can be recycled and re-purposed into new products up to ten times while maintaining structural integrity. That a single polyethylene durable good will be used 3-10 years on average, that's an estimated 30-100 years of useful, non-landfill life before the plastic must be retired.

While recycling polyethylene is a relatively simple and cost-effective process, recyclers need clean recyclate (no contaminants). Grade A bales (94-95% indicated plastic) get the best price and are most sought after by manufacturers who consume the recycled polyethylene for use into producing new products.

Paper-based pressure-sensitive adhesive labels, hot stamp foils, screen print inks and adhesives along with other coatings, substrates and adhesives are all considered contaminants that must be removed prior to recycling operations. On the plastics recycling scale of 1-7, these methods are considered a #7 "miscellaneous, rarely accepted" due to the non-compatible materials used.

The labels most commonly utilized, pressure sensitive adhesive labels (PSAs), pose a significant waste issue. When these labels fail in the field, they transform into litter, contributing to environmental pollution as non-biodegradable physical waste. Moreover, they release toxic chemicals and additives from their inks, coatings, adhesives, and substrates, further exacerbating environmental concerns[1]. Additionally, during recycling activities, the removal of these labels leads to the generation of waste due to their incompatibility with the recycling process[2]. Both problems are highly unsustainable and contribute to environmental challenges.

When parts are ground with non-compatible labels intact (which happens often), not only does this regrind require inventory management (time, labor, additional costs), it can only be used in a 5% regrind to 95% virgin ratio when making new products adding more unnecessary costs to already complex recycling operations.

Not only is Polymer Fusion Labeling Technology from Mold In Graphic Systems® and Polyfuze® Graphics Corporation fully compatible with polyolefin thermoplastics, they are totally "green", recyclable at end-of-life with the durable product they're applied to. Recycling processors get 100% clean recyclate with no worry about contaminants, removal, landfill waste, or extra cost. Only 100% clean, profitable recyclate to support the ever growing sustainable supply chain.

Contrary to Kermit the Frog's famous saying, "it's not easy being green," ***it actually is easybeing green... and cost efficient, and compatible, and less wasteful, and more sustainable."***

[1] Are Stickers Bad For The Environment; 2022. https://thinkofthepandas.com/2022/04/26/are-stickers-bad-for-the-environment/
Are Stickers Eco-Friendly? 16 Facts You Should Know. https://citizensustainable.com/stickers-eco-friendly/

[2] Do Labels Need to Be Removed for Plastic Recycling; 2022. https://www.plasticplace.com/blogs/blog/do-labels-need-to-be-removed-for-plastic-recycling
Recycling Quandry: What To Do About Labels on Plastic; 2023. https://earth911.com/home-garden/recycling-quandary-what-about-labels-on-plastic/

mold in GRAPHICS® polyfuze

Solving Problems One Label At A Time