Labeling Technology Reinvented: Meeting the Needs of the New Age of Shopping

An Avery Dennison White Paper

AVERY DENNISON

Label and
Packaging Materials

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The Challenge and Opportunity of the E-Commerce Explosion

The synchronous advancement of e-commerce platforms and the proliferation of the customers who use them is placing new demands on the packaging industry. Companies are working overtime to make products and catalogs available online, anytime. Customers have responded to that by increasing their demands for fast, free shipping. To respond to this explosion of consumer pressure, retail companies are in need of label technology that can handle the fast-moving economy. Wrapped up in this battle to feed the changing consumer appetite is the ultimate need to manage the waste stream.

The trends have been converging for some years now. Online retail has grown 300 percent between 2000 and 2018, according to the U.S. Commerce Department. And that figure is expected to only increase; the e-commerce sector grew by 11.4 percent in 2018, and is expected to grow 21 percent in 2019. In the U.S., companies shipped 14 billion parcels that year alone.

As with many segments of the modern economy, e-commerce's growth is driven by the proliferation of mobile devices. Increasingly, brands are finding that the more they cater to a customer base that is dominated by mobile shoppers, the better their results.

All of this activity illustrates the urgency of the modern online economy. A recent study highlights those trends; a survey by Alix Partners, conducted in late 2017 showed that the maximum delivery time expectations have contracted. In fact, the study showed that while back in 2012, shoppers would accept a maximum delivery time of 5.5 days, by 2017 those expectations had ratcheted down by a full day to 4.5 days' time.

The Recyclability Challenge

As e-commerce grows, so does the demand for clean, fully recyclable packaging and labeling. The boom in e-commerce dovetails with a dramatic reduction in landfill space.

New efforts to stem the tide are underway at the regulatory level. The U.S. Postal Service began a project in 2017 intended to, among other things, establish a recyclability metric to identify what adhesives might be considered environmentally benign. These adhesives had to meet the agency's guidelines for postage stamp adhesives, but they also had to satisfy the paper industry's recyclability metrics.

The U.S. Postal Service standards compelled the Tag and Label Manufacturing Industry (TLMI) to create their own Standards for Recycling Compatible Adhesives. Doing so allows the USPS and the TLMI to sync up their requirements of manufacturers.

The paper recycling industry faces a number of challenges during the processing of recycled paper. Perhaps the largest problem is also the smallest element. During processing, pressure-sensitive adhesives combined with recycled paper can become small particles, known as "stickies." These particles can build up on equipment and cause defects in the final product paper. Because of stickies, paper companies can contend with lower product selling prices, downtime and equipment cleanup costs. The cost of stickies to paper companies is estimated to be more than $700 million per year.

The response to these challenges of urgency and sustainability has required some innovation from labeling companies. To help paper companies recycle papers and boxes that have adhesive labels on them, and to meet the U.S. Postal Service's standards of recyclability, some new thinking has been brought to bear.

BY 2021
ONLY 15 YEARS OF LANDFILL CAPACITY WILL REMAIN

whitepaper

Urgency Begets Innovation

To help improve the recyclability of paper packaging, companies like Avery Dennison are developing new adhesives that are compatible with the existing recycling stream.

The company's new TrueCut™ All-Temp Adhesive Technology, or AT2550, is purpose-built for paper facestocks and specially designed for shipping, weigh scale and warehouse and logistics applications.

AT2550 is also repulpable; this means the adhesive is fully recyclable and products labeled with this platform can go back into the paper recycled waste stream. AT2550 not only reduces stickies, but also meets the testing criteria of the TLMI Recycling Compatible Adhesive LRP-2 Lab Test Protocol. These tests confirm that the adhesives meet key criteria of the recycling industry and ensures that AT2550 may be fully recycled at the label's end life.

Recycled or recovered paper fiber offers economic and ecological benefits. And, paper recycling reduces greenhouse gas emissions from landfilled paper and saves landfill space. Time is of the essence; the United States is running out of landfill space due in part to packaging that fails to meet the need of the modern economy. According to Waste Business Journal, over the next five years, total landfill capacity in the U.S. is forecast to decrease; by 2021 only 15 years of landfill capacity will remain.

The situation presents an opportunity. Even as consumer demands for speed and convenience increase, packaging and labeling companies are wise to respond to the challenges presented by their products after those sales are closed.