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Buckle-Up For a Palletable Evolution

By JEFF ROGERS

Plastics take 100 to 400 years to break down in a landfill. Every year Americans make enough plastic film to shrink-wrap the state of Texas. Notably, 33 percent of all landfill waste originates from some kind of packaging. In addressing these eco-challenging issues, more and more companies are looking for ways to "go green" with their packaging products by leveraging eco-friendly, sustainable, biodegradable, or natural alternatives.

While helping the environment is one benefit of eco-friendly packaging, packing products using fewer and more sustainable materials reap additional rewards including: optimized product warehousing and stacking, a less packaging material-intensive alternative to shrink film bundling, long lasting durability, safety, and labor saving ease-of-use across a wide variety of industries.

In a continuing effort to advance sustainable packaging solutions, Midwest Precision Products, provider of retractable, reusable,



self-contained cargo restraints for material handling applications has been collaborating with one of the oldest thermoforming and structural foam molding companies in Michigan, Robinson Industries in Coleman, Mich., to create eco-friendly systems that combine their "Seatbelts for Pallets" with

Robinson's returnable synthetic pallets.

Sustainable System Synthesis

For many years, Robinson molded pallets and containers strictly for the automotive industry but, over the past few years, the company has expanded its operations to



serve the retail, sporting goods, food and beverage, solar, agriculture, and office furniture markets. MPP has been collaborating with them in the early stages of design and engineering for max usage for a variety of these applications to provide a uniquely sustainable packaging system for a myriad of industries.

Robinson's reusable plastic pallets, industrial storage containers, plastic shipping containers, and custom industrial packaging are primarily made out of polyethylene and polypropylene which outperform wood pallets and crates. The material is lighter in weight, making them easier to handle for worker safety and more cost-effective to transport. Since they are reusable, they offer a longer life cycle making them more cost-effective.

Producing new plastic from recycled material uses only two-thirds of the energy required to manufacture it from raw materials. Over 50 percent of Robinson's materials are recycled vs. virgin resin on their products—using extruded plastic flat sheets, which are injection molded, thermoformed, and vacuumed down.

Ultimately, the system is made with a structural foam base and vacuum form lid with totes placed between them. Two trays will make up a layer, and multiple stacks go up based on client need. The MPP retractable belts simply attach and reattach per repeatable loading/unloading operations.

MPP also conducts comprehensive testing upon each new lot of manufactured products in their state-of-the-art Testing Laboratory to meet the highest performance specifications set by select customers and industry standards.

Seatbelt System Savings

This sustainable system combination optimizes Robinson's recycled pallets with MPP's retractable "seatbelt" straps eliminating plastic stretch wrap and the metal or plastic banding responsible for many injuries and landfill waste. As both elements in the system combine to offer a repeatable asset, it is able to withstand the rough handling of a typical logistics system across a multitude of years providing a rapid return on investment (ROI) and achieving a lower cost-pertrip vs. single-use expendable packaging.

Coupled with returnable synthetic pallets, MPP's retractable seatbelt products are progressively replacing antiquated, expendable options such as shrink wrap, steel binding, and wood skids. Additional substantial benefits of this reusable packaging system include: advanced product protection, ergonomics, durability, potential automated interface, safety, and the reduction of significant annual direct disposal costs.

Notably, labor cost reductions are also realized by reducing time intensive activities such as unpacking parts, consolidating and separating waste, and transporting it out of the plant. The ability to increase line speed and affect productivity may also provide vital advantages via streamlining integrated in-process and outbound material handling systems.

Seatbelt System Applications

MPP's "Seatbelts for Pallets" and Robinson have partnered successfully in recent years in Tier 1 Automotive market sectors. An ISO 9001 registered company, MPP is also a principal GM Approved Supplier. Robinson is Tier 1 approved for their structural foam and vacuum-formed lids and pallets.

Typically, Tier 1 automotive customers purchase large bulks of MPP seatbelts in a 4-belt standard system, which includes Robinson's 45" x 48" trays, tops, and bottoms. These are used for transport of a wide variety of automotive assembly components. Robinson does all turnkey customized trays and design while collaborating with MPP for system usage and advanced customization.

The strength of the systems' collective material design configuration is ideal for Tier 1's overall multiple use and product protection requirements, often outlasting the 6-8 year engine cycle lifetime. Tier 1 clients typically have the systems tested using shake tables, etc., to ensure they meet their standards for system usage and customization optimization.

Big-Box retailers are also benefitting from the system's economic, ergonomic, and ecological versatility. In recent years, a major custom retailer of home furnishings based out of Europe has adopted the system to optimize their customized usage needs. Robinson's 35" x 80" trays, tops, and bottoms (often with unique shaped lids) combine with MPP's retractors/buckles in a simple turn one-down, turn one-up, and lock configuration.

The 80" footprint was required to custom fit the client's long-shaped, slim-lined products into trucks. The system is designed for a 6-8 year reuse cycle, with a replacement system in place for MPP's seatbelts (if needed).



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Buckle-Up Conclusion / Expansion

The MPP/Robinson seatbelts and pallets system is providing retailers and manufacturers with an edge in meeting demanding economic and environmental production goals.

Whereas key vertical markets including Material Handling, Automotive, Food & Beverage, and Pharmaceutical are currently implementing the system, growing market sectors such as big-box e-commerce retailers are adopters on the horizon. Key players

in these booming markets are currently conducting time, safety, and ergonomic analytic studies vs. antiquated stretch wrap and strapping systems.

According to MPP's President Jeff Rogers, "Many potential clients don't know the seatbelt system—so education is paramount for retailers and manufacturers to take advantage of the "green" reusable, sustainable seatbelts and pallets system benefits."

Robinson's Sales Manager Mark Weidner said, "We see more and more companies trying to reduce their waste and scrap to zero. The ultimate goal is that nothing goes to the landfill. Our system's collective benefits help them achieve this goal—along with other benefits such as nesting design for max usage, space, and ergonomics." FSM

Jeff Rogers is president of Midwest Precision Products, Inc. Midwest Precision Pallets, Inc. (MPP) is the world leader in providing retractable, self-contained cargo restraints for material handling applications in key industries including: the Material Handling, Automotive, Food & Beverage, and Pharmaceutical. For more information, visit www.seatbeltsforpallets.com.



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