

Edwards Manufacturing

Checkout stand cladding withstands impact of loaded carts

Looking for Durability

TAMPA, FL, USA—To prevent shopping carts from damaging its checkout counters, a major manufacturer of custom store fixtures and food handling equipment replaced high-pressure laminates with a proprietary, impact-resistant thermoplastic sheet.

"The supermarket environment is hostile for fixtures, particularly check-out counters, due to the high impact of shopping carts," says Ron Holland, V.P. Operations for Edwards Manufacturing, Tampa, FL, a 160-employee manufacturer of custom store fixtures and food handling equipment for major supermarket and convenience store chains.

"Loaded shopping carts, propelled by shoppers, bump into our counters every day, all day long, and unprotected edges of high-pressure laminates just could not withstand the impact. Our supermarket customers came to expect that the laminates would incur damage unless cabinet edges were protected with bumper materials. Their maintenance people would make the repairs. But when damage occurred early on or in transit, we would take the units back to re-laminate, which became expensive."

The company learned of a protective thermoplastic called KYDEX® sheet from customers who had specified it for their checkout counters based on previous experiences in similar applications. Within two years, the material has displaced high-pressure laminates in 20 percent of Edwards' surfacing applications, and will surface about a third of the company's products within two years, according to Holland.

"Our first applications for the KYDEX® sheet material were checkout counters for supermarkets...redesigns to replace high pressure laminates on horizontal and vertical surfaces, but mostly vertical. Once we switched to the new material, we did away with de-lamination problems, and breaking of panel edges where unprotected high pressure laminates would chip and break off. It was working well in the supermarkets, so it became a regular production item for us two years ago," he said.

Applications then expanded to vertical and horizontal surfaces of case goods and service counters, particularly where merchandising is transacted across the surface. Here the KYDEX® sheet material also replaced solid surfacing, stainless steel and painted metal, offering what Holland feels is "a better visual alternative to the metal surfaces."

Edwards is currently producing checkout counters clad with the impact resistant thermoplastic by the hundreds for one supermarket customer that averages 10 lanes per store, and now includes the material in its cabinet specification.

The company is also manufacturing a limited run of service counters laminated with KYDEX® sheet for an additional supermarket chain to be rolled out to additional stores pending the results of field trials. "Results are good thus far," reports Holland. "Their options were solid surface materials, stainless steel, or high pressure laminates, and the KYDEX® sheet material strikes a good balance of the durability, colour and style they want, at a reasonable cost."

"Other customers are beginning to evaluate (KYDEX® sheet) and to use it on horizontal surfaces of supermarket case goods and service counters, but change comes slowly. We often influence the design and specifications...it's a cooperative effort with customers. When they come with ideas, and questions about manufacturability of the product, we recommend it in most cases."



KYDEX® sheet eliminated de-lamination, chipping and breaking problems experienced with high-pressure laminates.

KYDEX, LLC

ISO 9001 and 14001 Certified

Customer Service

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Impact-resistant thermoplastic as a building material

Edwards utilizes two grades of KYDEX sheet:: KYDEX® L sheet in 0.71mm and 1.02mm (0.028" and 0.040") thickness in standard (integral) colours that carries UL Std. 94 V-0 (listed) and Class I/A (building product) fire ratings; and KYDEX® 510 sheet in 1.02mm (0.040") thickness that utilizes a reverse-printed cap sheet fused to matching substrate colours and carries a UL Std. 94 V-0 (independent lab) fire rating in certain gauges. Both grades exhibit impact-resistance of 801J/m (15 ft-lbs/in) (ASTM D-256), modulus of elasticity of 2,482 MPa (360,000 psi) (ASTM D-790), tensile strength of 42 MPa (6100 psi) (ASTM D-638) and Rockwell hardness of 94, R-scale (ASTM D-785).

"We order the sheet with a surface texture called 'Haircell', but have utilized the smooth reverse side of the sheet as the exposed side, because supermarket customers found it easier to keep clean," says Holland.

ChemClad Corporation of Auburndale, FL cold-presses the sheet for Edwards using "Type 1" catalyzed adhesive, onto 19.05mm, 1.22m x 2.44m (0.750", 4' x 8') plywood panels back-laminated with melamine. Edwards cuts and machines the pre-laminated panels, and fabricates using traditional methods such as edge banding, as well as unconventional techniques. "We found that the KYDEX sheet could be cold-formed," explained Holland. "When we could not locate extruded plastics or formed metal parts that would match in colour, we cold-formed and brake-formed the sheet to create parts we would otherwise purchase, adding value for us."

"We run the KYDEX sheet through our sheet metal fabrication plant's press brakes and get very acceptable products. In this manner we used some 1/16 in. gauge and heavier sheet, and replaced extruded plastics, angle brackets and whatever we could not find in matching colours. The components made from KYDEX® sheet fit right in," he said.



Within two years, KYDEX® sheet has displaced high-pressure laminates in 20 percent of surfacing applications at Edwards Manufacturing, and will surface about a third of the company's products within two years.

Edwards Manufacturing, Ltd., is a privately held company with wood assembly and sheet metal plants in Tampa, FL and Atlanta, GA, that custom manufactures checkout counters, refrigerated and non-refrigerated displays fixtures, stainless steel sinks and tables, aluminum carts and racks, and other point-of-sale store fixtures and food handling equipment for the grocery and food service industries. Major customers include Publix, Kroger, A&P, Food Lion, Kash n' Karry, Kroger, Shaws, Winn Dixie, and other supermarket and convenience store chains.

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