

A Historical Perspective and Supplier Overview

Introduction

Stan Lee of Corrugated Pallet Corp. commented, "A search of the U.S. Patent office records indicates that over the past twenty years numerous patents have been applied for and issued covering many various designs of corrugated paperboard pallets. It is amazing the configurations many employed. Most of the early efforts reflected concepts proven successful in designing corrugated paperboard containers and boxes. These designs were far from simple and practical. They failed because of significant user limitations and, probably more importantly, they could not be commercially produced."

But that was yesterday, and today is today. A number of companies are actively pursuing the design and manufacture of different forms of corrugated pallets. With pallet users looking for pallets which they perceive to be more user friendly, many pallet customers are considering corrugated alternatives.

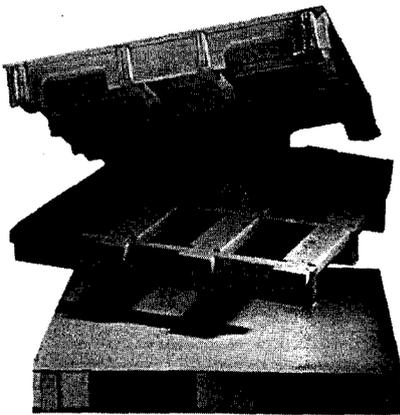
The first corrugated pallet known to us as being designed with beam strength in a fashion similar to standard wooden pallets, and commercially available, was the Corpal pallet. This pallet is now owned by the Jefferson Smurfit Corporation and marketed as the Payloader. Corrugated Pallet Corporation's Unipal pallet is a "beam strength" version which is drawing strong interest in today's market.

Previous to this beam design concept, most corrugated paperboard pallets were constructed by using some form of a block design which supported a top sheet (usually with nine blocks). Many have bottom sheets to help maintain the location and integrity of the blocks. This design concept continues to be common for a number of suppliers today. Some large corrugated companies, most notably Stone Container Corporation, have developed a successful product line of block style corrugated pallets. Their patented Cordeck design has gained solid acceptance for light loads in the automotive industry.

Corrugated pallets of various designs

have several common marketing characteristics. They are light weight, much lighter than the wooden alternatives. They are recyclable and push this concept hard in their marketing efforts. The corrugated recycling stream is well established, certainly when compared to wood recycling. As a result, many corrugated pallet makers push the environmentally friendly property of their products when compared to wood. Many corrugated pallets use recycled paperboard as well. Corrugated pallets are clean and offer a splinter-free product.

Corrugated has some distinct drawbacks. The number of suppliers is some-



Variety of Unipal pallets.

what limited. More importantly, it is more difficult to design corrugated pallets to have the strength required for many unit load applications, particularly when it comes to racking requirements. Exposure to moisture can be deadly to corrugated, although there are some coatings which help alleviate this problem. Direct exposure to precipitation is obviously bad, but even heavy humidity can leave many corrugated pallets lifeless.

We contacted the companies known to us as manufacturers of corrugated pallets. The Supplier Overview below contains information from those who responded to our inquiry for product details. Any omissions were not inten-

tional. We make no claim as to the accuracy of every fact reported to us and certainly make no effort to compare one company or product directly to another. Companies are listed in alphabetical order to remain impartial. A list of the phone numbers of all companies included is provided at the end of this article for your convenience. We hope this overview will provide information of value to pallet people who wish to contact corrugated pallet suppliers.

Bay Corrugated Container, Inc.

Bay Corrugated Container has over 25 years of experience in corrugated products. The Bay corrugated pallet has corrugated blocks with corrugated top and bottom sheets. Bay promotes its uniquely engineered corner supports as the key to strength in load bearing. In addition to pallets, Bay has corrugated pallet trays to accommodate smaller products groups and collapsible pallet boxes with a corrugated block pallet and foldable box sides.

Bay Container also offers machinery for others who want to manufacture its corrugated pallets. Its system incorporates a modular design for ease of upgrade.

For more information, call 313/243-5400.

Corrugated Pallet Corporation

Corrugated Pallet Corporation is covered in depth in the lead article of this issue of the *Enterprise*. Its Unipal corrugated pallet looks more like a wooden pallet in its design than the common block style corrugated pallets. Longview Fibre Company and Union Camp Corporation work with Corrugated Pallet to manufacture the corrugated pallet parts which go into Unipal pallets. Viking Machinery manufactures the machine to assemble these components into finished pallets.

Five common Unipal designs are

available up to 60x60 in size. Unipal pallets have more racking strength than many other corrugated pallets due to its stringer design concept.

For more information see the lead article or call 713/370-1307.

Ecological Pallets, Limited

Available in various configurations, EcoPallet is constructed of a combination of solid and built-up fiber board plus multi-ply corrugated paper board, with no wooden members. EcoPallet states that its pallets can be designed for two-way entry, four-way entry, warehouse beam racking, warehouse tier racking, lift truck operation, pallet jack operation, automated banding machine operation, shrink film packing, robotic palletizer, and roller conveyors. EcoPallets are manufactured from paper board and glue, using cutting, laminating, bonding, and press operations.

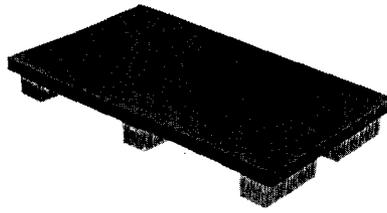
The EcoPallet has undergone testing by United States Testing Company, Inc., a clinical testing laboratory. The EcoPallet reportedly exceeded both U.S. Federal specifications (PPP-P-1660A) and European specification sheets. EcoPallet said the strength and performance tests were designed to judge these characteristics present when the pallets are exposed to conditions normally found during warehousing and distribution.

The EcoPallet design incorporates a combination of corrugated blocks, stringers, and tops for a heavy-duty corrugated pallet.

For more information, call 602/573-3344.

Edgeco

Edgeco manufactures "sticky feet" self-adhering pallet blocks and runners which allow customers to reduce freight charges and storage space. Sticky feet



Edgeco "sticky feet" can be stored until a corrugated pallet is needed.

are constructed of corrugated paper bonded to a specially treated pressure-sensitive adhesive. Measuring 48" long, 4" wide and 4" high, the runners will adhere to wood, glass, paper, metal and plastic surfaces. The 48" pieces are slit-scored so they can be broken into 8"

lengths for users who need pallet blocks instead of stringers.

Sticky feet are also used inside the container as bracing, cushioning, dunnage, and protective packaging materials. Edgeco says that sticky feet will support weights up to 2,000 lbs.

For more information, call 201/641-3222.

Hexacomb Corp.

Hexacomb, a large manufacturer of kraft paper honeycomb structures, manufactures kraft paper pallet parts at six U.S. plants. Weighing from 7 to 17 pounds and available in standard or custom sizes, Hexacomb pallets are acces-

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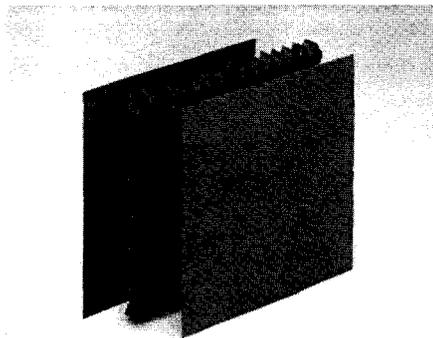
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sible by fork lifts or hand trucks. Made from recycled kraft paper and water based adhesive, Hexacomb pallets are recyclable.

Hexacomb pallets can be constructed as two-way stringer pallets or four-way block pallets with single decks, double decks, or perimeter bases. Hexacomb indicates its honeycomb kraft cells distribute weight evenly to support static loads to 12,000 lbs. and dynamic loads to 3,000 lbs. The 40x48 reusable or one-way pallet weighs 12 lbs.

The honeycomb material handling products include pressure sensitive blocks and runners, dunnage panels, air bag retention panels, separator panels, risers, and base pads. The structures consist of a series of kraft paper ribbons which are glued at intervals and expanded to form a hexagonal pattern.



Hexacomb's honeycomb pallets are constructed from light weight, strong honeycomb material.

This core is then generally faced on both sides with recycled kraft in various basis weights. The resulting structure can be stored, die and punch-cut and shaped in many ways to specific tasks.

For more information, call 708/317-1991.

Liberty Carton

Liberty Carton's Load-Right line of shipping platforms includes corrugated, a combination of corrugated and plastic, and plastic. Each product contains recycled materials and is recyclable.

The Load-Right kraft series is offered in three basic styles and can be custom-engineered to fit particular needs. They offer four-way entry for fork trucks and pallet jacks and are appropriate for point-of-purchase displays.

Load-Right nestables are space-saving platforms which nest together for storage. They feature high density plastic supports which can accommodate a variety of decking materials, including corrugated, corrugated plastic, superboard, solid fiberboard, Masonite, plywood, or oriented strand board.

For more information, call 612/540-9606.

Menasha Corp.

Menasha's Buckboard corrugated pallets consist of a die cut double wall or single wall corrugated deck and high-impact polystyrene legs. Menasha says its Buckboard pallet will support a 1200 lb. evenly distributed load. They permit four-way entry of both fork lifts and hand trucks. Buckboards are shipped preassembled in convenient to handle units. Buckboard pallets use a patented Shur-Lok system which captures a corrugated deck between an interlocking polystyrene leg and ring. Legs come in 2-5/8" and 3-5/8" heights.

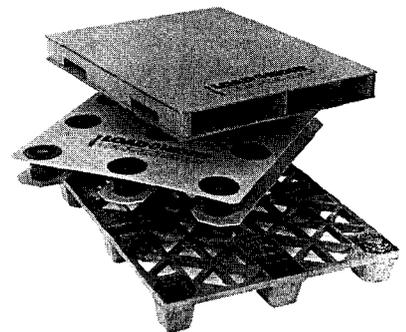
The most standard Buckboard pallet uses double wall or single wall corrugated board and from 4 to 12 legs. They are available with flanges on two or four sides to increase protection from banding, aid in load containment, and increase deck rigidity.

Bulk units can be shrink wrapped or banded directly to the pallet.

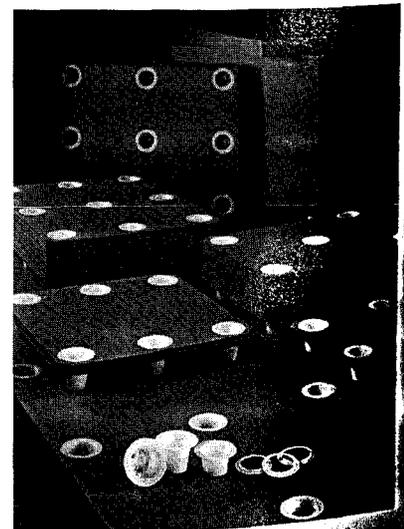
For more information, call 800/558-5073 or 800/242-5077.

Mid-States Container Corporation

Mid-States manufactures honeycomb pallets and containers. The cellular honeycomb form provides strong top-to-bottom compression. Honeycomb pallets are light

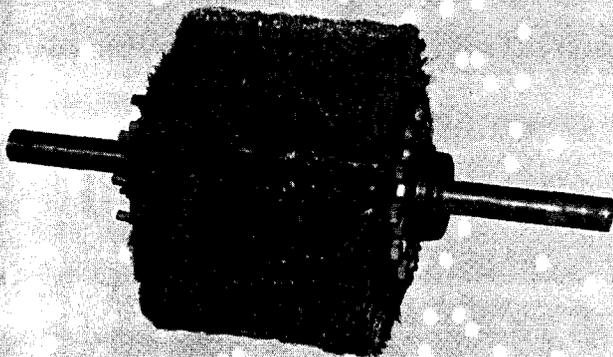


Liberty's Load-Right recyclable shipping platform lines includes the Load-Right Platform, Nestable Platform with runners, and the Universal 3300 plastic platform.



Menasha Buckboard nestable corrugated pallets.

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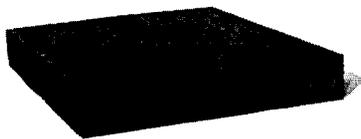
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Mid-States honeycomb pallet.

weight for less freight, and they are recyclable. Mid-States indicates they are popular with export markets.

Mid-States' "Quik-Pak" bulk package utilizes a honeycomb pallet. It comes completely assembled and sets up in seconds. Honeycomb stringers laminated to the bottom make for easy material handling and stacking. The Quik-Pak can be designed with liner combinations and dimensions to meet individual packaging and shipping needs.

For more information, call 513/585-5361.

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Packaging Materials Corp.

Packaging Materials' Pack-A-Derm pallet line is a patented 100% recyclable corrugated-fiber board, manufactured from recycled fibers. The standard design features a smooth deck with no holes where legs are attached. A double wall corrugated deck is cross-laminated to a die-cut single wall. Interlocked fingers fold down inside fiberboard elephant legs and are glued in place with an inner core of fiberboard. Pack-A-Derm pallets reportedly meet FDA requirements for sanitary conditions in warehouses. All stock size pallets are available. Pack-A-Derms come in spe-



Pack-A-Derm Elephantainer one piece pallet shipping container for attractive point of purchase sales.

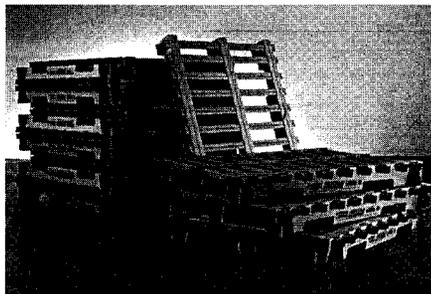
cial sizes and shapes as needed. The Tusker heavy-duty deck is built with two laminated sheets of double wall. Both are die cut interlocked. The top and bottom decks are die cut interlocked with two cores.

The Elephantainer one piece pallet shipping container handles products with high weight density. Pack-A-Derm pallets are designed to promote attractive point of purchase sales.

For more information, call 708/288-1500 or 800/722-3376.

Smurfit Pallet Systems

Jefferson Smurfit Corp. bought Gate Pallet Systems and its line of corrugated pallets last year and is now marketing them under the name of Smurfit Pallet Systems. Smurfit manufactures a line of corrugated pal-



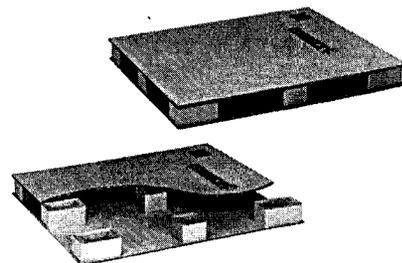
Payload pallet by Smurfit corrugated pallet looks more like a conventional pallet.

lets under the trade name "Payload™". They are manufactured from 100% recyclable corrugated sheets using patented designs and processes. Jefferson Smurfit Corp. operates 149 mills and converting facilities in the U.S., Canada, Mexico, and Puerto Rico.

Smurfit says its Payload pallet handles payloads up to 2800 lbs. The typical 2400 lb. capacity 48x40 weighs only 15 lbs. The Payload pallet can reportedly rack loads up to 1500 lbs. The Payload II is a solid top and bottom pallet which is open rackable for loads up to 2,000 lbs.

The Payload Pak is a pallet, box-bin, and cover in one complete packaging/shipping unit. It snaps into position without tools or fasteners and folds down into 6" of vertical storage space.

For more information, call 800/321-4283 or 314/746-1100.



Stone Container's Cordeck pallet is one of the most popular corrugated pallets in use today.

Stone Container

Stone Container's Cordeck corrugated pallet has enjoyed solid success since its inception in November of 1991. This June the company celebrated five million Cordeck pallets. Cordecks are now being manufactured in 38 Stone plants around the world. Stone's Cordeck pallet has been widely used in the automotive industry in the last few years to ship unit loads of 500 lbs. and less from parts suppliers to assembly plants.

Cordeck pallets are specifically designed to meet an application. They currently manufacture over 500 different styles and sizes. Stone looks at pallets as being an extension of its boxes and packaging. Sizes are available up to 60x96. They are manufactured with up to 100% recycled material. A typical Cordeck pallet weighs only about 12 pounds. The Cordeck GMA is a full four-way, accessible by pallet jacks.

Either a single sheet of triple wall corrugated or a combination of double and/or single wall corrugated is glued directly to the top surface of wound core blocks to make Cordeck pallets. Double wall corrugated has die cut flaps glued to the inside of each core on the bottom. The bottom deck features access holes for the use of pallet jacks.

Stone also manufactures SlipDeck slip sheets and the CrossDocker, a retail-ready display that packages, transports, displays and markets products at the point of sale. In addition, CorFrames are used on top of a load to unitize and protect it from strapping and stacking damage. The Cor-reel is Stone Container's new corrugated reel product. The Stone-A-Matic is a returnable bulk packaging system which can be used on either a corrugated or wooden pallet. The Stone-A-Matic can be returned for reuse.

For more information, call 708/305-3599. *205 853-579*