packaging digest

As seen in the **March 2000** issue

Farbest **bulks up** to slim down

A 260-gal intermediate bulk container for liquid food ingredients stores flat, cuts filling labor by half. Increases handling efficiency while reducing material costs.

Lauren R. Hartman, Senior Editor

Sometimes, good things come in big packages. At least they do at Farbest Brands' plant in Plain City, OH. The plant began shipping liquid food ingredients such as fructose in 260-gallon, collapsible intermediate bulk containers (IBCs) from Weyerhaeuser's SpaceKraft® Div. (formerly MacMillan Bloedel, Bulk Packaging, see PD, February '00, p. 99) with great success. The collapsible, reusable intermediate bulk containers with replaceable film bag liners provide convenient handling and stacking ease, are highly protective of the liquid products during shipping. They have made container filling at the plant easier by lowering labor for the food ingredients processor and upping convenience for its customers.

The Montvale, NJ-based manufacturer and specialty food ingredients packager has shipped the products in 50- and 55-gallon drums, which it still uses for certain products, as well as other bulk containers. For the liquid ingredients in this case, the decision to begin using an IBC was an easy one, but finding just the right container was another story. Some bulk containers it tried earlier weren't all that easy to fill and set up, says purchasing vp Pam Taylor, and can come in all sorts of shapes, sizes and materials. Determining the one best for the Farbest plant's needs could have involved a lengthy trial and error process, and "we wanted something quickly." Partnering with SpaceKraft soon led to a sweetly successful outcome (more on the partnership later in the story).

Farbest also receives raw materials in the IBC. An operator attaches a fill hose to the bottom dispensing valve of an incoming container and opens the valve to release product that pumps to a recirculating tank.

Farbest supplies bulk liquid ingredients such as sweetener and carbohydrate systems to food processors in the one 260-gal SpaceKraft IBC size. Using the articulating arm filler frees operators from manually dispensing the liquids into the bag. Now, operators simply attach the articulating arm to the IBC's fitment valve on the inner film liner and go about other tasks while the bag fills with product.

The container, which holds the equivalent of nearly five 55-gallon drums, and dispensing arm integrated smoothly into the Plain City operation. Since the container components store flat, Farbest saves valuable warehouse space and can get about 25 percent more product on a pallet than with a multiple drum configuration.

Standing about 40.5 inches tall, the IBC features three main components—an outer corrugated sleeve or shell, an inner film liner supplied in a corrugated cassette, and a corrugated top cap. The outer corrugated sleeve is made via a patented process that continuously winds eight plies of 69# linerboard and 36# A-flute corrugated medium into a seamless shell that eliminates the manufacturer's joint (sometimes a weak link in some containers), as well as any metal staples and wood components. Rectangular in shape, the outer container or shell is placed on a 40 ′ 48-inch pallet.

Lining the outer is a food-grade film liner supplied by Scholle that SpaceKraft then inserts into a handy corrugated cassette. The operator then places the cassette into the outer corrugated shell. Equipped with a two-inch-diameter threaded filling fitment at the top and a two-inch-diameter buttress-threaded fitment at the base, the liner, delivered presterilized, comprises two 4-mil plies of linear low-density polyethylene film and an outer laminated structure of 2-mil LDPE/60-ga biaxially oriented nylon/2-mil LLDPE. The top of the bag incorporates a fitment for filling, while the base features a valve from which customers can dispense the liquid ingredients products. SpaceKraft also provides the corrugated top cap that's added at this time.

Quicker fill, less labor

For Farbest, among other benefits, the switch to IBCs cut filling labor versus drums by operators by about 50 percent, and improved filling and container setup efficiency and streamlined handling and eliminated labor. Since the container is rugged, able to withstand up to 30 tons of compression, Farbest can stack it in its racking system up to four-high, saving valuable warehouse space.

The bulk ingredients containers are easier to handle and fill than individual drums, and require fewer trips to and from warehouse storage, says John Hauser, vp of operations at the Plain City plant. "When we were filling drums, we'd have to stop and start five times to connect and disconnect the hose fittings. Now, we fill the same amount of product in just one container, eliminating all that starting and stopping. Plus, the articulating arm option has cut labor requirements in half."

"We get 260 gallons of product in one IBC, almost five drums worth," Hauser adds. "We don't have to continuously stop to fill them."

The empty IBCs arrive at the plant stacked flat, 12 per pallet. Farbest stores the dozen empty containers in about 24 sq ft of space. SpaceKraft points out to PD that the totes can save as much as 80 percent in space, depending on the specific container and storage requirements. That's important for Farbest, which also receive products in SpaceKraft IBCs. Thus, Farbest is thoroughly versed in the container's performance on both ends of the distribution cycle.

To set up the container for filling, an operator first positions the outer corrugated sleeve on a pallet, opens the bag cassette and installs the quick-disconnect fitting on the inner film bag. Then the operator attaches the filling hose to the valve fitment. The bag cassette is then inserted in the bottom of the corrugated container, a drain fitting and hole in the outer sleeve are aligned and the corrugated outer sleeve is squared to the pallet. The bag is now ready for filling. After setup, the operator opens the valve.

The articulating arm system is mounted on a three-legged mast and boom that supports the filling hose and valve assembly. A counterweight on the rear of the boom can be adjusted to balance the hose assembly as the bag is filling, allowing the arm to rise as product is pumped through a filter from a 5,000 gallon tank and fills the bag. As the bag fills, it rises to the top of the container. When the IBC is full, the operator closes the valve, removes the filling hose and threaded connector, pushing excess air from the bag top and caps the opening.

The corrugated top cap is then placed over the bag and a LLDPE shroud (also from SpaceKraft) is placed over the entire outer container to protect it from dust and moisture before the IBC is strapped tight. "This process used to require two operators," Hauser explains. "One would run the filling pump, and another was needed to position the hose and hold it in place during filling. The articulating arm eliminates the second person [who can be freed to perform other tasks.]

On most occasions, it takes one operator about a minute to set up the container for filling while another IBC can be staged. The filled, palleted container is then forklifted to the warehouse where it is stacked four-high until needed for shipment.

Directly above, the 260-gallon IBC is being filled by way of an articulating arm that permits automatic filling and cuts labor. The 2-in.-dia fill valve fitment, above, center, is capped after the bag is completely filled.

Even without racks, the containers could be stacked, thanks to the patented corrugated ply winding/manufacturing process, which promises superior sidewall strength.

"When we can, we request that our suppliers ship to us in SpaceKraft IBCs," says Hauser, "It's not just more efficient to fill, but to empty." Incoming ingredients that arrive in the IBCs are in turn received by operators who attach a dispensing valve to the connection on their bases. The contents are pumped through a hose into recirculating tanks for further processing.

Collaborative effort

While the project sounds like an open and shut case, far more goes into the daily relationship Farbest shares with SpaceKraft, explains Bob Claire, Farbest's senior vp of marketing and co-owner, who says that a partnership grew from the IBC project. According to Claire, Farbest's Mitch Telsey, manager of business development, spearheaded a partnership with SpaceKraft that promotes the IBC concept to Farbest food processor customers as well as customers with special packaging needs. "If people are looking for containers, we've mentioned the IBC totes as alternatives," Claire says. "Mitch has made some joint sales calls with SpaceKraft, visiting first-time users [of an ingredient system] that would want to discuss the benefits of such containers."

Telsey attributes the success of Farbest's operation to what he dubs an unusual partnership, in which both parties strictly follow the rules for success: "It's a real joint effort. We believe in partnering here at Farbest, but it isn't [always] easy to accomplish. Many vendors say they want to form partnerships but they're only paying lipservice. A true partnership-a successful one-demands total commitment from both parties, and that takes tremendous time and effort. There might be personal visits involved where SpaceKraft really will assist to make my sale easier as well"

The "win-win" partnership stems to many levels in both companies. There is constant communication, Telsey tells PD, from production and purchasing to marketing, sales and accounting functions. "When we formed this partnership, we began by having representatives from each company attend the other's sales meetings," he adds. "Both of us learned a lot about each other's products, needs and goals. Many companies don't want to do this, either because they don't want to share information with their suppliers, or they simply don't want to spend the time and peoplepower. But that's a big mistake. We feel the better our suppliers understand our business, the better equipped they are to answer our needs."

Taylor tells PD that the purchasing department has gained substantial benefits. "There are open lines of communication among all of the departments, so if there's a quality problem [with an IBC], it's handled between our production people and SpaceKraft's," she says. Even a lower price wouldn't change her mind, Taylor says: "It would take more than a supplier coming in with an IBC at a lower price to make us want to change suppliers. We wouldn't consider changing on that basis alone, because of the service and relationship we have with SpaceKraft. We feel very strongly about the partnership."

The sturdy IBCs can withstand up to 30 tons of compression and can be racked or stacked as-is up to four-high.

Commitment is key

When Farbest adopted the IBCs, SpaceKraft representatives instructed plant personnel in setup and filling, providing handy tips and pertinent shortcuts. After the company began shipping the bulk containers, SpaceKraft representatives went to customer sites to tell Farbest's clients of the benefits of the new containers as well as dispensing and disposal information. "They want to make sure the container is being used correctly and not only

The bag liner is supplied in a corrugated cassette that can be easily inserted into the outer corrugated sleeve.

that the Farbest client is happy, but that Farbest is happy. That's how we pave the way for new opportunities."

Telsey says SpaceKraft continues to visit with new Farbest customers, suggesting new and better dispensing methods. Customers can recycle the IBC, disposing of the plastic liner, while the corrugated material can be knocked down and bundled for local collection. Or the units can be reused in other shipping applications

Claire indicates that a team concept must be taken beyond a company's inner sanctum if a packaging solution is to work for both product supplier and customer. Also, that much communication is needed on many levels: "Packaging is a complex issue," he says. "The package we choose not only affects us, but our customers in a very real way. If we view the package as a delivery system, then we have to take into account our customers' production requirements. That means the package manufacturer has to go beyond simply supplying us with a quality container. They have to be prepared to see that container perform at optimum levels throughout every step of the cycle, from filling to shipping to receiving to emptying and disposal. It's our belief that the best way to control this is through partnering. Many businesses call it the way of the future."

The 260-gal IBC has become popular with Farbest's customers and suppliers, Telsey says, and is anticipated to further Farbest's growth. "When all is said and done, it's the end users that truly benefit from this kind of partnership," sums up Telsey. "It really makes an impression upon our customers that we understand and are involved with the packaging we use. This IBC really serves a great purpose that makes it easy for our customers to use our liquid systems without their having to install special bulk storage units. That eases customers minds to know these things are available to them."

As far as the partnership goes: "Trust between partners is extremely important, and an understanding of each other's business is key," he adds. "Mutual meetings are needed on a periodic basis. So when a partnership develops, there's a blurring of the lines. Taken seriously at each management level, the partnership between container supplier and ingredients manufacturer has more than paid off."

More information is available:
IBC, bag cassette, shroud, top cap: SpaceKraft, a Weyerhaeuser Co., (800) 688-0875.

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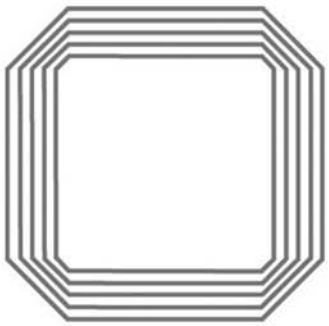

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