Dart Container Achieves Measurable Carbon and VOC Emissions Reduction
When Dart Container decided to switch from traditional packaging inks to INXhrc Natural-Based High-Performance inks, the company knew the switch would reduce its emissions and impact on the environment. What it didn’t know was how much easier the ink would be for its press operators to use and how much the ink would improve its production operations.

When we think about environmentally friendly products, making things easier and more efficient is not always the story we expect to hear, but it’s the story this well-known food and beverage packaging company experienced.

Dart Container, headquartered in Mason, Mich., is a family-owned company with 15,000 employees and nearly 40 facilities worldwide. Dart started out manufacturing polystyrene foam cups in 1960, and during its 60-year history has expanded its product offerings and materials to include more than 3,000 different types of food and beverage packaging. The company’s products are present in a wide variety of markets, including restaurants, health care facilities, schools, convenience stores, retail chains, and sporting venues — virtually any market that uses packaging or offers food and beverages to go.

The company’s success is founded on listening to customers and responding to the needs of the marketplace. It’s long been recognized as the industry leader in educating consumers on and providing them access to plastics recycling. As interest in more sustainable products has grown, Dart’s investment in and commitment to sustainable packaging has increased as well.

“It used to be that customers cared only about the function, performance, and price of our products,” notes Michael Westerfield, corporate director of recycling programs for Dart Container. “Today, they expect us to check off the sustainability box as well.

“The marketplace has really changed over the past five years,” Westerfield says. “Our customers are more concerned about sustainability than ever before. In fact, we are seeing a de-selection by customers if a vendor’s products are not sustainable. We need to respond to new legislative actions as well.”
NOT JUST LISTENING, TAKING ACTION

To show customers and end users that the company was listening and taking action, Dart decided to enhance its efforts to reduce carbon emissions. This would require some significant changes in its production operations.

Considering the breadth of its products and the markets Dart serves, this was no small task. “We are unique in that we manufacture products that give people the freedom to have their favorite foods or beverages virtually anywhere,” Westerfield adds. “But sustainability is a high priority for us, so we also take responsibility for the environmental consequences of that freedom.”

This made INX International a great partner for Dart since both companies are aligned in their efforts to innovate and make their products more sustainable. So, while Dart has worked with INX International for 30 years, it switched to INXhrc Natural-Based High-Performance Inks in 2017 in an effort to further reduce its carbon emissions.

INXhrc inks were formulated to replace petrochemically derived ingredients with clean, renewable, and sustainable ingredients. The inks are free of allergens, nanomaterials, fluorochemicals, fanal pigments, heavy metals, and PTFE, and are designed for all packaging applications.

“We have always taken sustainability seriously,” notes John Hrdlick, president and CEO of INX International. “Over the past few years, the market has evolved, and we are now at a point where consumers are demanding that companies focus on lowering CO$_2$ emissions. This shift began in Europe and California, and the momentum has been building. We do not see this ending anytime soon.”

The impact of INXhrc Ink on Dart Container’s environmental footprint was immediate and substantial. Since the switch, Dart has achieved the following through its use of INXhrc:

- Reduced more than 200 tons of CO$_2$ emissions.
- Reduced VOC emissions by 75%.
- Reduced regulatory risk and liabilities.
- And, Dart received all these benefits without an increase in cost!

Over a three-year time period from 2017 to 2019, more than 3.5 million pounds of petrochemically derived raw materials were replaced with natural-based alternatives representing the elimination of 9.5 million pounds of carbon emissions. This equals:

- Greenhouse gas emissions from 10,692,624 miles driven by an average passenger vehicle
- CO$_2$ emissions from 4,748,067 pounds of coal burned
- CO$_2$ emissions from 484,880 gallons of gasoline consumed
- CO$_2$ emissions from 730 homes’ electricity use for one year
ENVIRONMENTAL BENEFITS PLUS BETTER ON-PRESS PERFORMANCE

How do INXhrc Natural-Based High-Performance Inks perform in the pressroom? They are outstanding. INXhrc inks produce a wide variety of environmental benefits without sacrificing machine, processing, or end-use product performance.

In fact, according to Mike Peloquin, director of manufacturing – print for Dart Container, they provide better on-press performance. “Our press operators love them,” he says. “The inks have excellent solubility on press, which means easier cleanup for the crews. Press operators are washing plates less often, which translates into using less wastewater and less ink spoilage.”

Other on-press benefits include:

- 10% increase on ink mileage
- Sharper graphic images
- Less scrap generated
- More machine up-time
- Higher print efficiency

In addition to the switch to INXhrc inks, Dart has enhanced its sustainability commitments in recent years. In addition to more than 35 years promoting and building plastics recycling infrastructure, Dart is innovating, inspiring and investing in numerous projects to lessen its impact on our planet.

Dart recently opened a new $32-million dollar technical and innovation center focused on creating ever-more sustainable products. The company also increased its investment in recycling facilities and secondary material reclamation operations to prevent as much plastic as possible from being landfilled. The company partners with and sits on the board of numerous industry associations to promote sustainability in food and beverage packaging. And the company’s Community Action Teams, made up of employee volunteers, clean up trash from areas around waterways in the communities where Dart has facilities.

“Dart Container’s products offer a variety of environmental attributes — commercial compostability, SFI*-certified paperboard, post-consumer material, recyclable materials, or being made with renewable resources.”

* SFI® is a registered certification mark of the Sustainable Forestry Initiative.
But, it’s the switch to INXhrc inks that gives Dart's customers immediate proof of emissions reduction that they can take to their own internal stakeholders.

OUTSTANDING SUPPORT

The support from INX before, during, and after the transition to INXhrc ink has been outstanding. “INX has worked hand in hand, side by side with the pressmen and with our print management in the facilities,” Peloquin says. “They troubleshoot print issues when necessary and are part of our lean process improvement meetings that focus on increasing operational efficiencies within the process.”

Peloquin also points to the INX in-plant and corporate personnel’s broad knowledge of the flexographic print process, which makes them able to contribute to the meetings with sound ideas.

Even INX’s R&D lab has been an active partner. Whenever there is a print issue, they jump in to assist. “They have been quite helpful to our efforts to improve our print quality and service our customers,” Peloquin explains. “They are an ongoing resource for our production and management teams in helping us improve our overall machine efficiencies. Plus, whenever there is a quality complaint, we have always gotten a very rapid response and resolution to our challenges.”

This is not surprising, considering that Dart and INX share similar philosophies when it comes to sustainability and listening to customers. Notes Hrdlick of INX International, “When our customers have a need, we listen,” he says. “Whether it’s our customer service department, R&D facility, or one of our manufacturing facilities, we focus on our customers and try to come up with a workable solution.”

In fact, Hrdlick notes, INX’s ability to maintain its growth and success depends on its ability to do just that!

Working with INX gives Dart Container an even stronger sustainability story to tell. “Now that story extends all the way from the products we manufacture to the ink that we use to print on them,” Westerfield concludes. “We are always looking for ways to reduce our carbon footprint and make our manufacturing more sustainable. INX and INXhrc inks have been a huge partner in those efforts.”

The Jazz and Symphony prints pictured here are two of several custom prints available from Dart Container.
Hrdlick is quick to give the praise right back. “We look forward to the future with Dart Container Corporation. Dart is leading the way with advanced recycling programs and they are always open to trying new products that are good for the environment. We couldn’t ask for a better partner.”

ABOUT INX INTERNATIONAL INK CO.

INX International Ink Co. is the third largest producer of inks in North America, with full service subsidiaries in Europe and South America and is part of Sakata INX worldwide operations. We offer a complete line of ink and coating solutions technology for commercial, packaging and digital applications. As a leading global manufacturer of inkjet inks, we provide a full palette of digital ink systems, advanced technologies and integrated services. To stay in touch with the latest developments, follow INX on Facebook, LinkedIn, and Twitter and visit www.inxinternational.com