

Electronically reprinted from
February 2010 Volume 6 • Issue 1



A Foam Revolution



THINK THAT BY CHOOSING PAPER CUPS OVER POLYSTYRENE FOAM CUPS YOU'RE SAVING THE ENVIRONMENT? WELL, YOU'RE NOT. AND DART CONTAINER CORPORATION HAS THE ENVIRONMENTAL FACTS TO PROVE IT AS THE COMPANY CONTINUES TO ADVANCE A GREENER WAY OF DOING BUSINESS, REPORTS LORIE GREENSPAN.

THERE YOU ARE, WITH YOUR PAPER CUP HOLDING your hot coffee, thinking you're doing your part in saving the planet because you've refused that other cup, the sturdy, foam polystyrene one, the one you're certain is mucking up our environment. So you've either added a protective sleeve or inserted two paper cups together because, sadly, one paper cup doesn't prevent your hand from being burned by the hot liquid.

It's OK, refugees of polystyrene. Come back to the light. Some people think that compared to paper cups, polystyrene foam is an envi-

ronmental villain. Not so fast.

Dart Container Corporation, a leading manufacturer of single-use polystyrene and plastic cups and other foodservice products, and the largest manufacturer of foam cups in the world, deals with single-use foodservice products and associated environmental issues every day.

"A tremendous amount of misinformation and misconceptions exist, as well as an overall lack of information about polystyrene packaging and environmental issues – particularly about the realities of solid waste and its management," says Ray Ehrlich, a regional manager of government affairs and the environment for Dart.

"One main area of misconception involves landfills. It is often mistakenly believed that polystyrene takes up huge space in landfills – that's not true. According to the U.S. EPA and other credible sources, polystyrene foam foodservice products constitute less than 1 percent, by both weight and volume, of the total municipal solid waste discarded in the U.S."

In addition, most people mistakenly believe that waste readily biodegrades in a modern landfill. Ehrlich stresses, however, that landfills are actually designed to keep waste from the environment and to minimize biodegradation. In reality, very little waste biodegrades in a landfill. "Modern landfills are designed to discourage biodegradation by removing oxygen, sunlight (heat), and water. Because biodegradation can lead to the release of harmful methane gas, or leachate which can contaminate groundwater, it is actually preferable to place non-biodegradable rather than biodegradable products in landfills," he says.

Another major misconception is that foam polystyrene isn't recyclable and paper is. The reality, says Ehrlich, is that polystyrene foam foodservice products are actually the most recycled of all single-use foodservice materials.

"They're completely recyclable and are being recycled today in select locations, unlike their paper brethren," Ehrlich says. "Residential programs in Los Angeles and Toronto collect foam polystyrene at curbside, similar to glass bottle and aluminum can recycling. In Ontario Canada, where over 50 percent of the households have access to foam polystyrene collection programs, the majority of these materials are recycled by the Canadian Polystyrene Recycling Alliance (CPRA) which operates two polystyrene recycling facilities in Ontario and has more than enough capacity to recycle all the household polystyrene collected by municipalities."

As a company, Dart leads the way in recycling post-consumer foam polystyrene.

In the early 1990s the company's engineers invented a state-of-the-art process for washing and drying used foam foodservice products, enabling Dart to operate polystyrene foam recycling drop-off locations at many of its North American production facilities. Dart is capable of reprocessing 12 million pounds of foam products annually and receives foam from local schools, community recyclers, supermarkets, hospitals, manufacturing plants, cafeterias and individuals. Dart sells its recycled polystyrene to manufacturers who reprocess it into useful products.

Also at that time, Dart instituted two portable, off-site recycling programs. CARE (Cups Are Recyclable) provides larger institutional users of foam products with an integrated, efficient method of recycling, in which the customer leases a densifier on the premises to crush all postconsumer Dart foam foodservice products (cups, plates, bowls, clam shell containers) into a cylinder for convenient storage and transportation. The cylinder is then backhauled on a Dart truck for reprocessing at a Dart recycling facility. The second effort, Recycla-Pak, is a mail-back program designed for beverage service on a smaller scale. The program allows businesses such as delis or coffee shops to collect and return used foam cups in specially designed Dart Recycla-Pak cartons, shipping prepaid. The cups are then recycled in a Dart or industrial facility.

In a 1992 letter, the EPA recognized these off-site programs, writ-

ing: "Dart's initiatives to foster recycling of its products are precisely the sort of actions that we would like to see adopted throughout corporate America." The company's recycling programs have been presented with several awards, including a Certificate of Special Congressional Recognition from the United States Congress, Certificates of Recognition from the California State Senate and Assembly, an Earth Effort Packaging Award from McDonald's Corporation, an award from the California Integrated Waste Management Board and several Hillsborough County, Fla., Business Recycling Awards.

Litter is another issue that suffers from widely-held misconceptions. It is mistakenly thought by many people that litter is a problem caused by one particular material or one particular category of packaging rather than aberrant consumer behavior. The reality is that some people improperly dispose of materials by littering. Littering is a matter of behavior; people who discard materials into the environment usually do so because they don't think or don't care.

"The fact is that eliminating all food-related polystyrene (or any other product or material) would simply change the composition of litter found on our sidewalks and streets and in our waterways – not reduce the quantity or eliminate the negative effects of the irresponsible human behavior that put it there in the first place" states Ehrlich. "There is no environmentally acceptable form of litter."

TAKE THAT, PAPER

But what is even more surprising is that paper cups virtually aren't recycled because they're often coated with polyethylene plastic, which enables them to hold liquids. "I spend a lot of time battling this myth. In reality, the mix of paper and plastic makes them very difficult to actually recycle," Ehrlich says.

Ehrlich also talks about the true meaning of "green," reflecting that the tendency of the general public is to identify environmentally preferable, green or sustainable products solely (and erroneously) on the basis of a specific feature or attribute. "The public's environmental focus is often on solid waste disposal and the single attributes of recyclability and compostability, for example. However, landfill space isn't the only resource that needs protecting. Perhaps more importantly, water, energy, air and other elements are also valuable and under certain circumstances, can claim priority. Dart stresses a lifecycle inventory (LCI) approach because, in order to truly evaluate sustainability, you must look at the total environmental impact of a product over its lifespan."

In 2006 Dart and other polystyrene food-service products manufacturers commissioned such a study from Franklin Associates

Ltd., a nationally recognized life cycle practitioner, which analyzed the energy and environmental performance of foodservice packaging products made with polystyrene foam, bleached paperboard or corrugated paperboard, offering a cradle-to-grave picture of a product's environmental attributes, from raw material extraction and manufacturing to post-use recovery or disposal.

In four key areas of resource and energy use, solid waste generation, atmospheric emissions and waterborne emissions, the LCI study demonstrates that polystyrene foam products in most cases have environmental burdens that are lower than or comparable to the alternative products studied, including plastic-coated paperboard cups for hot beverages, plastic-coated and wax-coated cups for cold beverages and fluted paperboard clamshells.

Says Ehrlich: "The report will disappoint gourmet coffee customers who believe they're doing something for the good of the environment by choosing to use two plastic-coated paperboard cups for one hot beverage instead of a single polystyrene foam cup. According to the data for an average-weight plastic-coated paperboard and polystyrene foam cup, this practice of 'double cupping' a paper cup results in over twice as much energy use and solid waste by volume and over five times as much solid waste by weight as the use of a single polystyrene foam cup." In addition, he says, the report shows that an average weight polystyrene foam hot beverage cup requires about one third less energy to produce and produces only about one fifth as much total waste by weight as a similarly-sized polyethylene plastic-coated paperboard hot beverage cup with a corrugated cup sleeve.

DART'S ENVIRONMENTAL ETHIC

Dart established a department specifically dedicated to environmental issues in 1988 and strives to provide current, well-documented, factual information on its products and the environment, and to develop environmental answers and solutions for its customers and the general public. Dart is recognized as an





industry leader in promoting and understanding the facts about polystyrene foodservice products and associated environmental issues. "We're careful to provide current, comprehensive and accurate information, and this sets Dart apart," Ehrlich stresses.

In addition, as a responsible corporate citizen, Dart has fashioned a comprehensive environmental policy within its organiza-

tion, with the drive for efficiency – producing effectively with a minimum of waste – being a core value at Dart. Today the concept of efficiency often is expressed in new and different terms, such as "sustainability," "stewardship," and "carbon footprint." Given its position at the heart of its mission, Dart's drive for efficiency has led to remarkable achievements in product stewardship and minimizing its carbon footprint.

Each element of the company's business is scrutinized for ways to reduce energy consumption, air emissions and solid wastes. For example, heat from its cup-making process is recovered to warm the company's buildings, and at Dart's largest factory, located in Leola, Pa., gas from a nearby landfill is used to run the boilers for its foam cup production and the ovens for its non-foam polystyrene operations, resulting in a net reduction in greenhouse gas emissions.

Adds Ehrlich, conservatively, it is estimated that as of 2006, Dart's efforts in pursuit of sustainability produced energy savings totaling approximately 8.4 trillion BTUs per year and five million watts – enough

energy to heat nearly 105,000 homes and power more than 3,000 homes.

Also, Dart is continually researching and developing new materials, products, and technologies that further reduce its energy usage and carbon footprint, and is actively working on developing biobased products made from renewable resources, with the following materials currently under consideration: materials from renewable resources; biodegradable materials; additives to improve performance of biodegradable materials; materials that lower emissions or energy usage; and additives to lower environmental impacts of polystyrene.

Dart's intent is to ensure that any new process or material it adopts as a sustainable alternative is truly beneficial to the environment, and Dart considers it its duty to use sound science to evaluate the total environmental impact of all options and make the choice that is best for the earth on an overall basis.

VERTICAL SUCCESS

Dart Container is privately held by the Dart family and grew up from humble beginnings, as most worldwide businesses do, with a few slices of interesting history. Founded as a small machine shop by William F. Dart in 1937, this modest business prospered through the manufacture of such products as flexible metal tape rules and key cases, "dog tags" for the armed services, and the very successful "Marble Race Game." Experimental work with polystyrene foam started in 1959 and was followed by foam cup production the next year. By 1963, Dart had shifted all of its efforts to producing single-use products for the foodservice industry. The company is headquartered in Mason, Mich., and maintains 12 production facilities in the U.S., as well as facilities in Canada, U.K., Mexico, Australia and Argentina.

"One of the keys to Dart's continued success is our vertical integration," notes Ehrlich. "Our total control over all stages of the production process – including raw materials, engineering, machinery manufacturing, production, transportation and sales – ensures a consistent and dependable source of supply."



For more information, contact Dart:
1-800-248-5960
Email: info@dart.biz
Visit: www.dart.biz