

David Tolley, a packaging industry veteran of nearly 40 years, died on Saturday, Dec. 4, 2004, after an extended illness. Tolley most recently served as a corporate officer and chief operating officer at **Associated Packaging Technologies** (APT), one of the world's largest suppliers of CPET containers. During a three-year tenure, Tolley helped APT implement a major capital expansion, which included two new plants. Prior to joining APT, Tolley held a variety of senior management posts at Graphic Packaging Corp. from 1990 to 2001, where he concluded as president of GPC's sales, marketing and product development division. His career also included posts with Klearfold Inc., Dee Paper Co., Quality Packaging Corp., Ridgeway Packaging Corp. and Container Corp. of America.

Following its purchase of **SIG Pack**, **Bosch Packaging Technology** unveiled plans to integrate its North American business. Bosch will adopt a Bosch umbrella brand and continue to use individual brand names, including Dobby and Sigpack Systems. A common sales organization will handle system sales, while a separate group will be responsible for selling standard machinery such as Dobby. Bosch Packaging Technology is a division of Robert Bosch GmbH in Stuttgart, Germany. The company's North American offices are in Bridgman, Mich.

Global consumer packaging supplier **Huhtamaki OYJ**, Espoo, Finland, announced a two-stage, two-year restructuring program to improve efficiency and cost base, especially in its rigid packaging operations, officials said. First, Huhtamaki's board authorized management to initiate cost-saving programs in certain European countries. Officials said a second "more sizeable step" of restructuring will be announced during the first half of this year.

Looking to strengthen its packaging business, **Appleton**, Appleton, Wis., acquired **New England Extrusion Inc.** (NEX), a Turners Falls, Mass., company that manufactures single- and multilayer polyethylene films for packaging applications. The purchase price was approximately \$68 million, plus the assumption of certain liabilities. Officials said NEX complements Appleton's current film production capabilities from its subsidiary American Plastics based in Rhinelander, Wis. American Plastics manufactures high-barrier co-extruded films.



Clear single-serving bowls allow consumers to see the product.

Microwave packaging heats up

Simple, easy and delicious — just what the consumer ordered.

By Nevenka Jevtic

With the hustle and bustle of modern daily life, consumers are hard pressed to fit in three square meals each day. Refrigerated and frozen foods provide convenience and a variety of meal options. More often than not, consumers rely on their microwaves to bring these foods to the kitchen table.

However, they are no longer willing to sacrifice taste or texture just to satisfy their appetites quickly. They now expect their microwave ovens to perform like conventional ovens and cook tops, delivering delicious recipes that taste more like home-made. Many processors are working overtime to formulate recipes specifically for the microwave.

And packaging companies also are stepping up to the plate with new ideas in microwave packaging for refrigerated and frozen foods.

Fresh from the oven

Modern consumers continue to seek convenience to keep pace with their hectic lifestyles.

“The speed of technological innovations such as e-mail and cellular phones has increased consumer expectations that everything must be done faster,” says Huston Keith, principal of Keymark Associates, a packaging consultancy firm based in Marietta, Ga. “Now a new generation less oriented to the culture of cooking from scratch is more receptive to new convenience packages that were shunned by earlier generations.”

Many of the current microwave packaging technologies, specifically reflective materials for browning such as susceptor films, have been in use for more than 20 years. According to Keith, these susceptor films have improved “as film metallizers have learned to apply optical densities more precisely.”

In addition, he says, “food packagers have learned more about placing the films and formulating the food so it reheats with the right texture, flavor and color.” The results are new high-quality microwaveable food options that were once considered unlikely. For example, Kraft Pizza Co.’s DiGiorno Microwaveable Rising Crust Pizza touts both a new formulation and new packaging to deliver oven-quality pizza.

“We have a proprietary formulation for the pizza to ensure optimal performance in the microwave,” explains Sean Marks, brand director, Kraft Pizza Co., Glenview, Ill., “and we have a patent pending on our proprietary packaging.”

The packaging — a cooking tray

and crisping ring — “ensures the specially formulated fresh crust rises and bakes up crispy and golden brown on the outside and tender on the inside,” notes Marks.

The product has been a long time coming.

“Only 17 percent of frozen pizza is made in the microwave,” he adds. “Clearly, an opportunity exists for a premium microwave pizza that tastes oven-baked and is ready in just five minutes.”



DiGiorno Microwaveable Rising Crust Pizzas feature both a cooking tray and crisping ring.

The H.J. Heinz Co.’s new Ore-Ida Extra Crispy Easy Fries promise fries that are crispy on the outside and light and tender on the inside — straight from the microwave. The specially prepared fries are tucked between an upper and lower crisping sheet built within the paperboard package and go from freezer to plate in just four minutes.

Quick and easy

Food processors also realize that consumers want more value from their microwaveable packaging. The packaging has to be simple and easy to use. Puncturing or slitting films, stirring midway through cooking or additional tableware add to prep and cleanup time. New microwave packaging for refrigerated and frozen foods will elimi-

nate these steps and open the door to truly express cooking.

Marietta, Ga.-based Graphic Packaging International Inc. (GPI) provides paperboard packaging solutions to the beverage, food and other consumer product industries. The company has worked with microwave packaging for almost 30 years.

Designed to enhance the cooking of microwave products, the company’s MicroRave™ product line includes trays, pizza disks, raised trays, sleeves and pouches. Recently, GPI announced the launch of its latest solution, Quilt Wave™.

According to GPI’s director of marketing, Dan Keefe, Quilt Wave “is a flexible susceptor where the sides expand when exposed to microwave energy. As the sides expand, air pockets are created in the material, providing better susceptor contact with the food product to enhance browning and crisping, allowing for improved product quality.”

Food processors stand to benefit from the technology because it can be used with more food products, conforming to “irregular-shaped foods like nuggets, sandwiches and breaded products,” suggests Keefe.

Quilt Wave was introduced with a microwaveable grilled cheese sandwich manufactured by Sepp’s Gourmet Foods Ltd., Surrey, British Columbia, Canada. The companies collaborated to develop the product and technology, achieving commercialization in three months. The package was developed to run on existing horizontal form, fill and seal equipment to meet the rapid commercialization schedule.

“One of the most appealing aspects of the package is that the material expands, creating air pockets of insulation” explains Keefe, “allowing consumers to reach into

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PACKAGING TECHNOLOGY

the microwave oven and grab the product. The product is hot, but the outside of the package is cool enough to be handled safely.”

Recently introduced in Canada, the microwaveable grilled cheese sandwich is now being launched in the United States.

Also designed for ease of use are the FreshLock™ fully prepared meat trays from Chadds Ford, Pa.-based Associated Packaging Technologies (APT). Based on a proprietary crystallized polyethylene terephthalate (CPET), the trays are suitable for semi- and fully prepared meats and meals and are tailored to specific product requirements. Moreover, says APT, they can be used in both the microwave and conventional ovens — giving consumers a choice.

MeadWestvaco Packaging Systems, Atlanta, offers paperboard Printkote Ovenable trays for frozen entrees, side dishes and other foods that also are dual-ovenable, withstanding conventional oven temperatures as high as 400° F. The trays are extrusion coated with PET to provide a barrier to oils and water.

New-age films

Each type of microwaveable food category requires a specific type of packaging, designed first to protect the food through distribution. Microwaveability is important, but is secondary, says Keymark Associates' Huston Keith.

“Refrigerated foods need high-oxygen barrier films to prevent spoilage,” he adds, “while frozen foods require moisture barrier films to prevent freezer burn. Baked goods need susceptor films for browning and crisping.”

With that in mind, packaging materials manufacturers must work within these parameters when advancing microwave packaging films.

QuickWave International Corp., Alliston, Ontario, Canada, produces a line of self-venting

products that are suitable for the microwave. According to company President Shirley J. Cox, the patented technology is a film product that breathes.

The film has micro pores that, when heated in the microwave, “allow excess pressure to self-vent,” she explains, “and then [the film] resumes its natural closed state when removed from the heating source.”

The result is a packaged product that “cooks up to 50 percent faster than previous microwave times; retains more minerals, vitamins and moisture; and reduces or eliminates the consumer's involvement in the preparation process by eliminating the venting or slitting step,” says Cox. In addition, no machinery reconfiguration is required for QuickWave's rollstock film.

QuickWave's latest release, a film with browning features, could open up new possibilities for the microwave food industry, says Cox. Some of the possible applications include breaded foods of any type, pastry, crusted items and bakery items.

Outside the film arena, St. Louis-based Anchor Packaging recently launched a redesigned M400 Series of black polypropylene microwaveable containers with removable clear PVC lids. Offered in a variety of sizes, the containers are geared toward ready-to-heat supermarket foods and foodservice offerings.

The experience

Many refrigerated and frozen food processors have been thrown back into their test kitchens to create microwave-friendly recipe formulations for time-starved consumers. Packaging and packaging material companies are working to simplify the preparation, cooking and cleanup of microwaved foods. According to one company, however, something is still missing from the overall microwave food experience.

ScentSational Technologies, Jenkintown, Pa., has introduced new technology for microwaveable packaging that claims to enhance the consumers' cooking and eating experience. CompelAroma Encapsulated Aroma Release technology involves the incorporation of FDA-approved food-grade flavors within the polymetric structure of thermoformed packaging at the time of manufacturing. These flavor additives are added during the extrusion process. The aroma is emitted during microwave cooking.

ScentSational's process of encapsulating fresh flavors into the plastic matrix ultimately results in each flavor molecule being individually wrapped in a protective plastic casing. The casing keeps the flavors fresh and stable so they are less prone to oxidation and degradation. Some

of the flavors that have been developed include tomato herb, roasted garlic, maple brown sugar and butter-roasted chicken.

According to the company, the new technology is compatible with polypropylene and polyethylene monolayer trays, coextruded with dual-ovenable amorphous polyethylene terephthalate (APET) and crystallized polyethylene terephthalate (CPET) trays and multilayer trays made for shelf stability.

"In some applications, CompelAroma technology offers significant health benefits," explains Steven Landau, the company's chief technology officer. "For example, we can make a tray with a very buttery aroma which doesn't add any butter or fat to the product but does offer butter aroma and flavor." He points to

research that shows how aromas can help satiate people.

The frozen food category stands to benefit the most from the CompelAroma technology, says Landau. Because microwaving cooks foods so quickly, the aromas generated during slow cooking methods are not achieved. Prepared meat and poultry, ready-meals, frozen bakery products, frozen snacks and appetizers, entrees and more all make good applications.

No end in sight

Once, nuking food primarily consisted of reheating leftovers and making popcorn. Today, consumer expectations are on the rise. Smarter and simpler packaging for refrigerated and frozen food will continue to make it easier for consumers to bring delicious meals to the table in no time. **RFF**



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