

By David Savastano Editor

Printing ink appears in many unique places. Perhaps the most complex applications are those that require the printed product to be in contact with food. In the U.S., the Food and Drug Administration (FDA) will only go so far as to say that an ingredient is FDA compliant, but anything that comes in contact with food goes through the most thorough regimen of tests.

For ink manufacturers, food projects are among the most difficult, which is why very few ink companies want anything to do with these applications. That's just fine for Colorcon's No-Tox Products Division, a Chalfont, PA-based specialist in customized ink applications, particularly food packaging-related. If a food has a printed product inside the package, there's a strong chance that Colorcon made the inks.

"Any time someone opens up a candy bar with a contest on the wrapper, looks at a coupon inside of a food package or sees an application that has cooking instructions for microwave ovens to show how food should be cooked, they will probably be looking at our inks," said Michael Gettis, Colorcon No-Tox Products Division's general manager.

Today, Colorcon, a division of Berwind Phamaceutical Services, Inc., is growing rapidly. The No-Tox Products Division recorded its best sales month ever in July, and Colorcon celebrated the grand opening of its new No-Tox headquarters and manufacturing facility the same month.

Getting Into The Food Business

Colorcon's present success is the

result of the work of two companies: F.G. Okie, Inc. and Colorcon. F.G. Okie dates back to the early 1900s, when Francis G. Okie had begun an ink company in Philadelphia, PA. Mr. Okie, who would become an original member of the National Association of Printing Ink





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Manufacturers when NAPIM first met in 1915, was an inventor of much repute, and was credited with creating the first water-resistant sandpaper. He joined 3M, which trademarked it as Wetordry.

F.G. Okie was primarily a letterpress ink company, but Mr. Okie, who kept his hand in the ink business, was also developing novel products, such as a black rubber base ink, which he created in conjunction with Bob Gans of Gans Ink and Supply.

By the early 1950s, Mr. Okie sold the ink business to Rex Kane and John Attaway, colleagues of his at 3M. In conjunction with R.W. Harnett Company, an offset gravure equipment company, Mr. Attaway developed pharmaceutical printing inks for sugar-coated tablets.

In the late 1950s, the F.G. Okie Ink Company was acquired by Warren Ingersoll and a group of private investors. Mr. Ingersoll brought in Gordon Way, a former personnel director and research manager with Smith, Kline & French (SK&F). Mr. Ingersoll also acquired Allen & Wilson, a security ink specialist, and consolidated both businesses in Fort Washington, PA. Okie licensed SK&F technology to manufacture opaque color concentrates for pharmaceutical sugar coatings. By 1961, Mr. Attaway branched out on his own, forming Colorcon, short for color concentrates, licensed SK&F technology and went into competition with Okie. Under Mr. Attaway's leadership, Colorcon grew much more rapidly than the more conservative Okie Company.

Entering Food Packaging

Even though the Okie Company was growing slowly, the company made a huge jump when Mr. Ingersoll hired Fred Bichaylo to be technical director in 1967. Mr. Bichaylo had a distinguished career in the ink industry, culminating in his receiving the NAPIM Printing Ink Pioneer Award in 1998, and his work with General Foods Corporation on sheetfed offset inks for coupons that could go directly into food packages would change the industry.



"While Fred was at International Paper, he had developed inks for milk cartons, and Fred knew he could make inks that the FDA would not frown upon," said Mr. Gettis, who joined Okie in 1966 as a chemical operator and rapidly moved up through the ranks. "Prior to that we were in pharmaceutical inks, and Fred got us to focus on non-toxic printing inks, and we branched out from there. He was able to develop the inks our customers needed."

In 1978, the Berwind Group, a family-owned business, acquired Colorcon, thus allowing Berwind to provide a full line of services including inks to pharmaceutical manufacturers. While doing due diligence on Colorcon, Berwind came across Okie, and acquired it as well.

By 1983, Okie became Colorcon No-Tox Products Division, with the goal of developing inks and coatings for FDA compliant applications,

which it has continued to specialize in since.

Developing Specialty Inks for Foods

Needless to say, FDA compliant inks are not an off-the-shelf item. Rather, they are custom-made for each project. Under the leadership of Mr. Bichaylo, who passed away in 1998, Jerry Napiecek, technical services, regulatory affairs and quality assurance manager, and Dr. Rich Podhajny, manager of technology, Colorcon has led the way in developing innovative inks for a host of unique products. It also manufactures formulations from other ink companies.

The company analyzes each application to determine key resistance properties, such as moisture, grease and fat, and whether color bleed and abrasion are concerns. Odor and taste



Michael Gettis, Colorcon's general manager, and his wife, Kathy, at the 2003 NAPIM Convention. Mr. Gettis is currently serving as treasurer of NAPIM.

F. G. OKIE No-Tax

Food Packaging Inks for wet and dry offset. letterpress, heatset web offset. gravure and flexographic.

This flyer was printed exclusively with Okie NO-TOX Sheetfed Offset Food Packaging Inks.



Food packagers and their printers can avoid possible future clearing with the Food & Drug Administration by aspectiving and using Oaks No-Tox* flood packaging inks. Made entirely from materials approved by the FDA. No-Tox inks are completely safe for the printing of packaging materials which confact or which nely come into certact with creats, transact cakes, pick, candles, fruits supplicables, or other foods. They are ideal for the printing of inserts, coupons, labels, paper cups and plates, boxes, errappore, and similar packaging forms.

Press stability is excellent and drying time is equal to o

bottler than standard printing inks. No-Tox inks dry to a hard permanent histre. They may be used for printing on any type of paper slock. See participant and glassine. To prevent offsetting extremely hard stocks should be coated with standard non-toxic apray after

-Tox itiks are not recommended for applications ere long perinds of exposure to sunlight are required on normal food packaging asplications. No-Tox inshort inot fade and provide a high-degree of permanence of attability. If containers are closed when not in use too sizes may be stored inputinitary.

WIDE VARIETY OF COLORS

Oxio No-Tox inix are evaluable in twelve standard colors plus white including the four process colors

No-Tox food packaging inks have been in commerce use for over fitnern years. Press performance, statuli and versability are proven. Some of the largest footnotes packagers in the country now specify Ckie No-Tus in as standard.

F.G.OKIE

Incorporated

Clockwise, from left, an old F.G. Okie ad discusses its No-Tox products; an early F.G. Okie logo; Fred Bichaylo works in the lab; and John Attaway, founder of Colorcon.







are among the other aspects Colorcon takes into account.

"Some inks we produce are edible, such as applications where the ink appears on the packaging film, and is transferred to the food product," Mr. Gettis said. "In another example, we make color concentrates for paint ball manufacturers, where the paint might accidentally get into a person's mouth."

Colorcon has also developed, in conjunction with AgIon, its No-Tox AM functional coatings and inks, which provide anti-microbial protection for packaging. This increases the shelf life of products.

The company also makes more conventional applications, but even these are unconventional. For example, Colorcon inks that meet indirect contact specifications are used on packages that might accidentally be ingested by children, and Colorcon also makes inks for medical devices.

While R&D is an essential part of Colorcon's business, knowing the legal ins and outs of the business is equally imperative.

"We are heavily into regulatory issues," Mr. Gettis said. "Our products are used in 32 different countries. We have to know all of the international regulations, and work closely with the U.S. Food and Drug Administration, Health Canada, the Australian/New Zealand Food Authority (ANZFA), and Pira in Europe."

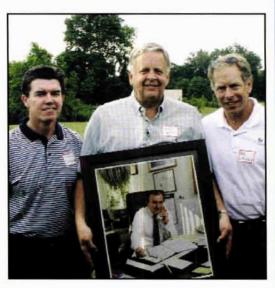
In order to meet these standards, Colorcon has the only U.S. FDA's cGMP (current Good Manufacturing Practice) commercial printing ink facility in the world, in accordance with Title 21 of the Code of Federal Regulations (21CFR).

For the new facility, the company built in LEL (lower explosive limit) sensors, which can initiate air purging systems well before a danger is present.

"We are concerned for the safety of anybody who works here," Mr. Gettis said. "We could have built a facility with blow-out capabilities, but we chose instead to spend a fortune on fail-safes and safety systems that can



Above, Colorcon's new headquarters in Chalfont, PA. At right, Colorcon president Dennis Cummings, general manager Michael Gettis and Berwind Pharmaceutical Services CEO Mike McLelland unveil a picture of Fred Bichaylo, the company's longtime technical director, during the grand opening ceremony for the new facility.



alert workers and clear out problems well in advance."

Colorcon Today

Last month, Colorcon No-Tox Products Division opened its new 22,000 square foot plant in Chalfont, PA. Mr. Gettis is proud of the new facility, which has been designed both for growth and for maximum safety. He credits Colorcon's parent company for its support of the expansion.

"We outgrew our old facility, and now

we can manufacture more product," Mr. Gettis said. "Berwind Group is family-owned, and it's an excellent company to work for. They are very conservative business people who buy successful companies and provide them with the resources they need to grow."

Considering the company's continued growth, insistence on high standards and the ever-present need for new products for consumer markets, Colorcon will undoubtedly continue to build on its successes in the coming years.