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A lack of understanding on the part of lawmakers could have a potentially devastating effect on printing and packaging companies in the Empire State.

Proposed Ban on Carbon Black Raises Red Flags for New York State Printers

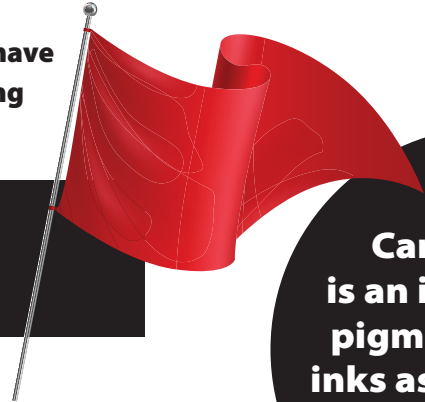
By Patrick Henry, Liberty or Death Communications

Disclosure: the writer is a member of the Print and Graphic Communications Association (PGCA), which commissioned the article.

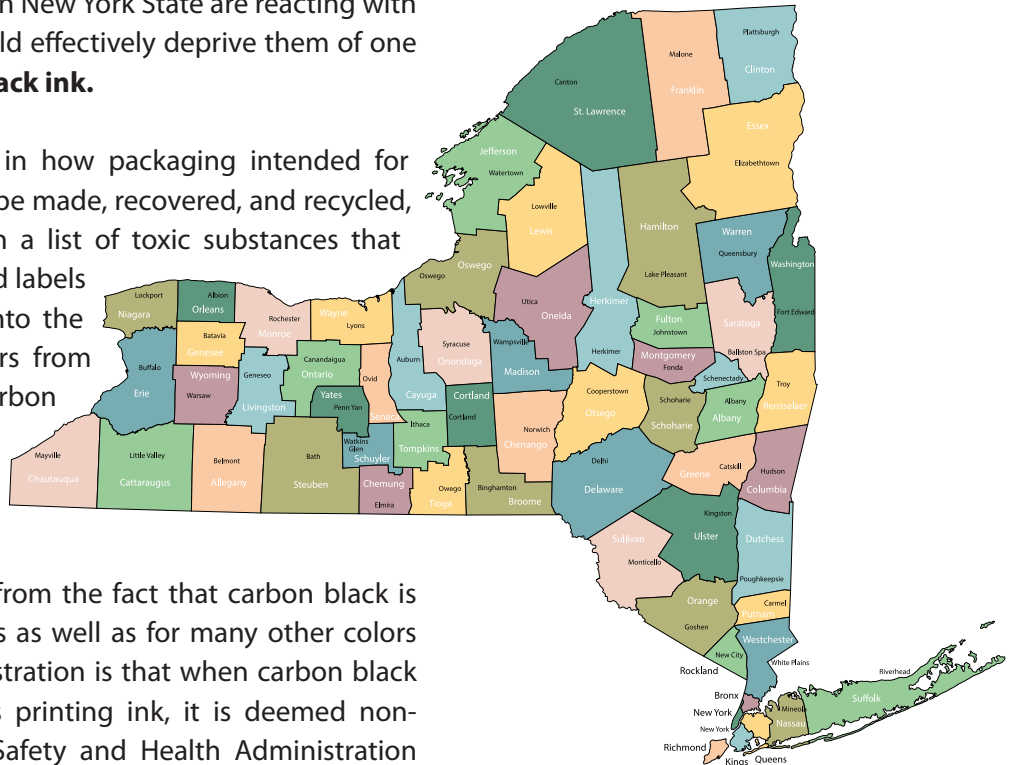
Printers and packaging manufacturers in New York State are reacting with alarm to proposed legislation that would effectively deprive them of one of their most essential raw materials: **black ink**.

In its sweeping mandate for change in how packaging intended for consumption in New York State would be made, recovered, and recycled, the legislation places carbon black on a list of toxic substances that could not be contained in packages and labels sold, offered for sale, or distributed into the state. Producers would have two years from enactment to completely eliminate carbon black from their packaging, after which violations could be adjudged and stiff fines imposed.

The potential crisis for printers stems from the fact that carbon black is an irreplaceable pigment for black inks as well as for many other colors into which it is blended. An added frustration is that when carbon black is incorporated into products such as printing ink, it is deemed non-hazardous by the U.S. Occupational Safety and Health Administration (OSHA) and other entities that monitor the health and safety impacts of toxic substances.



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On a Fast Track

The legislation, known as the Packaging Reduction and Recycling Infrastructure Act, was first proposed in the New York State Senate and Assembly last year and was reintroduced with amendments in 2024. It is proceeding steadily through legislative review and could be ready for signature by Governor Kathy Hochul as early as June.

Eliminating inks containing carbon black would not only disrupt print manufacturing. It would also force the graphic redesign of packages and labels created in the CMYK color space – a description that applies to virtually all branded consumer product packaging. Brands and printers would also have to find ways to reproduce nutrition labels, scannable barcodes, and product information inserts without the K (black) component.

If carbon black is banned, “almost every item we make will be impacted,” says Daniel G. Keane, CEO of Mod-Pac, a producer of folding cartons and stock packaging in Buffalo, NY. “It’s going to impact our customers the most. They would have to change the design of all the packages to remove the black.”

Keane notes that while the company could run whatever alternative colors its customers choose, “they would have to rework all their items, which is a cost to the customer, and that’s going to be pushed through to the consumer.”

David Rydell, President of Diamond Packaging in Rochester, NY, foresees the same kind of upheaval if ink parameters must be changed.

“It’s going to be a pretty significant impact if it happens, because virtually every job we print has black ink. It will affect everything we do. We have approved color standards on file for thousands of products that we manufacture for consumer goods companies and cosmetic companies,” he says. “We would basically have to recertify all of our standards that we have with our clients and get new color matches made, which would be very costly.”

He notes that while Diamond Packaging has had to adjust to other restrictions on the press consumables it uses, these were limited in their impact on production. “I’ve never had anything that would affect one hundred percent of our work” as a ban on carbon black would, he says.

Enactment of the legislation would be an “industry killer” for printers in New York State, according to Steve Davis, President of Tapecon Inc., a Buffalo based provider of printed applications for commercial, medical, and industrial markets.

“The more I learned about it, the more concerned I became after realizing how extreme a measure the language is proposing,” he says. It’s going to significantly harm my business,” he says. “I wouldn’t be able to serve my customers’ requirements.”

Carbon black, he observes, “is the heart and soul of almost all ink formulation. You’re asking a printer to stay in business without printing.”

'To a Grinding Halt'

Andy Staib, owner and CEO of DWS Printing & Packaging in Deer Park, NY, is no less apprehensive. "It would probably bring us to a grinding halt," he says. "It would be beyond disruptive. It could potentially put us out of business."

"We would probably have to stop production at least until there's an alternative out there," adds TJ Staib, President of DWS. "If we have to use more expensive, less available inks, lead times go up, prices go up, and customers go away. It really is unreasonable and unmanageable for the printing community to make such a drastic change."

"When carbon black is 'bound' within the matrix of printing ink as one of its ingredients, the risk of harmful exposure to its particles is not acute."



Troy Turley, President of Apple Converting Inc. of Oneonta, NY, calls the legislation "absurd" in its stance on carbon black as a hazardous substance in the printing industry. "Clearly, our legislators don't understand chemistry," he says. "Carbon black may be an issue when it is particulate matter in the air as a waste product, but when carbon black is captured, it becomes safe to use and can be recycled and used again."

Taking carbon black away from New York producers won't stop products made with carbon black coming in from other states and international sources, asserts Turley, whose company develops flexible packaging solutions for the pharmaceutical, medical device, confectionery, food, and Industrial markets.

"Basically, the printer on the other side of the border is now going to be printing it and sending it into the state," he says. If this isn't prevented by the authorities, "then all they're doing is putting printers in this state out of business. There's truly not any common sense on what they're trying to accomplish."

The issue may be less a lack of common sense among lawmakers than their dearth of understanding about how "toxic" carbon black actually is when used as a component of printing ink.

Widely used as a colorant not just in black but in almost all colored inks, carbon black is produced by partially combusting or thermally decomposing gaseous or liquid hydrocarbons. In unencapsulated powder form, carbon black is known to irritate the lungs, eyes, nose, and throat. Long-term exposure to very high amounts may increase the risk of pulmonary disease and cancer.

But when carbon black is 'bound' within the matrix of printing ink as one of its ingredients, the risk of harmful exposure to its particles is not acute. In 2005, the U.S. Environmental Protection Agency (EPA) declared that its risk of toxicity was low when used as a pigment or a colorant in tires, plastics, automobile components, inks, adhesives, paints, dyes and ceramics.



Clearance from OSHA and Prop. 65

Responding to a request from the National Association of Printing Ink Manufacturers (NAPIM), OSHA similarly concluded that carbon black in printing inks presents no exposure problems for those using the inks.

The agency administering California's Proposition 65, which requires businesses to warn the public about reproductive toxicants and carcinogens, agreed that exposure does not occur when carbon black is bound within the matrix of a product such as printing ink.

None of this information seems to have been available to the sponsors of the New York legislation, which also would create a "toxic packaging task force" empowered to recommend additions to the prohibited list.

"We don't quite understand with any level of certainty exactly why they have identified carbon black," says George Fuchs, NAPIM's Director of Regulatory Affairs & Technology. "It's a little bit difficult to comment on this when you don't understand what their motivation was."

Banning carbon black in the form of PB7, the pigment for printing ink, "would make four-color process printing almost impossible," says Fuchs, adding that the proscribed list also contains substances used in energy curable printing. "If they take those off the board, that would have just a devastating effect on that part of the business," he says.

'Somewhat Intransigent'

According to Fuchs, the sponsors of the Assembly and Senate bills that make up the act have appeared to be "somewhat intransigent in terms of wanting to amend the legislation" in ways that would alleviate printers' concerns. One of the lawmakers, Assemblymember Deborah J. Glick, indicated in an email message that there could be some room for modification – but probably not as much as printers would need.

"Conversations are occurring regarding any possible carve-out," wrote Glick, who introduced the legislation in partnership with Senator Pete Harckham. "But it should be noted that this does not relate to all printed matter."

In calling for the legislation's passage, Harckham, chair of the Senate Environmental Conservation Committee, described it as "the best chance to finally do something about recyclable waste and the many toxins found in packaging." A response from his office focuses on an aspect of the situation over which printers have no control: the use of carbon black as a colorant for the packaging material itself.

"When it comes to recycling packaging and plastic, more is better. Unfortunately, carbon black, a pigment created by partial burning of charcoal and natural gas, is not detectable by scanners in the waste sorting processes," the statement reads. "With scannable, non-toxic alternatives to carbon black on the market already, and scanners that can detect the pigment now being developed, it is a good time to move toward substances that increase recycling rates and are also better for the environment."

This addresses the concern that black plastics can be difficult for certain optical sorters to detect in mechanical recycling lines. Becoming commercially available, however, are new technologies that make it possible to identify and separate black plastics with carbon black as the coloring agent.

What troubles printers is that the bill's sponsors seem not to know there currently are no practical replacements for carbon black as a pigment for printing ink.

Suitable Alternatives Lacking

Substitutes made from wood scraps, hemp, and metal oxides exist, but they do not perform reliably enough for mainstream printing and packaging applications. Printers have to work with inks that they can readily source, afford to purchase, and be certain that their customers will approve.

As Fuchs observes, "all of the things that the brands require in a package, those performance properties just are not met by pigments other than PB7 carbon black."

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That leaves printers with nowhere to turn if a ban goes into effect. Turley says, "The feedback we are getting from our primary ink manufacturer is that there are really not any good options out there" as substitutes for carbon black. Keane, likewise, notes that "our ink suppliers said they didn't currently have one."

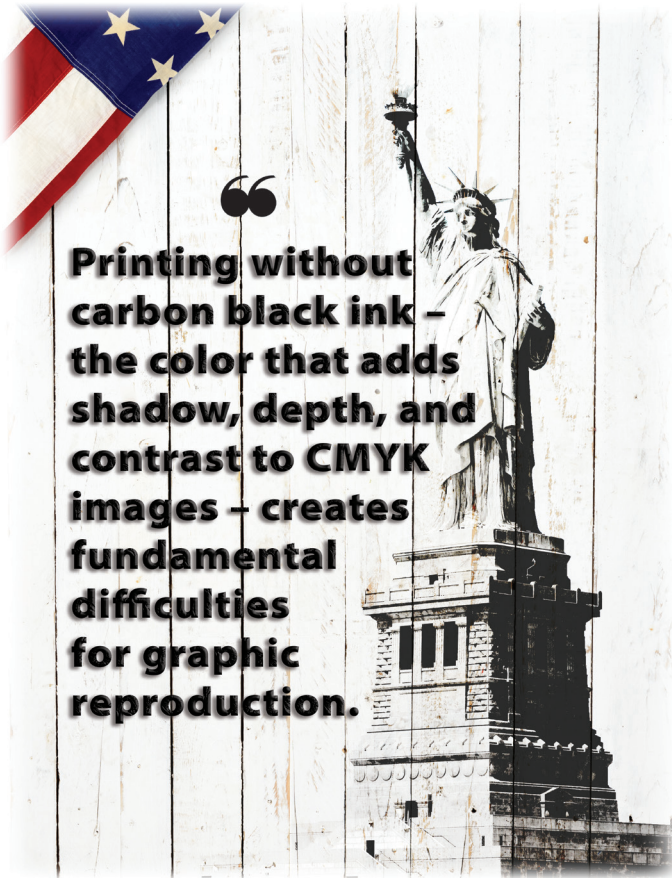
"There is no alternative that I'm aware of," concurs Davis. "Therefore, this is backing an industry into a corner without any alternative solutions, which is why I feel it's irresponsible."

Rydell says that Diamond Packaging has been working with its ink suppliers to identify a just-in-case replacement for carbon black based ink. "But I don't have a timeline yet as to when that could even be commercially available," he acknowledges. "We don't have a solution that I could say I could switch to tomorrow."

And as printers know from experience, a substitution made under this kind of pressure is likely to carry a price tag. "It's going to add cost," Rydell points out. "I haven't ever found anything that is more sustainable and that doesn't add cost."

Printing without carbon black ink – the color that adds shadow, depth, and contrast to CMYK images – creates fundamental difficulties for graphic reproduction. Keane says, "We do a lot of food packaging. Food packaging typically has a picture of the food. You can't make a picture without black."

Attempting to do so would mean giving up the business, warns TJ Staib.



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Printing without carbon black ink – the color that adds shadow, depth, and contrast to CMYK images – creates fundamental difficulties for graphic reproduction.

“Our customers come to us because they know we can hit specific colors that they want,” he explains. “We could try to convince our customers to accept a dark gray instead of a black until we’re blue in the face. But at the end of the day, our customers are going to want what they want, and if they have to go elsewhere because they can print using black ink, they probably will.”

Flunking the Scan Test

Then there is the matter of UPC barcodes for packages and labels scanned at checkout. Barcodes printed in black ink, according to Keane, get a grade of A for readability and accuracy. Printing in another color – for instance, blue – drops the grade to D. “We certainly would not recommend a barcode in any other color than black,” he says.

One of Turley’s chief concerns is end-user safety. He says that brands and packaging producers, especially in the pharmaceutical, medical device, and food industries, “want to be able to make sure that you are printing products appropriately so that there is no misuse or misidentification of the products.”

He adds that because inaccurate labeling is a leading cause of product recalls, it’s essential to use black as the primary color for conveying safety information clearly and legibly. “This is critical for traceability through the whole supply chain, which includes warnings, direction for use, dosage, lot and date information,” he says.

“It’s crazy to think our legislators want to shut down an industry that is actually good for the environment by repurposing carbon black,” Turley declares. “The benefit it provides to all New Yorkers is incredible and cannot be measured nor undervalued when someone’s life is at stake.”

Printers believe that an industry cut off from its most-used pigment is an industry facing dire economic consequences.

According to Tim Freeman, Co-President of the Print & Graphic Communications Association (PGCA), a trade group, “Passage of the Packaging Reduction and Recycling Infrastructure Act, with its ban on the use of black printing ink containing carbon black, is an existential threat to companies, and their employees, who manufacture packaging and labels in New York State. This legislation is being vigorously opposed by the Print & Graphic Communications Association.”

Freeman said that PGCA’s Board of Directors has authorized the retention of Faist Government Affairs Group, a well-known Albany lobbying firm, to spearhead its opposition to the bill. The group also has launched a grassroots communication initiative, filed a Memorandum of Opposition with the New York State Legislature, and is scheduling personal meetings with various legislators over the next several weeks.

Further, said Freeman, “we are initiating efforts to get the graphic design and brand owner communities involved, as passage of a ban such as this will greatly impact their businesses as well.”

PGCA, which also represents the industry in New Jersey, Pennsylvania, and Delaware, worries that a blanket ban would jeopardize all 8,000 of the Empire State’s label and package manufacturing jobs. It says that 260 firms would be affected and that work they could no longer produce would then shift to competitors in other states.

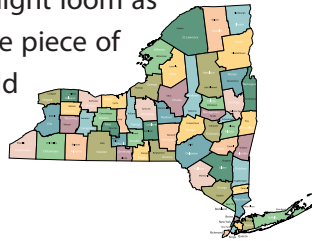


The ban is only one piece of a legislative undertaking that would impose a broad new set of mandates and costs on producers of packaging and labels in New York State.



Vast in Scope and Impact

As large as a ban on carbon black might loom as a threat to the industry, it is only one piece of a legislative undertaking that would impose a broad new set of mandates and costs on producers of packaging and labels in New York State.



This is because the driving force behind the Packaging Reduction and Recycling Infrastructure Act is the concept of extended producer responsibility (EPR).

The Sustainable Packaging Coalition (SPC), a policy organization, defines EPR as an approach that makes producers responsible for their products at the end-of-life stage. The responsibility can be both financial and operational, with producers typically required to provide funding and/or services to assist in managing covered products after the use phase.

According to SPC, nine states have introduced legislation on EPR for packaging in 2024. Four EPR bills for packaging have passed. None except New York's has included a ban on carbon black.

The proposed New York State legislation requires companies with a net annual income of over \$1 million to reduce consumer packaging, improve recycling efforts of their product packaging, and help update recycling infrastructure. The companies also will be expected to create and/or maintain reusable and refill infrastructure, support municipal recycling programs financially, and reduce the toxins in their packaging.

The bill will oblige eligible producers of consumer packaging and recyclable waste to register with a Producer Responsibility Organization (PRO) within 30 months of the bill's enactment. Within two years, they must provide an advisory council with a plan that will be used to gauge compliance with the new packaging and recycling rules.

A Landscape Transformed

The producers will then have six months to execute their plans. Targets are ambitious, including reduction of packaging weights by 10% within three years, 20% by five years, 30% by eight years, 40% by 10 years, and 50% by 12 years. The bill also mandates that by 2050, a minimum of 75% of plastic and non-plastic packaging material supplied into the state will be reused or recycled. In the case of non-plastic packaging, a minimum of 20% must be reused.

The program is to be funded by “ecomodulated fees” that producers will pay based on the types and quantities by weight of the packaging materials that they sell, offer for sale, or distribute in the state. Exemptions will be made for producers that realized less than \$5 million in total gross revenue in a prior calendar year or used less than two tons of packaging material.

Proponents say the legislation will save New York taxpayers as much as \$250 million annually by reimbursing local governments for the costs of recycling and disposing of packaging. What the state’s printers don’t see in the push for its enactment is any awareness of the plan’s potentially staggering cost to them.

Rydell sees the legislation as a “great overreach” that will penalize the industry through its misunderstanding of the science that applies.

Carbon black in the form that printers use it “doesn’t pose a threat to anyone,” he says. That’s why something like this, that’s really not an issue, is such a disruption to the business. We would never propose using any kind of raw material that would put us in a precarious position that way.”

The threat printers worry about is the one that the legislation poses for the state’s printing and packaging industry.

The expense of having to adjust to a ban on carbon black “is going to make us less competitive as a company in New York State” versus firms in states that are friendlier to business, Rydell asserts. “We’re already struggling with competitiveness because of the costs and the regulation and the taxes in New York.”

“**Black ink has been used for almost 600 years since the first Gutenberg Bible was printed. Why do we need to ban black ink after all this time?**”

In Andy Staib’s view, the proposition behind the ban “is really not based on fact. It would potentially risk the livelihoods of the entire printing community. It’s just that unreasonable.”

“The industry would essentially be punished for doing what we do,” Staib says.

What’s Next on the List?

The idea that a ban on carbon black could be applied to products besides labels and packaging also raises fears. Printers point out that the ban would stigmatize more than just ink.

“Just look around you,” Turley says, “and you will find books, newspapers, inkjet printers, prescription medication, painted walls, and all kinds of plastic materials. If it’s black, it most likely is using carbon black.”

“Will they ban it from all products?” asks Keane. “Every book, magazine, newspaper, takeout coffee cup, grocery and drug store item? Will all copiers and laser printers be banned? Black ink has been used for almost 600 years since the first Gutenberg Bible was printed. Why do we need to ban black ink after all this time?”

“Carbon black is not the enemy,” Davis emphasizes. “There are more creative ways to address the problem than by imploding the printing industry.”

“I’d encourage the legislators to reach out to and have open conversations with the people that do know about these things,” he says, adding that the bill’s supporters need to “keep an open dialogue and educate themselves on what they’re legislating.”

Scan the QR code to send a letter to your NYS legislative representatives asking them to oppose the proposed blanket ban on carbon black in New York State.



Questions? Contact Tim Freeman at (716) 691-3211 or via email at tim@printcommunications.org

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Highlights:

- The use of black printing ink containing carbon black is ubiquitous within the packaging and label manufacturing industry.
- There is no commercial viable alternative to carbon black as a pigment in printing ink.
- The presence of carbon black in printing ink does not pose a threat to human health and the environment.
- Changes in recycling separation technology and ink formulation have solved the problem of black plastic in the recycling stream.
- The inability to use black ink to either print directly on a package or on a label will have significant consequences for 8,000 jobs within the New York State printing community.
- S 4246 B/A 5322 B is being advanced within the New York State legislature without meaningful stakeholder discussion or reliance on scientific data.



→ If enacted, most of the affected work will cease to be produced within New York State, effectively eliminating approximately 8,000 jobs. The work will then be produced in other states.

The problems of toxics and microplastics in our environment are real but they will not be solved without a balanced science-based solution that has been thoroughly and productively discussed by all stakeholders.

Our industry has been involved in many actions to decrease our waste and environmental impact. These actions include the use of recycled and environmentally sustainable paper as well as soy-based inks and a significant elimination of chemicals. These actions have all been taken voluntarily by our industry based on scientific data and input from stakeholders.

**Take Action!
Scan Code**



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