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Carbon Black Talking Points

NY S 4246-B/A 5322-B

- Carbon Black is the primary pigment in black printing ink and is a component in other ink colors as well.
- There is no commercially viable substitute for carbon black as a pigment in black printing ink.
- Black ink is utlized on its own for many applications. Additionally, black ink is used in CMYK printing, more commonly known as 4 Color Process printing. CMYK stands for Cyan (Blue), Magenta (Red), Yellow, and Black, the four primary colors of pigment used in 4 Color Process printing. Together, CMYK printing can reproduce a wide spectrum of colors by utilizing various dot patterns and densities. The amount of printing produced utilizing the CMYK process is vast, as it is the standard color model used in offset and digital printing. No black ink, no CMYK process printing!
- Banning the use of carbon black in printing inks would have a devastating impact on the label and packaging component of the New York State economy.
- This component is comprised of label and packaging manufacturers and employs more than 8,000 people, working at approximately 260 printing and packaging firms with a payroll exceeding $400 million. The annual value of packaging produced in New York State is approximately $2.8 billion.
- A blanket ban on carbon black puts every one of these 8,000 jobs in jeopardy.
- The jobs in question are highly skilled, well-paying manufacturing jobs that carry health benefits, pay mortgages, put children through college, and support the New York State tax base.
- The justification for banning carbon black within S-4246 B/A 5322 B relies on three main factors. These are:
  - Perceived carbon black toxicity
  - Black plastics interference in the mechanical recycling process
  - Concerns about ink “Bleeding” due to exposure to liquids during the mechanical recycling process
- **Perceived toxicity of Carbon Black –** In powder form, carbon black presents concerns related to its toxicity. However, carbon black is not found in powder form when it is incorporated into ink or as a colorant for a package. This important distinction has been recognized by the Occupational Safety and Health Administration (OSHA) as a result of a question posed by the National Association of Printing Ink Manufacturers (NAPIM), with OSHA stating:

  “The Hazard Communication Standard requires that, when mixtures have been tested as a whole, the results of such testing shall be used to determine whether the mixture is hazardous. Furthermore, in the case of printing inks, the carbon black is not present in such a form so as to present an exposure problem for employees.”

OSHA's response to the request from NAPIM was based on scientific data confirming that carbon black encapsulated in printing ink does not have the same health concerns that carbon black powder presents.

This has also been recognized under California's Proposition 65. California's Proposition 65 is administered by the Office of Environmental Health Hazard Assessment (OEHHA). OEHHA is an independent agency with several responsibilities including monitoring the scientific literature, publications of research organiztions, governmental entities and academia, and other information sources to maintain and update their list of chemicals known to cause cancer, or reproductive toxicity. The Proposition 65 notice of listing addressing carbon black was released on February 21, 2003, and it specifically states:

"The listing only pertains to airborne, unbound carbon black particles of respirable size" and "Exposure to carbon black does not occur, per se, when bound within a product matrix, such as rubber, ink or paint."

Since there have not been any revisions to EOHHA's position about carbon black, scientific evidence again supports the position that carbon black does not pose a threat to human health and the enviroment when incorporated into printing ink.

» It should be noted that carbon black is a major component in auto and tractor tires, belts, gaskets, paints, coatings, cosmetics, and even some water and air filtration systems. None of these products have any restrictions placed on them regarding the use of carbon black.

» **Black plastics interference in the mechanical recycling process –** Black plastics have been difficult to detect utilizing the current technology in mechanical optical sorters. However, recent technological advances have made it possible to sort black plastics utilizing various processes including hyper spectral imaging, artificial intelligence and laser line scanning to identify and separate black plastic. As these technologies come online and facilitate the sorting of black plastics, the contemplated ban will remove a valuable component from the recycling stream.

» **Concerns about ink "bleeding" due to the exposure to liquids -** Companies have new formulations and processes to avoid this problem. These include "washable inks", primers, coatings, and varnishes – all designed to address the ink "bleeding" issue.

In conclusion, banning carbon black as a toxic material without any qualifying statements regarding its form, is not appropriate or accurate. Independent agencies, utilizing scientific data, have studied this issue and come to their own conclusions that there is no threat to human health and the environment due to the presence of carbon black used to color printing ink.

In summary:

» 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 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

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