Office of Senate Floor Analyses
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THIRD READING

Bill No: AB 823
Author: Boerner (D), et al.
Amended: 5/23/25 in Assembly
Vote: 21

SENATE ENVIRONMENTAL QUALITY COMMITTEE: 7-0, 7/2/25
AYES: Blakespear, Valladares, Gonzalez, Hurtado, Menjivar, Padilla, Pérez
NO VOTE RECORDED: Dahle

SENATE JUDICIARY COMMITTEE: 13-0, 7/8/25
AYES: Umberg, Niello, Allen, Arreguín, Ashby, Caballero, Durazo, Laird, Stern, Valladares, Wahab, Weber Pierson, Wiener

SENATE APPROPRIATIONS COMMITTEE: Senate Rule 28.8

ASSEMBLY FLOOR: 63-10, 6/2/25 - See last page for vote

SUBJECT: Solid waste: plastic microbeads: plastic glitter

SOURCE: Author

DIGEST: This bill expands the existing ban on microbeads in personal care products that are rinsed off to include the sale of non-rinse personal care products, personal care products containing glitter, and cleaning products beginning January 1, 2029 or January 1, 2030 as specified.

ANALYSIS:

Existing law:

1) Establishes the California Integrated Waste Management Act of 1989 (IWMA), administered by the Department of Resources Recycling and Recovery (CalRecycle), to regulate the disposal, management, and recycling of solid waste. Establishes under the IWMA a state policy goal that at least 75% of

solid waste be source reduced, recycled, or composted by 2020. (Public Resources Code (PRC) §§ 40000 et. seq.)

2) Requires, under the Porter-Cologne Water Quality Control Act, that State Water Resources Control Board (State Water Board) and Regional Water Quality Control Boards implement a program to control discharges of preproduction plastic (i.e. resins and colors for plastics). Directs the State Water Board to address the discharges of this plastic from these point and nonpoint sources. (Water Code § 1336)

3) Enacts the Plastic Microbead Nuisance Prevention Law (Public Resources Code § 42360-42366), which:

   a) Prohibits, on and after January 1, 2020, the sale or offering for promotional purposes any personal care products containing plastic microbeads that are used to exfoliate or cleanse in a rinse-off product, including, but not limited to, toothpaste;
   b) Defines "personal care product" as an article intended to be rubbed, poured, sprinkled, or sprayed on, or otherwise applied to, the human body or any part thereof for cleansing, beautifying, promoting attractiveness, or altering the appearance, and an article intended for use as a component of that kind of article, but does not include prescription drugs;
   c) Defines "plastic microbead" as an intentionally added solid plastic particle measuring five millimeters or less in every dimension;
   d) Exempts personal care products that contain less than 1 part per million plastic microbeads by weight; and
   e) Establishes civil penalties up to $2,500 per day for a violation, as specified.

4) Requires, on or before December 31, 2024, the California Ocean Protection Council (OPC) to adopt and implement a Statewide Microplastics Strategy related to microplastic materials that pose an emerging concern for ocean health; specifies that the goal of the Statewide Microplastics Strategy is to increase understanding of the scale and risks of microplastics on the marine environment and to identify proposed solutions to address the impacts of microplastics. (PRC § 35635(b))

5) Requires the State Water Board to adopt a definition of microplastics in drinking water by July 1, 2020, adopt a standard methodology to test drinking water for microplastics, and adopt testing and reporting requirements. (Health & Safety Code § 116376)

6) Defines "designated product" as a finished product that is an air care product, automotive product, general cleaning product, or a floor polish or maintenance product, as specified. (Health and Safety Code §108952)

This bill expands off the existing ban on microbeads in personal care products to include:

a) A personal care product containing glitter or non-rinse off products containing plastic microbeads that are used as an abrasive to clean, exfoliate, or polish; and

   i) Specifies that entities can still sell personal products containing plastic glitter until January 1 2030 if those products were acquired and transported into the state before January 1, 2029.

b) A cleaning product containing plastic microbeads that are used as an abrasive to clean, exfoliate, or polish.

Background

Prevalence and Impacts of Microplastics. Microplastics, defined as small plastic particles with a diameter less than 5mm, have become a subject of increasing environmental concern. Because microplastics are so small, they can travel in water, air, and in the bodies of living organisms. As a result, microplastics are ubiquitous in the environment and are found in some of the most remote areas on earth, including arctic sea ice, the deep ocean, mountain peaks in national parks, and human embryos. Of particular concern for living organisms, microplastics' small size allows them to bioaccumulate up the food chain. Plastics in water, for instance, can be consumed by fish and shellfish and become part of their tissue. The fish and shellfish can in turn be eaten by humans or other animals: with each step up the food web, the concentration of microplastics accumulates. Microplastics can also act as vectors for pollutants such as pesticides and heavy metals, effectively "piggybacking" these harmful pollutants wherever the microplastics go, including into the living tissues of plants, animals, and humans. Current studies have found microplastics in human lungs, brains, and placentas. A recent study suggests that human brains may contain an amount of microplastics equivalent to a plastic spoon. The study also indicated that microplastic levels in the brain have increased by 50% since 2016[1].

[1] **Bioaccumulation of microplastics in decedent human brains | Nature Medicine**

There are few studies on the impacts of microplastics on human health. However, a study from 2024 by the prestigious New England Journal of Medicine provided the first evidence of a potential link between microplastics and human reporting: "A study of more than 200 people undergoing surgery found that nearly 60% had microplastics or even smaller nanoplastics in a main artery. Those who did were 4.5 times more likely to experience a heart attack, a stroke or death in the approximately 34 months after the surgery than were those whose arteries were plastic-free…The team tracked 257 people undergoing a surgical procedure that reduces stroke risk by removing plaque from an artery in the neck.[2]"

While studies on the impacts of microplastics on human health are still emerging, numerous studies have shown that microplastics increase risk of cancer and disrupt hormone pathways in lab rats.

Microbeads: intentionally added microplastics. Microplastics can occur when larger pieces of plastic break apart in the environment, or microplastics can be manufactured and intentionally added to products. One type of intentionally added microplastics are microbeads. Microbeads are used as exfoliants and scrubbing agents in various personal care products, such as soap, facial scrubs, body washes, and toothpaste, as well as in cleaning supplies. They are also used in the formulation of cosmetics, including mascara, foundation, face powders, lipstick, and deodorant, to add texture or improve consistency. According a 2023 report by the California State Policy Evidence Consortium:

> "During the 1990s and early 2000s, cosmetic and hygiene companies began using solid plastic microbeads as a cleaner or soft exfoliant in facewash, shower gel, and toothpaste. Household and industrial cleaning agents also use microbeads…As a result, unprecedented amounts of microbeads funneled into wastewater treatment plants and subsequently made their way into rivers, lakes, and oceans (Dauvergne, 2018[3])".

While most microbead bans have focused on their use in personal care products, one study by an Austrian environmental organization and a consumer protection group tested 300 detergents and found microplastics in 119 of them.[4,5] Another study looking at sources of microplastics in the Netherlands in

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[2] Marfella, R., Prattichizzo, F., Sardu, C., Fulgenzi, G., Graciotti, L., Spadoni, T., ... & Paolisso, G. (2024). Microplastics and nanoplastics in atheromas and cardiovascular events. *New England Journal of Medicine*, *390*(10), 900-910.

[3] Dauvergne, P. (2018). The power of environmental norms: marine plastic pollution and the politics of microbeads. *Environmental Politics*, *27*(4), 579-597.

[4] **Einkaufstest Waschmittel.pdf (global2000.at)**

soil, water and air, found that cleaning agents produces approximately 3 tons of microplastics per year in the Netherlands.[6]

Microbead bans. Microbeads have been banned at the Federal level, and there are microbeads bans in over half the states[7], including in California.

In 2015, California enacted the Plastic Microbeads Nuisance Prevention Law, in 2015 (AB 888, Bloom, Chapter 594). This law prohibits the sale of rinse-off, personal care products that contain plastic microbeads used to exfoliate or cleanse ("personal care product" is defined as an "article intended to be rubbed, poured, sprinkled, or sprayed on, introduced to, or otherwise applied to, the human body…for cleansing, beautifying, promoting attractiveness, or altering the appearance...")

The European Union has established timelines to ban intentionally added microplastics from a variety of products, including from detergents, waxes, and polishes by 2028, loose glitter on Oct 17, 2023, and rinse-off cosmetics by 2027. The microplastics ban also included other products such as lip, nail and makeup products (*Commission Regulation (EU) 2023/2055 - Restriction of microplastics intentionally added to products).* Under this ban, suppliers of lip, nail, and makeup products will have to include the statement "This product contains microplastics" on the labels starting in 2031 and going until the bans are effected in 2035.

Comments

Purpose of this bill. According to the author "The plastic pollution crisis is with us every day—not just in faraway places. This isn't just an environmental issue. It is a public health emergency. Tiny microplastics—so small they are invisible to the naked eye—have infiltrated our waterways, soil, food, and bodies. Plastic microbeads are present in many everyday items. They are used in our makeup, our cleaning supplies, and our paints. As a result, our bodies are filled with microplastics. They are in our lungs, bloodstream, placental tissue, breast milk, reproductive organs, and even brains. It's time to put an end to these unnecessary

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[5] Lin, Q., Pang, L., Ngo, H. H., Guo, W., Zhao, S., Liu, L., ... & Li, F. (2023). Occurrence of microplastics in three types of household cleaning products and their estimated emissions into the aquatic environment. *Science of the Total Environment*, *902*, 165903.
[6] Verschoor, A., De Poorter, L., Dröge, R., Kuenen, J., & de Valk, E. (2016). Emission of microplastics and potential mitigation measures: Abrasive cleaning agents, paints and tyre wear.
[7] **Nationwide Ban on Plastic Microbeads in Cosmetics (bdlaw.com)**

and dangerous microplastics. With AB 823, we have a chance to protect our oceans, our communities, and our health."

Microbead alternatives are already on the market. There are numerous alternatives to intentionally added plastic microbeads already on the market today. These include crushed walnut shells, oats, sugar and jojoba seeds.

Alternatives to plastic glitter are also available on the market today, including glitter made from mica minerals. Further innovate research in this space is ongoing. According a to a 2022 study, *Large-scale fabrication of structurally colored cellulose nanocrystal films and effect pigments*, published in Nature Materials, researchers from the University of Cambridge describe the development of an alternative to plastic glitter, intended for use in the cosmetics industry.

Notably, AB 823 bans all plastic microbeads and plastic glitter, including biodegradable plastic. 'Biodegradable' means it will decompose by the action of living organisms, usually microbes. Numerous studies have demonstrated that there is a wide range in how efficiently biodegradable plastics break down in the environment depending on the type of polymers used and the environment in which the biodegradable plastic is immersed, among other factors[8,9,10]. One review study from 2021 on biodegradable plastics concluded: "…Not all biodegradable plastics are completely degradable under natural conditions. Some of them may be disintegrated into microplastics more rapidly than conventional plastics, emerging as another threat to soil environments.[11]"

In banning all plastic microbeads and glitter, AB 823 takes an approach to limit the intentional production microplastics that enter and linger in the environment from a variety of products.

Related/Prior Legislation

[8] Wei, X. F., Capezza, A. J., Cui, Y., Li, L., Hakonen, A., Liu, B., & Hedenqvist, M. S. (2022). Millions of microplastics released from a biodegradable polymer during biodegradation/enzymatic hydrolysis. *Water Research*, *211*, 118068

[9] Mohee, R., Unmar, G. D., Mudhoo, A., & Khadoo, P. (2008). Biodegradability of biodegradable/degradable plastic materials under aerobic and anaerobic conditions. *Waste Management*, *28*(9), 1624-1629.

[10] Adamcová, D., Radziemska, M., Fronczyk, J., Zloch, J., & Vaverkova, M. D. (2017). Research of the biodegradability of degradable/biodegradable plastic material in various types of environments. *Przegląd Naukowy. Inżynieria i Kształtowanie Środowiska*, *26*(1 [75]).

[11] Qin, M., Chen, C., Song, B., Shen, M., Cao, W., Yang, H., ... & Gong, J. (2021). A review of biodegradable plastics to biodegradable microplastics: another ecological threat to soil environments?. *Journal of Cleaner Production*, *312*, 127816

AB 1628 (McKinnor, 2023) would have required new washing machines for residential or state use to include a microfiber filtration system. This bill was vetoed by the Governor.

AB 888 (Bloom, Chapter 594, Statutes of 2015) prohibits the sale of personal care products that contain plastic microbeads on and after January 1, 2020.

FISCAL EFFECT: Appropriation: No Fiscal Com.: Yes Local: No
According the to the Assembly appropriations committee: " This bill expands the state's existing ban on plastic microbeads in personal care products, which makes a violator liable for a civil penalty not to exceed $2,500 per day for each violation, and authorizes the penalty to be assessed and recovered in a civil action brought in any court of competent jurisdiction by the Attorney General or local officials.

1) Cost pressures (Trial Court Trust Fund, General Fund) of an unknown amount to the courts, potentially in excess of $150,000, to adjudicate enforcement actions authorized by this bill. Actual costs will depend on the number of cases filed and the amount of court time needed to resolve each case. It generally costs approximately $1,000 to operate a courtroom for one hour. Although courts are not funded on the basis of workload, increased pressure on the Trial Court Trust Fund may create a demand for increased funding for courts from the General Fund. The fiscal year 2024-25 state budget provides $37.3 million ongoing General Fund to backfill declining revenue to the Trial Court Trust Fund.

2) Possible costs (General Fund, special funds) to the Department of Justice (DOJ) of an unknown amount. Actual costs will depend on whether the Attorney General pursues enforcement actions, and, if so, the level of additional staffing needed by DOJ to handle the related workload. If DOJ hires staff to handle enforcement actions permitted by this bill, the department would incur significant costs, likely in the low hundreds of thousands of dollars annually. If DOJ does not pursue enforcement as permitted by this bill, the department would not incur any costs."

SUPPORT: (Verified 8/27/25)

350 Bay Area Action
350 Bay Area Action
350 Sacramento
5 Gyres Institute
5 Gyres Science to Solutions

7th Generation Advisors
Active San Gabriel Valley
Algalita Marine Research and Education
Alliance of Nurses for Healthy Environments
American College of Ob-gyn's District Ix
Azul
Ban Sup (single Use Plastic)
Black Women for Wellness Action Project
Blue Ocean Warriors
Breast Cancer Over Time
Breast Cancer Prevention Partners
California Black Health Network
California Domestic Workers Coalition
California Environmental Voters
California Nurses for Environmental Health and Justice
California Product Stewardship Council
Californians Against Waste
Calpirg, California Public Interest Research Group
Catholic Charities of Stockton
Center for Environmental Health
Chicobag Company
Clean Water Action
Cleanearth4kids.org
Climate Action California
Coastal Corridor Alliance
Community Water Center
Courage California
Credo Beauty
Defend Our Health
Del Norte Solid Waste Management Authority
Dr. Bronner's
East Bay Municipal Utility District
Ecology Center
Environmental Justice Communities Against Plastics
Environmental Working Group
Erin Brockovich Foundation
Facts Families Advocating for Chemical and Toxics Safety
Friends Committee on Legislation of California
Friends of the Earth
Green Science Policy Institute

Greenlatinos
Habits of Waste
Innersense Organic Beauty
Integrated Resource Management
Intelligent Nutrients
Just the Goods
Just Transition Alliance
Los Angeles County Sanitation Districts
Los Angeles Waterkeeper
Mamavation - Non-toxic Products for Healthy Families
Monterey Bay Aquarium
National Resources Defense Council
National Stewardship Action Council
Naturepedic
Northern California Recycling Association
Oakland Recycles
Occidental Arts and Ecology Center
Ocean Conservancy
Pacific Beach Coalition
Pacoima Beautiful
Physicians for Social Responsibility
Physicians for Social Responsibility - Los Angeles
Plastic Free Future
Plastic Pollution Coalition
Regen Monterey
Rethinkwaste
Salinas Valley Solid Waste Authority
San Francisco Baykeeper
Save Our Shores
Save the Albatross Coalition
Save the Bay
See (social Eco Education)
Sierra Club California
Skinowl, INC
Socal 350 Climate Action
Surfrider Foundation
Sustainable Rossmoor
The Last Plastic Straw
U.s. Green Building Council, California
Zero Waste Marin

Zero Waste San Diego
Zero Waste Sonoma

OPPOSITION: (Verified 8/27/25)

None received

ASSEMBLY FLOOR: 63-10, 6/2/25
AYES: Addis, Aguiar-Curry, Ahrens, Alanis, Alvarez, Arambula, Ávila Farías, Bauer-Kahan, Bennett, Berman, Boerner, Bonta, Bryan, Calderon, Caloza, Carrillo, Chen, Connolly, Davies, Elhawary, Fong, Gabriel, Garcia, Gipson, Jeff Gonzalez, Mark González, Haney, Harabedian, Hart, Irwin, Jackson, Kalra, Krell, Lackey, Lee, Lowenthal, McKinnor, Muratsuchi, Nguyen, Ortega, Pacheco, Papan, Patel, Pellerin, Petrie-Norris, Quirk-Silva, Ramos, Ransom, Celeste Rodriguez, Rogers, Blanca Rubio, Schiavo, Schultz, Sharp-Collins, Solache, Soria, Stefani, Valencia, Ward, Wicks, Wilson, Zbur, Rivas
NOES: DeMaio, Flora, Gallagher, Hadwick, Hoover, Macedo, Patterson, Ta, Tangipa, Wallis
NO VOTE RECORDED: Bains, Castillo, Dixon, Ellis, Michelle Rodriguez, Sanchez

Prepared by: Brynn Cook / E.Q. / (916) 651-4108
8/27/25 12:12:27

****** END ******