AMENDED IN ASSEMBLY MARCH 30, 2023

AMENDED IN ASSEMBLY MARCH 23, 2023

CALIFORNIA LEGISLATURE—2023–24 REGULAR SESSION

ASSEMBLY BILL No. 234

Introduced by Assembly Member Bauer-Kahan

January 12, 2023

An act to add Chapter 5.8 (commencing with Section 42359) to Part 3 of Division 30 of the Public Resources Code, relating to solid waste.

LEGISLATIVE COUNSEL'S DIGEST

AB 234, as amended, Bauer-Kahan. Microparticles.

Existing law, the Plastic Microbeads Nuisance Prevention Law, prohibits a person from selling or offering for promotional purposes in the state 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.

This bill would enact the Synthetic Polymer Microparticles in Cosmetic and Cleaning Products Prevention Act. The bill would prohibit a synthetic polymer microparticle from being placed on the market in this state as a substance on its own or, where the synthetic polymer microparticles are present to confer a sought-after characteristic, in mixtures in a concentration equal to or greater than 0.01% by weight. The restriction would apply on and after specified dates depending on the type of product, as described, except as otherwise provided. *The bill would specify the screening tests and pass criteria to be used for purposes of determining compliance with this prohibition.* The bill would make a person who violates this prohibition liable for a civil penalty not to exceed $5,000 per day for each violation, in addition to

any other penalty established by law. The bill would authorize the civil penalty to be assessed and recovered in a civil action brought by a city attorney, a district attorney, a county counsel, or the Attorney General in any court of competent jurisdiction.

Vote: majority. Appropriation: no. Fiscal committee: yes. State-mandated local program: no.

The people of the State of California do enact as follows:

SECTION 1. It is the intent of the Legislature to prohibit the sale in this state of cosmetics, detergents, waxes, and polishes that contain intentionally added synthetic polymer microparticles by aligning with those restrictions under the European Union's Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) legislation.

SEC. 2. Chapter 5.8 (commencing with Section 42359) is added to Part 3 of Division 30 of the Public Resources Code, to read:

CHAPTER 5.8. SYNTHETIC POLYMER MICROPARTICLES IN COSMETIC AND CLEANING PRODUCTS PREVENTION ACT

42359. For purposes of this chapter, the following terms have the following meanings:

(a) "Cleaning products" or "detergents" means any substance or mixture containing soaps or other surfactants intended for washing and cleaning processes. Cleaning products may be in any form, including liquid, powder, paste, bar, cake, molded piece, or shape, and marketed for or used in household, institutional, or industrial purposes. Other products to be considered as detergents are any of the following:

(1) An auxiliary washing mixture intended for soaking, prewashing, rinsing, or bleaching clothes, household linens, or other fabrics.

(2) A cleaning mixture intended for domestic all-purpose cleaners, or other cleaning of surfaces, or both.

(3) Laundry fabric softener that is intended to modify the feel of fabrics in processes that are to complement the washing of fabrics.

(4) Other cleaning and washing mixtures intended for any other washing and cleaning processes.

(b) "Cosmetic" means an article intended to be rubbed, poured, sprinkled, or sprayed on, introduced to, 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 type of article.

(c) "Leave-on product" means a cosmetic product that is intended to stay in prolonged contact with the skin, the hair, or the mucous membranes.

(d) "Lip product" means a cosmetic product that is intended to be applied on the lips.

(e) "Liquid" means a substance or mixture that meets any of the following conditions:

(1) The substance or mixture at 50 degrees Celsius has a vapor pressure of not more than 300 kilopascals, is not completely gaseous at 20 degrees Celsius and at a standard pressure of 101.3 kilopascals, and has a melting point or initial melting point of 20 degrees Celsius or less at a standard pressure of 101.3 kilopascals.

(2) The substance or mixture fulfills the criteria in the American Society for Testing and Materials (ASTM) D 4359-90 standard test method for determining whether a material is a liquid or a solid.

(3) The substance or mixture passes the fluidity test.

(f) "Nail product" means a cosmetic product that is intended to be applied on nails.

(g) "Particle" means a minute piece of matter, other than single molecules, with defined physical boundaries.

(h) "Person" means an individual, business, or other entity.

(i) (1) "Synthetic polymer microparticles" are polymers that are solid and are either contained in particles and constitute at least 1 percent by weight of those particles, or build a continuous surface coating on particles, where at least 1 percent by weight of those particles fulfil either of the following conditions:

(A) Dimensions of the particles are equal to or less than 5 millimeters and greater than 0.1 microns.

(B) The length of the particles is equal to or less than 15 millimeters and greater than 0.3 microns in length and their length to diameter ratio is greater than 3 microns.

(2) The following polymers are excluded from the definition set forth in paragraph (1).

(A) Polymers that are the result of a polymerization process that has taken place in nature and are not chemically modified substances.

(B) Polymers that are degradable.

(C) Polymers that have a solubility greater than two grams per liter in accordance with the test methodologies identified herein.

(D) Polymers that do not contain carbon atoms in their chemical structure.

(j) "Rinse-off cosmetic" means a cosmetic product that is intended to be removed after application on the skin, the hair, or the mucous membranes.

(k) "Solid" means a substance or a mixture other than liquid or gas.

(*l*) "Waxes and polishes" means a chemically formulated consumer product, including a polish, wax, or restorer labeled to indicate that the purpose of the product is to polish, protect, buff, condition, temporarily seal, or maintain furniture, floors, metal, leather, or other surfaces.

42359.05. (a) For purposes of this chapter, all of the following apply:

(1) This section provides guidance for assessing the degradability of polymers for the purposes of entry to market: the permitted test methods and the pass criteria for those methods. The test methods were designed to measure biotic degradation, although some abiotic degradation may take place during the test and contribute to the test results.

(2) The biodegradability provisions apply only for the purpose of exempting biodegradable materials from the scope of this chapter.

(3) The tests described in subdivision (b) shall be conducted by laboratories complying with the principles of good laboratory practice provided for in Directive 2004/10/EC of the European Parliament and of the Council of the European Union or other international standards recognized as being equivalent or accredited to ISO 17025.

(4) The permitted test methods described in subdivision (b) are organized into five groups, on the basis of their design and underlying rationale. Meeting the pass criteria in any of the permitted test methods in groups 1 to 3, inclusive, as described in paragraph (1), (2), or (3) of subdivision (b), is sufficient to

demonstrate that the polymer or polymers contained in the tested material and subject to the test are degradable and are therefore excluded from the scope of this chapter. If group 4 or group 5 tests, as described in paragraph (4) or (5) of subdivision (b), are used to demonstrate degradability of polymers for uses other than agricultural and horticultural uses, the pass criteria shall be met in at least three of the following environmental compartments:

(A) Fresh or estuarine water.

(B) Fresh or estuarine water sediment.

(C) Marine water.

(D) Marine sediment.

(E) Marine water or sediment interface.

(F) Soil.

(b) (1) (A) The group 1 permitted screening test methods are the following:

(i) The "Ready Biodegradability" test (OECD TG 301B, C, D, F).

(ii) The "Ready Biodegradability - CO2 in sealed vessels (Headspace Test)" test (OECD TG 310).

(B) The group 1 pass criteria to demonstrate ready biodegradation is 60 percent mineralization measured, over 28 days, as evolved CO2 or consumed O2. The 10-day window requirement mentioned in the test guidelines listed in subparagraph (A) do not need to be fulfilled.

(2) (A) (i) The group 2 permitted screening test methods are the following:

(I) The "Ready Biodegradability" test (OECD TG 301B, C, D, F).

(II) The "Ready Biodegradability - CO2 in sealed vessels (Headspace Test)" test (OECD TG 310).

(III) The "Biodegradability in Seawater" test (OECD TG 306).

(ii) The group 2 screening test methods may be extended to up to 60 days and larger test vessels may be used.

(B) The group 2 pass criteria to demonstrate ready biodegradation is 60 percent mineralization measured, over 60 days, as consumed O2, which shall be permitted only for the tests described in subclause (I) or (II) of clause (i) of subparagraph (A), or as evolved CO2. The 10-day window requirement mentioned in the test guidelines listed in subparagraph (A) do not need to be fulfilled.

(3) (A) The group 3 permitted test method is the "Inherent Biodegradability: Modified MITI Test (II)" test (OECD 302C). The preadaptation of the inoculum mentioned in the test guideline shall not be allowed.

(B) The group 3 pass criteria to demonstrate inherent degradation is greater than or equal to 70 percent mineralization measured as consumed O2 or evolved CO2 within 14 days.

(4) (A) (i) The group 4 permitted screening test methods are the following:

(I) Determination of the ultimate aerobic biodegradability of plastic materials in an aqueous medium – Method by analysis of evolved carbon dioxide (EN ISO 14852:2018).

(II) Determination of the ultimate aerobic biodegradability of plastic materials in an aqueous medium – Method by measuring the oxygen demand in a closed respirometer (EN ISO 14851:2004).

(III) Plastics – Determination of aerobic biodegradation of non-floating plastic materials in seawater/sediment interface – Method by analysis of evolved carbon dioxide (EN ISO 19679:2016).

(IV) Plastics – Determination of aerobic biodegradation of non-floating plastic materials in seawater/sandy sediment interface – Method by measuring the oxygen demand in closed respirometer (EN ISO 18830:2016).

(V) Plastics – Determination of the ultimate aerobic biodegradability of plastic materials in soil by measuring the oxygen demand in a respirometer or the amount of carbon dioxide evolved (EN ISO 17556:2019).

(VI) Plastics - Determination of the aerobic biodegradation of non-floating materials exposed to marine sediment – Method by analysis of evolved carbon dioxide (ISO 22404:2019).

(ii) The specifications set forth in ISO 22403:2020 Plastics – Assessment of the intrinsic biodegradability of materials exposed to marine inocula under mesophilic aerobic laboratory conditions – Test methods and requirements shall be taken into account when applying subclauses (III) and (IV).

(iii) For group 4 test methods, the preadaptation of the inoculum shall not be allowed. The result shall be reported as the maximum level of degradation determined from the plateau phase of the degradation curve, or as the highest value if the plateau has not been reached. The form, size, and surface area of the reference

material shall be comparable to that of the test material. Either of the following materials may be used as reference materials:

(I) Positive controls: biodegradable materials, such as microcrystalline cellulose powder, ashless cellulose filters, or poly-β-hydroxybutyrate.

(II) Negative controls: nonbiodegradable polymers, such as polyethylene or polystyrene.

(B) The group 4 pass criteria is the ultimate degradation of greater than or equal to 90 percent relative to the degradation of the reference material within either of the following time periods:

(i) Six months in aquatic tests.

(ii) Twenty-four months in soil, sediment, or water and sediment interface tests.

(5) (A) (i) The group 5 permitted simulation test methods are the following:

(I) Aerobic and Anaerobic Transformation in Soil (OECD TG 307).

(II) Aerobic and Anaerobic Transformation in Aquatic Sediment Systems (OECD TG 308).

(III) Aerobic Mineralisation in Surface Water – Simulation Biodegradation Test (OECD TG 309).

(ii) The required test temperatures for purposes of clause (i) shall be 12 degrees Celsius for fresh or estuarine water, fresh or estuarine water sediment and soil, and 9 degrees Celsius for marine water and marine sediment because these are the average temperatures for that compartment in the European Union.

(B) The group 5 pass criteria to demonstrate degradation under relevant environmental conditions are any of the following:

(i) The degradation half-life in marine, fresh, or estuarine water is less than 60 days.

(ii) The degradation half-life in marine, fresh, or estuarine sediment is less than 180 days.

(iii) The degradation half-life in soil is less than 180 days.

(c) (1) This subdivision sets forth the permitted test methods and the test conditions to prove that a polymer is soluble for the purposes of entry. The tests shall be conducted by laboratories complying with the principles of good laboratory practice provided for in Directive 2004/10/EC or other international standards recognized as being equivalent or accredited to ISO 17025.

(2) The permitted test methods for purposes of paragraph (1) are the following:

(A) OECD Guideline 120.

(B) OECD Guideline 105.

(3) The test material shall be comparable in terms of composition, form, size, and surface area to the polymer particles present in the product. For polymeric particles containing inorganic elements, such as particles encapsulated with inorganic substances or particles in which the polymer is grafted onto an inorganic carrier, it shall be sufficient to demonstrate that the polymeric part of the particle meets the pass criteria. This may require the testing of the polymer prior to the formation of the particle.

(4) The conditions for the solubility test shall be the following:

(A) Temperature: 20 degrees Celsius.

(B) pH: 7.

(C) Loading: 10g/1000mL.

(D) Test time: 24 hours.

(5) When performing the solubility test, it shall be demonstrated, by any appropriate means, that the dissolved test material is qualitatively comparable to the polymer present in the synthetic polymer microparticles as released to the environment. In accordance with OECD Test Guideline 120, this shall be determined by either of the following:

(A) One test concentration and direct analysis, by any appropriate means, to demonstrate that the polymer components in the aqueous phase comprise all molecular weight fractions present in the synthetic polymer microparticles.

(B) Two test concentrations and indirect analysis, by any appropriate means, for example, by determining total organic carbon of the aqueous phase and of the undissolved or not-extracted part, demonstrating comparable results at the high and the low test concentration.

42359.1. (a) A synthetic polymer microparticle shall not be placed on the market in this state as substances on their own ~~or, where~~ *or if* the synthetic polymer microparticles are present to confer a sought-after characteristic, in mixtures in a concentration equal to or greater than 0.01 percent by weight.

(b) The restriction described in subdivision (a) applies as follows:

(1) On and after January 1, 2030, for synthetic polymer microparticles for use in the encapsulation of fragrances.

(2) On and after January 1, 2028, for rinse-off products, unless the products contain synthetic polymer microparticles for use as an abrasive, such as to exfoliate, polish, or clean.

(3) On and after January 1, 2036, for lip products, nail products, and makeup.

(4) On and after January 1, 2030, for leave-on products.

(5) On and after January 1, 2029, for detergents, waxes, and polishes.

(c) The restriction described in subdivision (a) shall not apply to the following synthetic polymer microparticles:

(1) Synthetic polymer microparticles that are contained by technical means so that releases to the environment are prevented when used in accordance with the instructions for use during the intended end use.

(2) Synthetic polymer microparticles, the physical properties of which are permanently modified during intended end use in a way that the polymer no longer falls within the scope of this entry.

(3) Synthetic polymer microparticles that are permanently incorporated into a solid matrix during intended end use.

(d) The restriction described in subdivision (a) shall not apply to the placing on the market in this state *of* any of the following:

(1) Synthetic polymer microparticles for use at industrial sites.

(2) Prescription drugs and over-the-counter products regulated as a drug by the United States Food and Drug Administration under the Federal Food, Drug, and Cosmetic Act (21 U.S.C. *Sec.* 321 et seq.), including combination products pursuant to Section 3.2(e) of Title 21 of the Code of Federal Regulations.

(3) Veterinary drugs.

(4) Fertilizers.

(5) Food and food additives.

(6) In vitro diagnostic devices.

42359.2. (a) A person who violates Section 42359.1 is liable for a civil penalty not to exceed five thousand dollars ($5,000) per day for each violation, in addition to any other penalty established by law. That civil penalty may be assessed and recovered in a civil action brought by a city attorney, a district attorney, a county counsel, or the Attorney General in any court of competent jurisdiction.

(b) In assessing the amount of a civil penalty for a violation of this chapter, the court shall consider all of the following:

(1) The nature and extent of the violation.

(2) The number and severity of the violations.

(3) The economic effect of the penalty on the violator.

(4) Whether the violator took good faith measures to comply with this chapter and when these measures were taken.

(5) The deterrent effect that the imposition of the penalty would have on both the violator and the regulated community as a whole.

(6) Any other factors that justice may require.

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