SENATE COMMITTEE ON ENVIRONMENTAL QUALITY
Senator Allen, Chair
2019 - 2020 Regular

Bill No:	SB 647		
Author:	Mitchell		
Version:	4/11/2019	**Hearing Date:**	4/24/2019
Urgency:	No	**Fiscal:**	Yes
Consultant:	Gabrielle Meindl		

SUBJECT: Hazardous substances: metal-containing jewelry

DIGEST: This bill would revise and recast the hazardous waste control provisions relating to lead and cadmium standards for children and adult jewelry.

ANALYSIS:

Existing law:

Under hazardous waste control laws:

1) Requires the Department of Toxic Substances Control (DTSC) to regulate the handling and management of hazardous waste and hazardous materials. Specifies that a violation of the hazardous waste control laws is a crime.

2) Under Proposition 65 (the Safe Drinking Water and Toxic Enforcement Act of 1986), lists toxins that are known to the state to cause cancer and reproductive damage. Cadmium and lead are both listed on the Proposition 65 list as both a carcinogen and a reproductive toxin.

3) Prohibits a person from manufacturing, shipping, selling, or offering for sale or promotional purposes jewelry, as defined, for retail sale in the state, unless the jewelry is made entirely from specified materials that do not exceed specified lead and cadmium content limits, and imposes separate material requirements for children's jewelry, as provided.

4) Provides that the content limits in adult jewelry for electroplated metal, unplated metal, plastic or rubber, and dye or surface coating are 6%, 1.5%, 0.02%, and 0.06% of lead by weight, respectively.

5) Provides that the content limit in children's jewelry for metal, glass, ceramic, or component parts ranges from .02 - .06 of lead by weight, as specified.

6) Provides that the content limit in children's jewelry for cadmium is .03% by weight.

7) Defines "children" for purposes of these provisions to mean children 6 years of age and younger.

8) Requires a manufacturer or supplier of jewelry that is sold, offered for sale, or offered for promotional purposes to prepare a certification that attests that the jewelry does not contain a level of lead or cadmium in excess of the provided limits.

9) Provides test methods and procedures for testing jewelry for purposes of these provisions.

This bill:

1) Changes the lead content limit in children's jewelry to .01% (100 ppm) of lead by weight, excluding inaccessible component parts.

2) Creates surface coating limits in children's jewelry of .009 (90 ppm) of lead by weight and .0075 percent (75 ppm) of cadmium by weight.

3) Changes the lead content limits in adult jewelry for electroplated metal, unplated metal, and dye or surface coating to .05% (500 parts per million (ppm)) of lead by weight.

4) Revises the definition of "children" to mean persons 15 years of age and younger.

5) Defines "inaccessible" to mean not physically exposed by reason of a sealed covering or casing and does not become physically exposed through reasonably foreseeable use and abuse of the product.

6) Provides that DTSC may establish guidance on what component parts in children's jewelry shall be considered inaccessible.

7) Requires the manufacturer or supplier certification to include additional detail about the jewelry covered by the certification, including, among other things, the dates on which, and the locations where, the jewelry was tested for purposes of certification. Because a violation of these additional certification requirements would be a crime, the bill would impose a state-mandated local program.

8) Authorizes the use of additional specified test methods to determine compliance with the standards for lead in children's jewelry.

9) Makes numerous non-substantive clean-up changes to these sections.

Background

1) *History of the Law*. In June 2004, the California Attorney General's Office and two environmental groups filed a lawsuit under Proposition 65 against several major retailers for selling jewelry containing dangerous amounts of lead without providing the required warning. The lawsuit resulted in a consent judgment with a number of jewelry manufacturers, distributors, and retailers. The settlement requires these businesses to comply with restrictions on lead in jewelry.

   Shortly after the original parties settled the lawsuit, the Legislature enacted the Lead-Containing Jewelry Law (AB 1681, Pavley). The law codifies the standards that are in the consent judgment. In 2008, the Legislature amended the Lead-Containing Jewelry Law (AB 2901, Brownley). Among other things, AB 2901 amended the definition of jewelry, extended the restrictions to promotional items, required manufacturers to provide compliance certifications, and enhanced DTSC's enforcement authority.

   After the Legislature enacted the Lead-Containing Jewelry Law to place limits on lead levels in jewelry, some manufacturers replaced lead with cadmium, which is also toxic. In response, the Legislature again modified the law, now called the Metal-Containing Jewelry Law, to include a restriction on cadmium in children's jewelry, effective January 1, 2012. In 2011, Governor Brown signed into law SB 646 (Pavley), which revised the definition of the term "jewelry" to include tie clips and clarified certification requirements for jewelry suppliers and/or manufacturers.

2) *Background on heavy metals in children's jewelry.* Lead and cadmium are toxic heavy metals that may be found in children's jewelry. Although there are no known risks to health from jewelry containing lead or cadmium touching the skin, there are serious potentially fatal risks from ingesting lead or cadmium.

3) *Health impacts of lead in children's jewelry.* Lead is used in making some children's jewelry because it is inexpensive and easily molded. It has a sweet taste that my encourage children to repeatedly chew or suck on lead-containing jewelry. Moreover, children's innate curiosity and their age-appropriate hand-

to-mouth behavior result in their mouthing and sometimes swallowing lead-containing or lead-coated objects. This route of exposure is magnified in children with a psychological disorder called pica (persistent and compulsive cravings to eat non-food items).

Young children are particularly vulnerable to the toxic effects of lead and can suffer profound and permanent adverse health effects, particularly affecting the development of the brain and nervous system. There is no known safe blood lead concentration. As lead exposure increases, the range and severity of symptoms and effects also increases. Even blood lead concentrations once thought to be a "safe level", may be associated with decreased intelligence in children, behavioral difficulties, and learning problems.

At high levels of exposure, lead can cause seizures, coma, and death. Since lead builds up in the body, ongoing exposure to even small amounts of lead can result in large amounts of lead being present in the body. Several cases of lead poisoning in children have been linked to children's jewelry containing lead.

4) *Health impacts of cadmium in children's jewelry*. As mentioned previously, efforts to place limits on lead levels in children's jewelry led some manufacturers to replace lead with cadmium. Cadmium is used to make the coating of jewelry shiny and to add weight and mass to each piece. However, cadmium is also a toxic heavy metal and a known carcinogen. Unlike lead, cadmium tastes very bitter and it is unlikely that children would repeatedly suck or chew items made with cadmium. Swallowing is considered the most likely route of exposure for cadmium in children's jewelry. Ingested cadmium has been associated with harmful effects on the kidneys, liver, and blood, and on the cardiovascular, neurological, reproductive/developmental and immune systems.

Comments

1) *Purpose of Bill.* According to the author, "California's metal-containing jewelry law has been in place for 15 years. Since then, science has made significant strides in understanding the long term health risks associated with exposure to lead and cadmium commonly used in jewelry. Those strides are reflected in significantly stricter standards enforced by the US Federal government, Canada, the European Union and the World Health Organization. It is time to align California's jewelry law with these higher standards that protect our families and are already familiar to the jewelry industry nationally and internationally.

The need to update our law is clearly documented in the heightened risks for women and children; but on a broader perspective, the population exposed to these materials are vulnerable based on their economic status. Lower income communities are already at greater environmental exposure, being more likely to live in older homes with lead paint and old pipes, among other risks. Combine that exposure with the fact that expensive jewelry (made with silver, gold and other nontoxic materials) is less accessible to low-income communities than cheaper jewelry, which commonly employs cadmium and lead to create comparable weight, brightness and "sparkle" at significant cost to public health. In the interest of protecting our families from the potent health risks of these metals prevalent in everyday jewelry, it is time to upgrade California's jewelry law."

2) *Updating standards to match new science*. This bill aligns California's lead and cadmium jewelry law with the current science and standards on the toxicity of lead and cadmium, which is significantly more advanced than when California first passed our law in 2006. Canada, the EU, the federal government, and the World Health Organization (WHO) all recognize lead and cadmium as a higher risk and more toxic than what is tolerated in California's current law.

   The sponsor notes, of particular concern, aside from the well documented risks for children and women of reproductive age, is the population exposed to these metals is biased based on economics. Expensive jewelry uses silver, gold and other nontoxic metals and materials. Cheap jewelry uses cadmium and lead as added ingredients which result in comparable weight, brightness and "sparkle" - all at significant cost to public health.

3) *Children's Jewelry Standard for Lead*. In 2006, AB 1681 (Pavely) established law governing lead content in children and adult jewelry. For children's jewelry, the bill established the standard of no more than .06% (600 ppm) lead by weight. Two years later, Congress passed and the president signed the Consumer Product Safety Improvement Act (H.R. 4040, Rush), which established federal standards for children's jewelry. For lead, the bill established a .01% (100 ppm) standard for children's jewelry. SB 647 would strengthen California's lead standard for children's jewelry by bringing it in line with the federal standard. The bill also establishes a surface coating requirement for lead in children's jewelry, consistent with the federal standard.

4) *Children's Jewelry Standard for Cadmium*. In 2009, SB 929 (Pavely) established a cadmium standard for children's jewelry. The bill mandated that children's jewelry cannot contain more than .03% (300 pm) cadmium. While SB 647 does not change the existing concentration-based limit of cadmium, it

would strengthen the California's cadmium standard for children's jewelry by limiting paint and surface coating of children's jewelry to .0075% (75 ppm), which is the ASTM International standard. ASTM International is one of the largest voluntary standards developing organizations in the world. They develop technical documents that are the basis of manufacturing, management, procurement, codes and regulations for dozens of industry sectors.

5) *New age threshold*. SB 647 (Mitchell) would raise the age threshold in the definition of "children's jewelry" from jewelry intended for children six years of age and younger to children 15 years of age and younger. The age threshold matches the Canadian standard. According to a regulatory impact analysis statement from Canada's Department of Health, Canada chose the broader age limit because it is more reflective of industry marketing practices, which targets the 10-14 year "tweens-young teens" age range as a single group. Staff notes that since industry has to comply with the Canadian age standard, it should be feasible to comply with the same standard in California.

6) *Adult jewelry standard*. In 2006, AB 1681 (Pavely) set the standard for adult jewelry to no more than 6% lead by weight if it is electroplated with suitable under and finish coats and established a stricter standard for non-electroplated metals containing lead (electroplating is the practice of using electricity to coat a metal with a thin layer of another, more precious metal, and can be used to make cheap metals look expensive). In 2012, the European Union (EU) adopted a .05% lead by weight standard for any individual part of jewelry.

   The study used to justify the EU standard was prepared by the EU's European Chemicals Agency. The report analyzes how the IQ of a young child would be affected if the child mouthed lead jewelry. For more common mouthing scenarios, the study shows that jewelry meeting California's adult jewelry standard would create appreciable risks to a child's IQ. Under a chronic mouthing scenario, the study concludes that a .05% lead jewelry standard would not create appreciable risks to the child's IQ. According to the sponsor, the adult jewelry standard is important to children's health since it is not uncommon for children to have access to adult jewelry.

   This bill would adopt the EU standard, which is significantly stronger than the current state standard for adult jewelry. Again, staff would note that since the industry has to comply with the EU standard, they should be able to comply with it in California, as well.

Related/Prior Legislation

Senate Bill 646 (Pavley, Chapter 473, Statutes of 2011) deleted provisions specifying that a party that is a signatory to the amended consent judgment or a signatory to the consent judgment in the consolidated action entitled People v. Burlington Coat Factory Warehouse Corporation, et al. (Alameda Superior Court Lead Case No. RG04-162075) is deemed to be in compliance with California law. SB 646 also revised the definition of the term "jewelry" to include tie clips and clarified certification requirements for jewelry suppliers and/or manufacturers.

SB 929 (Pavley, Chapter 313, Statutes of 2010) added prohibitions for jewelry containing cadmium to the Lead-Containing Jewelry Law, updating the statute to become the Metal-Containing Jewelry Law.

AB 1681 (Pavley, Chapter 415, Statutes of 2006), created the Lead-Containing Jewelry Law, which prohibited the manufacture, shipping, sale, or offering for sale of jewelry, children's jewelry, or jewelry used in body piercing that is made from materials with more than specified levels of lead.

AB 2901 (Brownley, Chapter 575, Statutes of 2008) strengthened and expanded DTSC's enforcement authority for the Lead-Containing Jewelry Law.

SOURCE: Department of Justice, Office of the Attorney General

SUPPORT:

Breast Cancer Prevention Partners
Center for Environmental Health
Clean Water Action
Environmental Working Group
Physicians for Social Responsibility

OPPOSITION:

None received

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