

CAR SEATS AND THE CHILDREN'S SAFE PRODUCTS ACT

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I. Car Seat Manufacturers

1. National Manufacturers

The Top 4 car seat manufacturers selling car seats in Washington as identified by the WA Office of the Safety Restraint Coalition (Jennifer 425-828-8975) are Evenflo, Dorel, Graco and Britex. These were also the Top 4 manufacturers with products available at the Toys R Us retail store in South Center and at Target in Olympia. Kathryn Kruger, Executive Director, Safety Restraint Coalition, Kirkland, WA; confirms that these are the brands of car seats most commonly seen by car seat technicians in Washington. Two other brands, Peg Perego and Chicco are also common in the Puget Sound region.

Company information for the top four car seat manufacturers in the U.S.

Company	Headquarters	2007 sales (mil.)	2007 employees	Brands
Evenflo Company, Inc.	Miamisburg, OH	124.3 (est.)	1,500	Evenflo
Dorel Juvenile Group, Inc.	Columbus, IN	579.1	320	Cosco, Safety 1 st , licenses Eddie Bauer
Graco Children's Products, Inc.	Exton, PA	109.0 (est.)	1,420	Graco, Century, SafeSeat, SnugRide
Britax	Charlotte, NC	unknown	unknown	Britex

2. Car Seat Manufacturers in Washington

There are two car seat manufactures in Washington. These are Sunshine Kids Juvenile Products and Prorider.

Company information for car seat manufacturers in Washington State

Company	Location	2007 sales (mil.)	2007 employees	Products
Sunshine Kids Juvenile Products	Sumner, WA	9.1	17	Juvenile products; Monterey and Radian brand car seats, car seat accessories
Prorider	Auburn, WA	1.6	4	Mostly bike helmets, manufactures and distributes one type of basic booster seats

II. Car Seat Testing Data

Important questions related to car seat testing:

- Will car seats meet the standards for lead, cadmium and phthalates? If not, will there be enough supplies of car seats that meet the standards?
- What information is available?
- Where do we need additional information?
- What will be the impact of the new standards on car seats sold in Washington?

It is assumed that these questions initially relate to the new standards for lead, cadmium and phthalates that take effect July, 2009. These standards will prohibit the sale of car seats or car seat components containing lead > 90 ppm, cadmium > 40 ppm, and the total of six phthalates > 1000 ppm. Other standards may apply to car seats once the list of chemicals of high concern for children are identified per Section 4 of the law and subsequent policy options are considered for these chemicals which may include content limits. For the purposes of this discussion, however, other possible chemicals will not be included.

1. *The Ecology Center*

The Ecology Center in Ann Arbor, MI has tested car seats for a variety of metals and other elements for the past three years. Recent testing is published on their website at: www.HealthyCar.org in their new report titled, The Consumer Guide to Toxic Chemicals in Cars, 2008 (<http://www.healthycar.org/reports.php>) This report provides data from car seat testing for elements including lead, cadmium and chlorine (which indicates the use of PVC plastic). Car seat models from 2007 and 2008 were tested; data for 2007 were reported earlier but appear to be updated (especially lead results) in the 2008 report.

Sampling details and results of the Ecology Center report are listed below. The summary of the sampling study below is preliminary; we have not had the opportunity to review the entire report.

Sampling Details:

- Types of car seats tested: infant, convertible, and booster.
- Individual parts of car seats tested (when applicable, not all seats have all components): seat, base, arm rest (2008 only), clip, shade, foam, and trim (2007 only)
- Test method: XRF - measures total element
- Chemicals (elements) analyzed: lead, chlorine (indicates use of PVC plastic), bromine (indicates use of flame retardants), other chemicals (chromium, cobalt, nickel, copper, zinc, cadmium, tin, antimony, mercury)

Types of car seats and components tested:

- The details on when or where the car seats tested in 2008 were purchased are not yet available.
- Number of car seats tested: 62 (2007 models) and 70 (2008 models)
- Number of different brands: 10 (2007) and 12 (2008)

- Brands tested (number of car seats tested of that brand):
 - 2007: Britax (9), Combi (1), Compass (1), Cosco (6), Eddie Bauer (a Cosco brand) (5), Evenflo (13), Fisher Price (1), Graco (25), Safety 1st (1), Peg Perego (1)
 - 2008: Britax (19), Graco (13), Evenflo (13), Baby Trend (2), Maxi Cosi (5), Orbit (2), Cosco (7), Eddie Bauer (2), Safety 1st (1), Sunshine Kids (3), Alpha Sport (2), Clek (1)

Results (for lead, cadmium and chlorine):

2007 models

- Lead: 19 out of 62 car seats (31%) contained lead; seven of these contained lead above 90 ppm (230 ppm in the shade of a Britax model, 103 ppm in the seat of a Britax model, 111 ppm and 1502 ppm in the seat and shade, respectively, of a Combi model, 166 ppm in a Cosco model, 113 ppm in an Eddie Bauer model, 557 ppm in the trim of an Evenflo model, and 535 ppm in the shade of a Peg Perego model)
- Chlorine (PVC): Fourteen out of 62 car seats (23%) contained chlorine; 9 of these were in the shade component only and 5 were in the trim only. The chlorine level measured ranged from 67,540 to 550,000 ppm. Detecting chlorine indicates the use of PVC plastic. We can not estimate the phthalate content based on the chlorine content.
- Cadmium: 0/62 car seats contained cadmium.

2008 models

- Lead: Nineteen out of 70 car seats (27%) contained lead; nine of these were above 90 ppm (96 ppm in seat of a Britax model, 208 ppm in seat of a Britax model, 463 ppm in a seat of a Britax model, 109 ppm in vinyl fabric of an Evenflo model, 276 ppm in seat of a Graco model, 115 ppm in seat of a Graco model, 309 ppm in the shade of a Maxi Cosi model, 516 ppm in the shade of a Maxi Cosi model, and 111 ppm in the shade of an Orbit model)
- Chlorine (PVC): Three out of 70 car seats (4%) contained chlorine; 2 of these were in the shade component only and 1 was in vinyl fabric. The chlorine level measured ranged from 35,082 to 379,342 ppm. One car seat containing chlorine also contained lead above the standard (109 ppm).
- Cadmium: One car seat had measurable cadmium (157 ppm) in the seat (an Evenflo model). The standard for cadmium is 40 ppm.

Limitations of sampling study:

- XRF only measures surface content of elements (up to a depth of 6-12 mm reported in the Ecology Center report); testing did not include any internal or subsurface parts
- The detection limit range for lead reported by the XRF manufacturer (10 – 100 ppm), which includes the new Washington standard for lead in children’s products (90 ppm). The Ecology Center observed lower detection limits than those reported by the manufacturer.
- The presence of multiple elements can cause interference with XRF measurements

- There is a margin of error associated with the XRF test results. This would be important to consider for results reported near the standard.
- Chlorine results do not predict phthalate content; additional laboratory testing for phthalates is required to give phthalate concentration to compare to WA's standard.

Conclusions:

- Car seat testing data for 2007 and 2008 from the Ecology Center indicates that most car seats will meet the standards for lead, cadmium and phthalates based on the XRF testing method. The testing included a large number of car seats from the main car seat manufacturers which are available for sale by large retailers. It is unknown how representative these testing results would be for the Washington State car seat market, but we assume they would be comparable.
- Sixteen car seats out of 132 tested had lead concentrations above the new standard (90 ppm). Four of these had lead concentrations close of the 90 ppm standard and could be within the margin of error for the XRF testing method (96, 103, 109, 111, 113, and 115 ppm) indicating it is unclear whether or not they are out of compliance.
- Seventeen of out 132 tested had detectable chlorine, indicating the use of PVC plastic in which phthalates are used. Chlorine was found in the shade, trim or vinyl fabric. However, since the testing was for chlorine and not phthalates directly, it is unknown how many of these would fail the phthalate standard.

III. Car Seat Compliance and Testing Information collected from Car Seat Retailers and Car Seat Manufacturers

1. Information from Jennifer Spall, Wal-Mart, car seat retailer

Jennifer Spall was contacted by phone on July 9 and July 11 with questions about compliance of car seats that Wal-Mart sells.

- Her compliance staff indicates that solder used in the joints of metal car seat frames would fail the new lead standard. She mentioned that even "lead-free" solder would not comply. She did not have information about exactly where solder was used in car seats.
- She commented that Walmart would not offer non-compliant car seats for sale in Washington.
- She could not provide information about which suppliers contain solder or information about the percentage of car seats that would fail the standard because of solder content. She said that she didn't have any testing data and referred us to the manufacturers to find out about any testing data.
- She mentioned that Graco was their largest car seat supplier.

2. *Juvenile Products Manufacturers Association (JPMA)*

JPMA is a trade organization representing manufacturers and importers of infant products such as cribs, car seats, strollers, bedding and accessories and decorative items.

DOH contacted Mike Dwyer (856.642.4409), Executive Director of JPMA, via email on June 16 asking about compliance of car seats with the new law and any testing data. He responded asking for some clarification around internal and external parts. DOH sent a follow-up email asking for any data on car seats on June 18.

Mike Dwyer's email response on July 20:

- Cadmium does not appear to be an issue.
- Phthalates do not appear to be an issue in the CRS (child restraint system) themselves, though some models from select manufacturers may come with a vinyl canopy and/or vinyl covering. However, with California's upcoming regulatory ban on phthalates going into effect on January 1, 2009, manufacturers are going to have to move away from the use of vinyl altogether as they will not manufacture products for the California market separately from the rest of the N. American market. CRS manufacturers intend to comply with the California legislation in this regard no later than the effective date.
- Lead could be an issue for CRS manufacturers. The lead content is an evolving issue, with manufacturers committed to reduce lead to mandated levels for coatings and substrate materials, primarily for the metal buckles and other metal components in the base or in structural steel. With pending federal legislation mandating lead levels down to either 100 ppm or 90 ppm depending upon whether this section of the legislation is taken from the House or Senate version, these are the levels to which all manufacturers are working toward compliance. The process is a time-consuming one, as manufacturers are working in tandem with their suppliers of component parts to confirm the existing levels of lead in their products, as well as the ease with which these lead levels can be reduced, if necessary. Meeting a 40ppm mandated level will be extremely difficult, as this is a trace level akin to that found naturally occurring in the environment.
- Besides the three chemicals listed above, the only other chemicals for which concerns have been publicly debated/ expressed include bromine, which is used as a flame retardant in covers, formaldehyde also used in cover finishes, BPA in polycarbonate plastics, and perhaps mercury and zinc. Some manufacturers have undertaken a study of one or more of these chemicals in their products, but there is no concerted effort to study these chemicals.

3. *Sunshine Kids Juvenile Products, Sumner WA.*

DOH contacted Sunshine Kids and spoke with Russ Berger the week of June 16. Referred to Dave Clement, who also works with JPMA, and emailed follow-up questions to Dave Clement asking about compliance and testing information on Wednesday June 18. As of July 23, we have not yet heard back from them regarding their responses.

4. *ProRider, Inc, Kent WA (800-642-3123, spoke with Lorie)*

ProRider manufactures and distributes nationwide only one style of backless booster seat. Presently their booster seat is a plastic base with vinyl and cloth covering. They report no lead in the base or coverings. They have met all federal requirements for production. None of their seats have been recalled and they have been in business since 2003.

5. *Graco Children's Products, manufacturer of Graco/Century brand car seats.*

DOH contacted Graco Corporate Office on 7/9/08. Referred to Gail Southwell (330/241-4772), Regional Sale Rep. Gail returned my call on 7/10 and referred me to their council, Stacy Broad (610/884-8207) who she said would be calling me to discuss. Stacy Broad returned my call on July 17.

- She essentially said that they don't know if their products meet our new standard since this is something new for them.
- She did confirm that Graco is one of the top 3 car seat manufacturers.
- She asked if we had contacted the Juvenile Products Manufacturers Association (JPMA). She said that it would be better to have a response from the JPMA instead of singling out individual manufacturers to report problems with compliance.

6. *Britax Company, manufacturer of Britax brand car seats.*

- DOH contacted Britax Corporate Offices on 7/9/08 and was referred to their council, Kenneth Whitenhauer (704/409-1705), left him a message asking about compliance and any testing information that was available.
- He returned our call and left a voice message on 7/10/08 saying that they were aware of our new law and that they see no problem with complying and would not have to restrict access or sale of their car seat products in Washington State.
- We called him back on 7/11/08 to ask some follow-up questions and left him a voice message asking if they have any testing data to share, any information about their market in WA, and about the use of solder in products per Wal-Mart's comments. As of 7/23 we have not heard back with responses to follow-up questions.

7. *Dorel Juvenile Group, manufacturer of Cosco, Safety Ist and Eddie Bauer brand car seats.*

Called Headquarters office on 7/9, was referred to Mark Evanco (812-314-4252), VP of Quality Assurance and Quality Safety. Telephone responses from Mark on July 18:

- Dorel is the largest manufacturer of car seats in the world. They manufacture over 800 child products, from car seats, strollers, high chairs, baby locks, etc, etc.
- This year they have spent over \$750,000 in testing and analysis of phthalates in their products. Other solutions for some of the phthalates are available that could

be used in place of phthalates, but the price increase in the product would be an issue.

- **Lead** – They are conducting an extensive inventory of lead, metals and other chemicals that are being used to manufacture their products. All metals have trace amounts of lead, and they are not sure if they can meet the 90 ppm lead levels. They typically do not use a paint or vinyl that contains lead, as a stabilizer or as an additive.
- **Cadmium** – Currently Dorel is evaluating all components in their products and considering cadmium, as well. They may not be able to reach the 40 ppm standard, as that is a very low standard. They use sheet vinyl and use over 50 million pounds of plastic a year. Even with a small rise in cost of materials to meet the standards, the price of their products will increase at the retail level.
- **The bottom line:** They do think their products would meet the standards, but unable to give numbers of the required chemicals per product. Many of the other states are now starting to use the WA legislation as a template and include car seats in their legislation. California's law goes into affect in January 09 and most manufacturers' will meet the CA law, due to the volume of business in CA

8. *Evenflo Company Inc., manufacturer of Evenflo brand car seats.*

DOH contacted Evenflo headquarters on July 9. Referred to Eric Dahle, Evenflo and received a reply 7/16 that our request was forwarded to the legal department. DOH received an email 7/17 from Amy Neff, Associate General Counsel, that Evenflo has been working with JPMA on providing answers to the inquiry and that they will be responding via an industry response to be provided by JPMA in the next few days.