

Car Seats

What we know about compliance with the
Children's Safe Products Act

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Children's Safe Products Advisory Committee Meeting

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SeaTac

Outline

- Overarching Question
- Washington Child Restraint Law
- Car Seat Manufacturers
 - Major national manufacturers
 - Washington manufacturers
- Types of Car Seats
- Car Seat Testing Data
 - The Ecology Center
- Information from Car Seat Retailer and Manufacturers
 - Wal-mart
 - Juvenile Product Manufacturers Association (JPMA)
 - Major national and Washington State manufacturers
- Conclusions
- Next Steps

Overarching Question

- Will the Children's Safe Products act significantly reduce the availability of car seats sold in Washington State?
 - Focus on compliance with lead, cadmium and phthalate standards that take effect July 1, 2009
 - Lead: 90 ppm
 - Cadmium: 40 ppm
 - Six phthalates: 1000 ppm

WA Child Restraint Law Requires:

- Children under 13 years old be transported in the back seat where it is practical to do so.
- Children up to their 8th birthday, unless they are 4'9" tall (which ever comes first), must ride in a child restraint. (For example a child car seat, booster seat, vest, or other restraint that is federally approved for use in the car.)
- The restraint system must be used correctly according to the car seat AND vehicle manufacturer's instructions.
- Vehicles equipped with lap-only seat belts are exempt from the requirement to use a booster seat.
- Children 8-years of age or at least 4'9" who wear a seat belt **MUST** use it correctly (never under the arm or behind the back) or continue to use a booster.
- **Always follow the manufacturers' instructions and guidelines for both the child restraint and the vehicle**

Top 4 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 , Eddie Bauer, Maxi Cosi
Graco Children's Products, Inc.	Exton, PA	109.0 (est.)	1,420	Graco, Models: Safe Seat, Snug Ride, etc.
Britax	Charlotte, NC	unknown	unknown	Britax

Other major manufacturers include: Baby Trend, Chicco, Combi, Peg Perego

Car Seat Manufacturers in Washington

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

Types of Car Seats

1. Infant (rear-facing)
2. Convertible
 - infant rear-facing to forward facing
3. Forward facing only
4. Boosters
5. Vests

Infant Car Seats



- For newborns and young babies
- Extra head and neck support and a reclined, rear-facing position
- Can be used with or without a base

Convertible Car Seats



- Adapts to growing child.
- Most models start as a rear-facing seat and graduate to forward-facing use
- Comes LATCH-equipped and with a tether for extra-secure installations in newer-model cars

Booster Seats



- For children aged 3 or older and weighing at least 40 lbs.
- A five-point harness keeps secures child
- High-back or no-back versions
- Uses vehicle's seat belt to secure older children

Travel Vests



- Meets applicable Federal Motor Vehicle Safety Standards. (FMVSS 213)
- Adjustable to fit growing children
- Can be used in all rear seat positions including the center seat (with included tether if lap belt only)

Travel Systems



- All-in-one systems usually include stay-in-car base, infant car seat and stroller

Car Seat Testing Data

www.**HealthyCar**.org

The Consumer Guide To Toxic Chemicals in Cars

2008 GUIDE TO CHILD CAR SEATS

**ECOLOGY
CENTER**



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Sample details

- Tested infant, convertible, and booster car seats
- Car seats purchased from major retailers and specialty stores for less common brands
- Tested parts of car seats that could come into contact with children or that might be exposed to UV light
- Not all parts on all car seats:
 - seat,
 - base,
 - arm rest (2008 only),
 - clip,
 - shade,
 - EBS (expanded polystyrene) foam, and
 - trim (2007 only)

Britax Marathon (Onyx)
Overall Rating: 4.4



Evenflo – Triumph Deluxe Ashby (Model 3941611)



Combi – Centre EX Mango (Model 808660)



Sample details

- Test method:
 - XRF - measures total element
- 12 Chemicals (elements) analyzed:
 - lead,
 - chlorine (indicates use of PVC plastic),
 - bromine (indicates use of brominated flame retardants),
 - chromium,
 - cobalt,
 - nickel,
 - copper,
 - zinc,
 - cadmium,
 - tin,
 - antimony, and
 - mercury

Sample details

- Number of car seats tested:
 - 63 (2007), 70 (2008)
- Number of different brands tested:
 - 10 (2007), 12 (2008)

Brands Tested (number tested 2007/2008)		
1. Alpha Sport (0/2)	7. Cosco (6/7)	13. Orbit (0/2)
2. Baby Trend (0/2)	8. Eddie Bauer (5/2)	14. Peg Perego (1/0)
3. Britax (9/19)	9. Evenflo (13/13)	15. Safety 1 st (1/1)
4. Clek (0/1)	10. Fisher-Price (1/0)	16. Sunshine Kids (0/3)
5. Combi (1/0)	11. Graco (25/13)	
6. Compass (1/0)	12. Maxi Cosi (0/5)	

Results

- 2007
 - Lead:
 - 19/63 (30%) contained lead;
 - 7 car seats with components > 90 ppm
 - 4 > 90 ppm in seat; 3 in shade; 1 in trim
 - 13 detects could be from interference with Br
 - Chlorine (to indicate PVC):
 - 14/63 (22%) contained chlorine;
 - 9 of these were in shade only & 5 were in trim only
 - Cadmium:
 - 0/63 contained Cd

Results

- 2008
 - Lead:
 - 19/70 (27%) contained lead;
 - 9 car seats with parts > 90 ppm
 - 5 > 90 ppm in seat; 3 in shade; 1 in vinyl fabric
 - Chlorine: (PVC):
 - 3/70 (4%) contained chlorine;
 - 2 of these were in shade only and 1 in vinyl fabric
 - Cadmium:
 - 1/70 contained Cd in seat, > 40 ppm

Limitations

- Only external, surface parts were tested
- Lead standard near XRF detection limit (reported as 10 – 100 ppm)
- Interference due to multiple elements makes some results uncertain
- Unable to assure parts meet standards when result is close to standard due to margin of error
- Can't determine compliance with phthalate standard for car seats with chlorine containing PVC components since only chlorine is measured
- Uncertainty about phthalate use in other materials

Conclusions

- Results indicate that most car seats would meet the new standards for lead and cadmium based on the XRF method and testing of major car seat parts
 - 16/133 (12%) car seats > 90 ppm lead
- Results indicate car seats could be in compliance with phthalate standard if phthalates are only used in PVC
 - 17/133 (13%) car seats contained detectable chlorine indicating use of PVC
- We need more information on parts of car seats not tested, especially any internal parts

Compliance and Testing Information from a Car Seat Retailer and Manufacturers

Retailer Information

- Wal-Mart
 - Raised question about use of solder used for joints of metal frames
 - Could not provide information about solder containing car seats or testing
 - Referred us to manufacturers
 - Solder not evident in car seats inspected

Manufacturer Information

- Juvenile Products Manufacturers Association (JPMA)
 - Trade organization
 - Response from Mike Dwyer
 - Cadmium doesn't appear to be an issue
 - Phthalates do not appear to be an issue
 - Some models have vinyl canopies that might be a problem
 - Companies already coming into compliance with new CA phthalate standard (doesn't include car seats)

Manufacturer Information

- JPMA cont'd
 - Lead could be an issue for car seat manufacturers
 - Manufacturers working to comply with proposed federal standards (100 ppm or 90 ppm)
 - Reports that the US Senate and House will report new national preemptive lead standards next week
 - Committed to reducing lead to meet standards in coatings and substrate materials, primarily for metal buckles and other metal components

Manufacturer Information

- JPMA cont'd
 - Lead could be an issue for car seat manufacturers
 - Takes time to work with suppliers of parts to confirm compliance with existing standards and to assess feasibility of reducing levels if necessary
 - Compliance with a 40 ppm standard would be extremely difficult because this is at trace levels
 - Brass and carbon steel used in structural components would contain lead in alloy at levels that would exceed the WA State requirements

Manufacturer Information

- Dorel Juvenile Group
 - Largest car seat manufacturer
 - Phthalates:
 - Have been testing their products for phthalates. Alternatives are available but cost might be an issue; could not provide any cost information
 - Lead:
 - Not sure if they can meet the 90 ppm standard. They typically do not use paint or vinyl containing lead
 - Cadmium:
 - Currently evaluating all components. They may not be able to reach the 40 ppm standard
 - Bottom Line: They do think their products would meet the standards, but unable to report on levels of chemicals in products
 - Other States also including car seats in legislation

Manufacturer Information

- Britax
 - Aware of our new law; they see no problem complying
 - Asked a follow-up question on solder and have not heard back
- Graco Children's Products
 - They don't know if their products meet our new standards
 - Prefer to have response from JPMA
- Evenflo Company
 - Working with JPMA to provide a response

Manufacturer Information

- Sunshine Kids Juvenile Products (Sumner, WA)
 - Contacted but have not heard back
- Prorider (Kent, WA)
 - Manufacturers one style of backless booster seat
 - Booster is plastic base with vinyl and cloth covering
 - They report no lead in base or coverings

Conclusions

- Available information indicates that compliant car seats will likely be available
- Compliance with the lead standard seems to be the main problem identified by manufacturers
- We need more information on:
 - Comprehensive testing data of car seat components, especially any internal or minor components, and
 - Information on the percent of car seats that might be out of compliance with the new standard
- Consumers will still be able to buy non-compliant car seats over the Internet

Next Steps

- Continue to collect information from car seat manufacturers regarding testing and compliance issues

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