

Wheel Weights

May 2008

For government purchasers

Publication No. 13-07-008

Responsible Purchasing Attributes

- Toxic chemical reduction
- Water quality

Benefits of Purchasing

- Reduces public exposure to toxins in the environment.
- Contributes to improved water quality for human and aquatic life.

How to Buy

Steel wheel weights are available on Washington State [Contract 01809](#)

Goal: To replace lead wheel weights with steel wheel weights on all state vehicles.

Wheel weights are typically fastened to wheel rims to help ensure a smooth ride and proper tire wear. Because of its density, low cost, and malleability, lead has been used in wheel weights worldwide since the 1930s to balance vehicle tires. A typical car or light truck may contain more than a quarter pound of lead in wheel weights.

An estimated 65,000 tons of lead wheel weights are in use nationally. An estimated 28,000 tons of lead are used nationally to manufacture new wheel weights each year. Most of these wheel weights are not collected at the end of a vehicle's life.

On average, five percent of wheel weights fall off vehicles. If our state trends mirror national trends, vehicles release 80,000 pounds of lead each year in Washington.

Lead wheel weights that fall off vehicles may be abraded into fine dust particles. These particles may end up in surface and groundwater supplies. This in turn can jeopardize the quality of water for human consumption and aquatic life. High levels of lead are typically found along urban roadways and in run-off from parking lots.

Fortunately, steel wheel weights are a good alternative to lead.

Standards

There are no standards for wheel weights.



*Lead wheel weights
Photo courtesy of the Ecology Center*

Leading the Way

Minnesota, Ann Arbor, Michigan, the European Union, Maine, and the Washington State Department of Ecology Lead the Way

In 2004 the state of Minnesota and the city of Ann Arbor, Michigan have announced programs to phase out lead wheel weights on their fleet vehicles.

The European Union banned the use of lead wheel weights in July 2005.

In 2006 the governor of the state of Maine issued [Executive Order 12](#), Promoting Safer Chemicals in Consumer Products and Services

directing the state to change its fleet to lead-free wheel weights.

The Washington State Department of Ecology plans to refit its entire fleet with steel wheel weights by the end of 2008.

Environmentally Preferable Purchasing

The Department of Ecology offers tools and resources to make environmentally preferable purchasing easier.

Find out about environmentally preferable products, standards and certifications, law and directives, and more at our website:

<http://www.ecy.wa.gov/programs/swfa/epp/>

Contact:

Tina Simcich
tina.simcich@ecy.wa.gov

Resources

Steel wheel weight providers:

[BADA](#)
 Hennessy Industries, Inc.
 Tim Presley
 Vice President Operations
 (800) 688-6359

[Perfect Equipment, Inc.](#)
 Mike Pursley
 Aftermarket Sales Manager
 (800) 251-1566

[International Marketing, Inc.](#)
 David Calzada
 Regional Sales Manager
 (800) 233-7086

On-line Resources

[Lead Free Wheels](#), The Ecology Center

Product Performance

Many alternatives to lead wheel weights have been considered. Some alternatives include steel, plastic, zinc, or zinc alloy called ZAMA, which is composed of zinc, aluminum, and copper.

Zinc, zinc alloys, and copper are toxic to fish and are not an environmentally preferred product.

Plastic wheel weights are a concern because the plastic is abraded by tires on the road and breaks down into unsafe byproducts. The plastic sometimes melts under high temperatures causing the weights to fall off.

All wheel weights perform similarly and improve tire life when applied correctly.

Coated steel weights are the most environmentally preferred alternative at this time.



Photo of steel wheel weight courtesy of International Marketing, Inc.

End of Life

Lead has adverse effects on survival, growth, reproduction, development, behavior, learning, and metabolism in every species that has been studied.

Lead is extremely toxic in very low doses to individuals of all ages and causes death at higher doses. It is particularly toxic to the brain and central nervous system, but lead also affects blood cells, the digestive system, cardiovascular system, and kidneys.

It is especially harmful to fetuses and young children. Lead is also harmful to adults, although the doses necessary to cause harm are generally higher than those for children.

In adults, it causes infertility, high blood pressure, and headaches. It lowers the IQ and causes behavior, learning, and hearing problems.

Replacing lead wheel weights with nontoxic wheel weights will significantly reduce toxicity issues related to lead wheel weights at the end-of-life.

Laws and Directives

<p>Chapter 70.270 Replacement of Lead Wheel Weights</p>	<p>Requires the use of alternatives to lead wheel weights.</p>
<p>Executive Order 05-01 Establishing Sustainability and Efficiency Goals for State Operations</p>	<p>Directs state agencies to modify their buying practices with goals to minimize energy use, shift to non-toxic materials, and expand markets for environmentally preferable products.</p>
<p>Executive Order 04-01 Persistent Toxic Chemicals</p>	<p>Directs the state phase out of the purchase of goods with persistent bioaccumulative toxic (PBT) materials.</p>

To ask about the availability of this document in a version for the visually impaired call the Waste 2 Resources Program at 360-407-6900. Persons with hearing loss, call 711 for Washington Relay Service. Persons with a speech disability, call 877-833-6341.