

Table 3.4.2 I: Wheel Weights – Tin

	Financial Parameter	Measure/Metric	Source of Information
<i>Required Data</i>			
	Initial purchase price for chemical/alternative	<p>Tin raw material price: \$4.43 per pound, Metals Week composite, December 2005</p> <p>Lead raw material price: \$0.65 per pound, Platts Metals Week North American producer price, December 2005</p>	<p>Carlin, 2006b</p> <p>Gabby, 2006a</p>
	Initial purchase cost for end-product/component	Pricing for tin weights was not available. It is expected that tin weights are significantly more expensive than lead weights.	
	Availability of chemical/alternative	<p>In 2005, the U.S. consumption of tin was 51,480 tons. Tin has not been mined in the United States since 1993. World tin reserves appear to be adequate to meet foreseeable demand.</p> <p>Domestic demand for primary tin is expected to grow slowly in the next few years, at a rate of about 1% per year. That rate, however, could double in a few years if new applications—especially those in which tin is substituted for toxic materials, such as lead-free solders - find acceptance in the marketplace.</p> <p>Recycling: About 9,000 tons of tin from old and new scrap was recycled in 2005. Of this, about 5,000 tons was recovered from old scrap at 2 detinning plants and 91 secondary nonferrous metal processing plants.</p> <p>Import Sources (2001-04): Peru, 44%; China, 14%; Bolivia, 14%; Indonesia, 11%; and other, 17%.</p> <p>It is estimated that 70,000 tons of lead are used per year to manufacture wheel weights worldwide.</p>	<p>Carlin, 2006b</p> <p>Ecology Center, 2006</p>

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	Financial Parameter	Measure/Metric	Source of Information
	Availability of component/end-product	<p>Availability of tin wheel weights was very limited.</p> <p>In the U.S., the aftermarket, which accounts for 80% of wheel weight usage, continues to use lead weights almost exclusively.</p>	Gearhart, 2006a
<i>Additional Data if Available</i>			
	Key operating costs during use of end-product	Operation costs for tin weights are expected to be the same as for the equivalent lead weights since tin weights are installed in the same manor as lead weights.	
	Key end-of-product life costs	<p>Used tin wheel weights are not subject to state and federal hazardous waste rules and therefore waste management and recycling costs may be reduced.</p> <p>The high value of scrap tin provides an economic incentive for recovery and recycling.</p>	