

Table 3.4.3 F: Fishing Sinkers – Tungsten

Technical/ Performance Parameter	Measure/Metric	Source of Information
<i>Component/End-product</i>		
<p><u>Key physical characteristics</u></p>	<p>Density: The density of tungsten is 19.3 g/cm³ vs. 11.34 g/cm³ for lead, which means that, for a given weight size (mass), a tungsten weight will be 41% smaller volume than a lead weight. (MatWeb)</p> <p>Melting Point: At 6100° F, the melting point of tungsten is significantly higher than the 622° F melting point of lead. (MatWeb)</p> <p>The high melting point of tungsten eliminates the possibility of anglers molding their own sinkers. The high temperatures result in higher energy costs during manufacturing. The high temperatures can also cause production delays when material or mold changes are made since the molds can take up to two days to cool.</p> <p>Corrosion resistance: Lead and tungsten are corrosion resistant materials and are successfully used for fishing sinkers without corrosion preventive coatings or special treatment.</p> <p>Malleability: Tungsten is very hard (Brinell hardness of 294) and has limited malleability (MatWeb).</p> <p>Hardness:</p> <p style="padding-left: 40px;">100% tungsten, Brinell: 294 100% tungsten, Vickers: 310 Tungsten, Mohr's Scale: 7 Lead, Mohr's Scale: 1.5 Lead, Brinell: 4.2 Lead, Vickers: 5</p> <p>(MatWeb)</p>	<p>MatWeb, 2006</p>