

Table 3.4.3 M: Assessment Summary of Alternatives for Lead Fishing Sinkers

Assessment Criteria		Lead (Reference)	Comparison Relative to Lead				
			Bismuth	Ceramic	Steel	Tin	Tungsten
Technical and Performance Criteria	Density	11.34 g/cm ³	-	-	-	-	+
	Hardness (desirable for “feel” and noise)	Soft Mohrs: 1.5	+	+	+	= (pure) + (alloy)	+
	Malleability (split-shot application)	Yes	-	-	-	=	-
	Low Melting Point (for home production)	622 °F	+	-	-	+	-
	Corrosion Resistant	Yes	=	=	-	=	=
Environmental Criteria	Highly toxic to waterfowl	Yes	+	?	+	+	+
	Toxic to Aquatic Species	Yes	+	?	+	+	+
	Primary Drinking Water Standards (MCL Action Level)	15 µg/L	?	?	+(iron)	+(FL & MN)	?
Human Health Criteria	Carcinogenicity	EPA B2 IARC 2B	+	+	+	+	+
	Developmental Toxicity	Yes (Prop 65)	+	+	+	+	+
	Occupational Exposure: REL (8-hour TWA)	0.050 mg/m ³	?	+	+	+	+
Cost	Retail Price	Low	-	-	- / = / +	-	-
	Availability of End-product	Excellent	-	-	-	-	-

COMPARISON KEY			
+ Better	= Similar	- Worse	? Unknown