



Designation: B 351/B 351M – 012

Used in USDOE-NE standards

Standard Specification for Hot-Rolled and Cold-Finished Zirconium and Zirconium Alloy Bars, Rod, and Wire for Nuclear Application¹

This standard is issued under the fixed designation B 351/B 351M; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This specification covers hot- and cold-finished zirconium and zirconium alloy bars, rod, and wire, other than those required for reforging, including rounds, squares, and shapes.

1.2 One unalloyed grade and three alloy grades for use in nuclear applications are described.

1.3 The products covered include the following sections and sizes:

Bars:	Rounds, squares and hexagons	$\frac{3}{8}$ in. (9.5 mm) and over in diameter or size
	Flats	$\frac{1}{4}$ to 10 in. (6.4 to 250 mm) incl in width and $\frac{1}{8}$ in. (3.2 mm) and over in thickness ^A
Rod:	Rounds in coils for subsequent reworking	$\frac{1}{4}$ to $\frac{3}{4}$ in. (6.4 to 19 mm) in diameter
Wire		less than $\frac{3}{8}$ in. (9.5 mm) in diameter or size

^AThickness $\frac{1}{8}$ in. (3.2 mm) to under $\frac{3}{16}$ in. (4.8 mm) can be cold-rolled strip as well as bar.

1.4 Unless a single unit is used, for example corrosion mass gain in mg/dm², the values stated in either inch-pound or SI units are to be regarded separately as standard. The values stated in each system are not exact equivalents; therefore each system must be used independently of the other. SI values cannot be mixed with inch-pound values.

1.5 The following precautionary caveat pertains only to the test method portions of this specification. *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:

B 350/B 350M Specification for Zirconium and Zirconium Alloy Ingots for Nuclear Application²

¹ This specification is under the jurisdiction of ASTM Committee B10 on Reactive and Refractory Metals and Alloys and is the direct responsibility of Subcommittee B10.02 on Zirconium and Hafnium.

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