

# PS-200™ Beryllium / Standard Purity Foil and Sheet Specifications

PS-200™ Beryllium — The scope of this specification is to define the characteristics of PS-200 grade beryllium foil and sheet that is made from standard purity input material.

Beryllium of PS-200 specification shall contain a minimum beryllium content of 98.5% and conform to the following maximum chemical limits:

Foil and sheet manufactured to PS - 200 specification is avail-

Compound	Maximum %	Compound	Maximum %
BerylliumOxide	1.5	Iron	0.13
Aluminum	0.10	Magnesium	0.08
Carbon	0.15	Silicon	0.06

Other metallic impurities (0.04% maximum each) as determined by normal spectrographic techniques. Beryllium may be determined by difference (i.e. 100% minus other elements). Please note that detailed analytical procedures used by BW-Electrofusion Products are available upon request.

able as flat stock in standard thickness range 0.005 – 0.250 inches (127 – 6350 μm). PS-200 is supplied cut to shapes such as rectangles, discs, and other configurations. The material is available in three integrity grades classified as vacuum-tight, optically-dense, and as-rolled in the following thickness ranges:

Vacuum-Tight	0.005 – 0.250 inches (127 – 6350 μm)
Optically-Dense	0.005 – 0.250 inches (127 – 6350 μm)
As-Rolled	0.005 – 0.250 inches (127 – 6350 μm)

**Vacuum-Tight** sheet shall have no detectable leakage through the sheet when tested with a helium mass spectrometer leak detector calibrated to a sensitivity of 1x10<sup>-9</sup> atm-cc/sec.

**Optically-Dense** foil shall have no detectable light penetration when illuminated with a high-intensity light source applied to a restricted area on one side while viewed from the opposite side in a darkened room environment.

**As-Rolled** foil material is supplied in an as produced condition and is neither inspected nor guaranteed to be vacuum-tight or optically-dense.

Sheet surface shall be uniform in quality and condition, clean, sound, and free from foreign materials, or internal and external imperfections that are detrimental to fabrication or performance. Standard surface finish shall be 63 microinches R<sub>a</sub> or better. All material is appropriately iden-

tified, packaged, and labeled to comply with applicable government regulations and BW-Electrofusion standard procedures. Note that various thicknesses may be available in different surface finishes. Contact BW-Electrofusion for available foil sizes, tolerances and finishes.

Feature	Dimension (Inches)		Tolerance (Inches) + / -
	From	To	
Thickness	0.005	0.010	10%
	0.010	0.025	0.002
	0.026	0.055	0.003
	0.056	0.075	0.004
	0.076	0.125	0.006
Diameter	0.126	0.250	0.010
	<	6.0	0.003
	6.0	>	0.005
Length/Width	<	3.0	0.015
	3.0	>	0.030

Tighter tolerances on disc and straight-cut foils are available on request. Please contact Brush Wellman-Electrofusion Products for price and availability.

#### Health & Safety Note:

*Handling solid beryllium material poses no significant health risks. However, as with many other industrial materials—materials containing beryllium may pose a health risk, if and when recommended safe handling practices are not followed and adhered to. Inhalation of airborne beryllium may cause a serious lung disorder in susceptible individuals. The Occupational Safety and Health Administration (OSHA) have set mandatory limits on occupational respiratory exposures. Read and follow the guidance set forth in the Material Safety Data Sheet (MSDS) before working with beryllium. For additional information on safe handling practices or technical data on beryllium, contact Brush Wellman Electrofusion Products.*

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