MATERION

PS-200®

PS-200 Beryllium Standard Purity Foil

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:

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

Rev C specification. 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 various test methodologies (Leco, DC Plasma, etc.) are used by our laboratory to determine trace element concentrations. Copies of the laboratory's NADCAP and A2LA certifications are available at www.materion.com

Foil and sheet manufactured to PS - 200 specification is available 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 two integrity grades classified as vacuum-tight and as-produced in the following thickness ranges:

Vacuum-Tight	0.005 – 0.250 inches (127 – 6350 µm)
As-Produced	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 1×10^{-9} atm-cc/sec.

As-Produced foil material is supplied in an as-produced condition and is neither inspected nor guaranteed to be vacuum-tight.

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. Typical surface finish shall be 63 microinches R_a or better as per ISO 1302. All material is appropriately identified, packaged, and labeled to comply with applicable government regulations and Materion Electrofusion standard procedures. Note that various thicknesses may be available in different surface finishes. Contact Materion Electrofusion for available foil sizes, tolerances and finishes.

Feature	Dimension (Inches)		Tolerance (Inches)
	From	To	+ / –
Thickness	0.005	0.010	10%
	0.011	0.025	0.002
	0.026	0.055	0.003
	0.056	0.075	0.004
	0.076	0.125	0.006
	0.126	0.250	0.010
Diameter		< 6.0	0.003
		> 6.0	0.005
Length / Width		< 18	0.010
		> 18	Consult Engineering

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

Health & Safety Note:

Handling beryllium in solid form poses no special health risk. Like many other industrial materials, beryllium-containing materials may pose a health risk if recommended safe handling practices are not followed. Inhalation of airborne beryllium may cause a serious lung disorder in susceptible individuals. The Occupational Safety and Health Administration (OSHA) has set mandatory limits on occupational respiratory exposures. Read and follow the guidance set forth in the Safety Data Sheet (SDS) before working with this material. For additional information on safe handling practices or technical data on beryllium, contact Materion Electrofusion. at +1 510.623.1500.

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EQF 30-08 03/2018