

Corning Med-Pet™

Gamma Radiation Shielding Glass



Corning's Med-Pet™ provides transparent, protective shielding against gamma based PET radiation

Applications

- Occupational protection from PET gamma radiation used in scanning techniques for the treatment and diagnosis of cancers
- Cyclotron maintenance

Benefits

- Shielding against PET radiation generating gamma radiation at 511 KeV
- Controlled addition levels of high purity radiation shielding additives
- Neutral appearance

Med-Pet™ is supplied as polished plates up to 2600 x 1300 mm, with smaller sizes cut to customer requirements.

Production of Med-Pet™ is strictly controlled and Corning follows both the environmental standard ISO14001 and the quality standard ISO9001,2000.

Med-Pet™ is available worldwide through local Corning sales offices and a network of specialist distributors.

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Shielding Characteristics

Actual Plane Thickness		Lead Equivalent Thickness 11C-13N, 18F at 511 KeV	
mm	inches	mm	inches
7.0-8.5	0.276-0.335	2.0	0.079
8.5-10.0	0.335-0.394	3.0	0.118
14.0-16.0	0.551-0.630	5.0	0.197
16.0-18.0	0.630-0.709	6.0	0.236
22.0-26.0	0.866-1.024	8.0	0.315
28.0-32.0	1.102-1.260	10.0	0.394

Other thicknesses available upon request

Measurements based on physical testing using Montecarlo method at the Tokyo National Medical Centre, Japan

When PET/CT is used in a combined system, specifiers should take account of differing penetration levels from CT and PET Sources

Physical Properties

Optical Properties

Refractive Index nd	1.76
Transmission % @ 550nm through 5mm path ≥ 85.0	

Chemical Properties

Lead (Pb)	48%
Barium (Ba)	15%

Chemical Properties

Specific Gravity (g/cm ³)	4.8
Knoop Hardness (kg/mm ²)	440
Young Modulus (GPa)	62.7
Poissons Ratio	0.23
Coefficient of Thermal Expansion (×10 ⁻⁷ /°C)	81.8

***Note:** The high barium and lead content makes Corning Med-X™ is susceptible to staining by acids and alkalis. We recommend this glass not be used or stored in conditions that will result in exposure to acid gases or excessive humidity.

This publication gives a general description of the product and materials. It is the responsibility of the users of this document to ensure that the proposed application of the product is appropriate and that such application complies with all relevant local and national legislation, standards, code of practice and other requirements.

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To obtain additional technical information or an engineering sample, or to place an order for this product, please contact us:

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