

X-Ray Radiation Lead Glass

Specifications

Standard Thickness: .276" —.335" [.087" (2.2 mm) lead equivalency]
Up to 1³/₈" available [.416" 9 (10.6 mm) lead equivalency]

Size: 42" x 60" maximum standard
Up to 48" x 96" by request

Lead Equivalency: .087" (2.2 mm) @ up to .417" (10.6 mm) @ 1³/₈" thick

Product Description

Radiation Shielding Glass RD 50 protects against X-rays and Y-rays in the medical and technical field. In research work it also provides necessary safety screening.

Glass Type

RD50 is an extra dense flint glass. It's protective effect is based on its high content of heavy metallic oxides of nearly 70 percent by weight. The lead oxide content alone is more than 65 per cent by weight. therefore, a density of at least 5.05 grs/cm³ is reached, so that relatively small glass thicknesses fulfill all legal safety regulations.

Lead Equivalents

The protective capacity of a radiation shielding glass for X-rays is indicated by the lead equivalent, either directly in mm Pb or alternatively what percentage of the glass thickness is pure lead.

Example:
Radiation Shielding Glass RD 50 with a thickness of 10 mm and at a voltage of 110 kV has a lead equivalent of 32%. This has the same protective effect as a 3.2 mm thick solid lead wall. This protective effect of the glass is clearly defined by its marking "3.2 mm Pb".

Transmittance

In spite of its high refractive index of 1.79, RD 50 has an excellent transmittance, guaranteeing high transparency. In the important wavelength range between 500 and 600 nm, in which range also the human eye reaches its highest sensitivity the most common thicknesses of RD 50 have a transmittance of 85%.

Fields of Application

In the medical field RD 50 is used as

- ❖ Screens for radio diagnostics
- ❖ Control windows for X-ray rooms
- ❖ Windows in radiation therapy rooms and operating theatres
- ❖ Insulating glazing for X-ray rooms
- ❖ Lenses for safety goggles. (Pb value 1 mm).

RD50 is needed in the technical field as

- ❖ Protection windows in materials testing houses
- ❖ Protection windows in baggage control units
- ❖ Protection windows in laboratories.

