

# THE SCIENCE BEHIND PROTECTION

Burlington Medical, the best fit in the industry, combined with the best x-ray protection using lightweight, lead-free and bi-layer technology.



Our XENOLITE® line of x-ray aprons is recyclable and safe for non-hazardous disposal.

Burlington Medical has an extensive knowledge of radiation physics and state-of-the-art technology. Today we are the industry's only fully integrated x-ray protection manufacturer with an in-house lab, and a full team of research and development engineers who develop and produce proprietary core/sheet materials.

✓ Recyclable and safe for non-hazardous disposal

✓ Lightweight, lead-free, and bi-layer technology

✓ Only fully-integrated x-ray protection manufacturer

**FACT:** More than 150,000 lead x-ray aprons are disposed of every year, adding in excess of one million pounds of toxic lead metal waste across the globe.

**FACT:** Burlington Medical is committed to reversing this impact with environmentally-conscious products.

## XENOLITE® Strata 300+ (Lead Free Bilayer)

XENOLITE “Strata 300” is a lead-free, super-lightweight, flexible and recyclable x-radiation protection material, featuring bi-layer technology. Constructed using two separate layers of attenuating materials (antimony and bismuth) for maximum attenuation in the key diagnostic imaging range, protecting wearers from fluorescence.

### K-EDGE TECHNOLOGY

The bi-layer concept has been developed so that the elements nearest the beam, contain a layers of low “Z” elements (Antimony) which have higher attenuation (versus Lead , high Z) in the photon bulk of the primary spectrum (e.g. 30-60 keV). The next, nearest-the-skin, is comprised of a separate layer of high Z elements (Bismuth) which better attenuates higher energy photons, along with attenuating the Fluorescence from the first low-Z layer. The end result is less transmission for the wearer, and at a lower weight

### COMBINED WITH ADVANCED POLYMER TECHNOLOGY

The attenuating elements, in fine powder form, are supported, encapsulated and homogeneously distributed in a tough-but-flexible, high-tech plasticized Dow elastomer matrix. This Dow-DuPont developed elastomer carrier was selected in 2012 after a year of R&D as having the best balance of toughness, flexibility, durability, and cracking resistance, and is more commonly used for flexing components (e.g. running shoes, wire and cable).

### ENVIRONMENTAL BENEFITS

The lead-free material is not “cross-linked” (or “cured”) and is therefore fully recyclable and thermally re-processable, or may be disposed of as a non-hazardous, non-toxic waste in municipal landfills.

### SPECIFICATIONS

Area-weight 5.54 kg/sq m for 0.50 mm Pb equivalence (60-110 kV)

% Attenuation

	0.50mm	0.35mm	0.25 mm
60kV	99.7%	99.0%	97.1%
110kV	94.0 %	89.8 %	84.3%

\*Test Method IEC 61331-1:2014, Broad Beam Geometry (BBG\*) as recommended by the VG5

