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### XENOLITE “S” – ‘Strata’ Grade Series 400 Technical Description & Specification

XENOLITE “S”-‘Strata’ is a lead-free, lightweight, flexible and recyclable x-radiation protection material, using two attenuating elements, one low Atomic Weight (“Z”) element and one high Z element, in a layered combination optimized for minimum area-weight and maximum attenuation in the key diagnostic imaging range of 60 – 120 kV.

#### “K-Edge and Layering Technology”

The lighter weight (lead-vinyl is 20% heavier) results from the use of the two attenuating elements, where the low Z element gives more efficient attenuation of the low energy photon spectrum below the K-edge window of lead ( 35-88 keV), complemented by the higher Z element which is more efficient for stopping higher energy radiation (> 88 keV). The layering of the high Z element (nearest the body)also virtually eliminates secondary radiation/fluorescence

#### Combined with Advanced Polymer Technology

The attenuating elements, in fine powder form, are supported, encapsulated and homogeneously distributed in a tough-but-flexible, plasticized high-tech elastomer matrix. This Dow (formerly Dow DuPont) elastomer, has the best balance of toughness, flexibility, durability and cracking resistance, and is more commonly used for the flexing components of running shoes and for vibration pads..

#### 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

Protection	0.50 (4-ply),	0.35 (2-ply) and	0.25 (2-ply)	mm Pb equivalence *			
Transmissions	80 kV	0.50mm	2.3%	0.35mm	4.94%	0.25 mm	8.95%
(direct beam)	100 kV		6.6 %		12.1 %		19.1%

\*Test Method IEC 1331-1/ EN 61331-1, **broad-beam**; DIN 6857, 60/80/100/120 kV

\*Calibration data by Univ of Innsbruck Dr Schoepf 2009

Tolerances - 7%/+2% (thickness, weight and mm Pb)