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***XENOLITE* "NL" ('No-Lead') Grade - Series 800 Technical Description & Specification**

XENOLITE "NL" is a lead-free, super-lightweight, flexible and recyclable x-radiation protection material, using a mixture of two attenuating elements, antimony and tungsten, in a mixture optimized for minimum area-weight and maximum attenuation in the key diagnostic imaging range of 80 – 100 kV.

"K-Edge Technology"

The lighter weight (lead-vinyl is **32% heavier**) results from the use of the two attenuating elements, where the antimony provides more efficient attenuation of that portion of the photon spectrum below the K-edge window of lead (35 - 88 keV), complemented by the higher Z element tungsten, which is more efficient for stopping higher energy radiation (> 69 keV), and also covers the K-edge window of antimony (< 35 keV).

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's R&D as having the best balance of toughness, flexibility, durability and cracking resistance, and is more commonly used for flexing components (running shoes, wire & cable etc).

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	**5.40 kg/ sq m** (9.9 lb/ sq yd) for 0.50 mm Pb equivalence (80-100 kV*)						
Protection	0.50 (4-ply),	0.35 (2-ply) and	0.25 (2-ply)	mm Pb equivalence *			
Transmissions	80 kV	0.50mm	2.1%	0.35mm	4.5%	0.25 mm	8.2%
(direct beam)	100 kV		6.2 %		11.3 %		17.9%

*Test Method	IEC 1331-1/ EN 61331-1, 80 kV (0.15 mm Cu) & 100 kV (0.25 mm Cu), narrow
Tolerances	- 7%/ +2% (thickness, weight and mm Pb), within DIN EN 61331-3 limits