

FIT & SIZING

Maximum comfort, proper protection, and body coverage require proper sizing. Most of the aprons are separately patterned in MALE or FEMALE categories. The FEMALE fit has a smaller armhole, which provides superior side breast protection. All garments that are unisex are described as unisex in our brochure. Unisex products include all skirts, half aprons, and thyroid collars. Proper garment sizing is important. Under-, or over- sizing may provide inadequate body coverage, may be uncomfortable, may stress or damage seams or material, may be extra heavy, and over time may lead to premature cracking of the protective core sheets. For proper apron sizing procedures, please refer to our instructional online video: <http://www.xenolitexray.com/product/how-to-measure/>

CARE, MAINTENANCE & INSPECTION

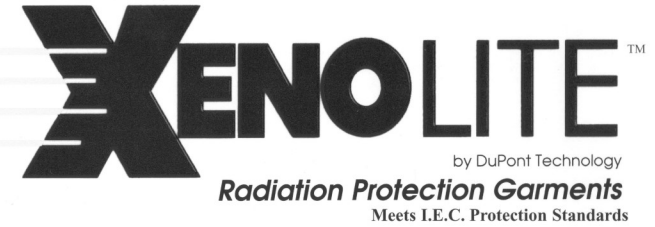
The Warranty of the garments is 3 years from date of manufacture. With careful use and proper storage, the useful life should be several years. When not in use, garments should be placed on a hanger. We recommend storage and use in conditions below 35 C and 85% RH. **AVOID CONTACT WITH HOT SURFACES OR LENGTHY DIRECT EXPOSURE TO HOT SUNLIGHT, AS MATERIAL MAY HEAT UP AND MELT LAYERS TOGETHER. ALSO AVOID CONTACT WITH SHARP OBJECTS AS THESE MAY PENETRATE THE GARMENT'S PROTECTIVE CORE.**

For transportation, the garments should be carefully **rolled up** and place in a box or tube. The garments may be washed in luke warm water (<35 C) with mild detergent. Drip-dry on a suitable hanger.

Regular inspections of the garment, at least annually, are recommended, using radiographic or fluoro operating at 70-90 kV. Lines may indicate cracks; dots may be pinholes, (seen as dark on film, clear on fluoro) - consult your Radiation Safety Officer.

- DO NOT IRON**
- DO NOT DRY-CLEAN**
- DO NOT AUTOCLAVE**
- DO NOT USE BLEACH**
- DO NOT USE ALKALI DETERGENTS**
- DO NOT USE ALCOHOL, OR ALCOHOL BASED PRODUCTS**

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**LITE TECH XENOLITE B, NL, TB, ,Strata & Eval
X-RAY PROTECTION GARMENTS & ACCESSORIES**


INFORMATION NOTICE TO USERS ISSUE # 20

Dear User,
Thank you for selecting a Lite Tech "XENOLITE" B, NL, TB, Strata+ or EVAL garment. These light-weight, composite garments will give you safe X-radiation protection for several years if properly used and maintained. Recommendations and use limitations are provided below. If you have questions, please contact us directly, or your authorized dealer. **Before using, please read the User Information provided in this Notice.**

LABELLING / MARKING

Inside the garment you will find two labels like the ones shown opposite, which identify the specific model, size and protection of your garment:

- Type of 'core' material:
- XENOLITE **B - Black** (Series 600)
 - XENOLITE **TB - Orange** (Series 700)
 - XENOLITE **Strata+ - Black on green** (Series 300)
 - XENOLITE **NL - Green** (Series 800)
 - EVAL - **Red** (Series 900)
- Manufacturer/ address/tel
Unique garment Serial ID #
Date of manufacture (on reverse)
Model/style # (& fabric color)
Male or Female cut/style
Lite Tech Size # - Length, cm
Lead Equivalent protection @ 100 kV
- mm Pb (front)
 - mm Pb (back)



by DuPont Technology

LITE TECH, INC.
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Norristown, PA 19403
USA, 800-647-5483

SERIAL NUMBER

No. 540650
ITEM NUMBER

AVOID SUN-HEAT EXPOSURE

Body Color/Trim:

Size:	Male	Female
XS	S	M L
XL	XXL	
Custom	Length	_____

Protection at 100 kV

	Front	Back
0.5	<input type="checkbox"/>	<input type="checkbox"/>
0.35	<input type="checkbox"/>	<input type="checkbox"/>
0.25	<input type="checkbox"/>	<input type="checkbox"/>
Other	_____	_____

At Vest Overlap
At Skirt Overlap _____

MADE IN U.S.A.

PROTECTION, ATTENUATION / TRANSMISSION VALUES

The stated lead equivalency protection of your garment, 0.50/0.35/0.25 mm Pb (or front-back combinations of these), are measured under direct beam conditions at 100 kV (beam HVL 7 mm Al) using the required test method of Standard IEC/EN 61331-1, and are certified to be in compliance, within an allowed +/- 7% manufacturing tolerance (as mm Pb).

The actual amount of X-radiation transmitted through the garment will vary with lead equivalence, beam kV, beam filtration (HVL), and in absolute "exposure values" with distance from the beam/table and exposed time. These transmissions, as a %, measured in the reality of scattered broad beams, will also vary with mm Pb, beam kV, but typical values are shown as guidance in the Table below."

Typical % Transmissions (in scattered broad beams)

Lead Equivalent mm Pb	50 kV	75 kV	100 kV
0.25 mm	0.35	3.0	10.0
0.35 mm	0.05	1.5	5.5
0.5 mm	0.01	0.7	3.0
1.0 mm	-	0.05	0.5

The following Lite Tech Apron & Accessory Models / Style # provide **only FRONT** protection, with mm Pb as marked on the label (0.25 or 0.35 or 0.50 mm Pb);

X10A (Adjustable-weight)	X10Q (Quick-drop)	X10E (Elastic tab)
X10S (Strap)	X10K (Back Support)	X10R (Shoulder release)
X10B (Buckle)	X40H (Half-Apron)	X10PHP (Elastic back and shoulder release)
X10-NV		

The following Lite Tech Aprons offer both **FRONT & BACK** protection, with combinations of mm Pb, front & back as marked on the label (0.25 or 0.35 or 0.50 mm Pb);

IMPORTANT NOTE: the designs are worn differently to achieve stated protection

X201 (Special Procedure) **X30V (Vest)**

Have the stated mm Pb in **EACH separate front panel** and are designed to overlap only 7-15 cm at center, using the "Velcro" (where overlapped, the mm Pb is double, eg 1.00mm Pb)

X250 (Full Overwrap Apron) **X30S, X20S & X35S (Skirt)** **X25V (Vest)**

Have only half (50%) the stated mm Pb in **EACH front panel** and are designed & sized to be worn with full front panel overlap (side-to-side +/- 5 cm) to achieve stated protection

X20V, X35V, X200TS & X10L **X320, X240**

Have the stated protection in a single front panel

WARNING - DO NOT MODIFY GARMENT AS THIS MAY AFFECT PROTECTION AND INVALIDATE WARRANTY

RECOMMENDATIONS AND LIMITATIONS OF USE

The recommendations given below are general and may be subject to local statutory or safety /use procedures mandated within your facility. If in doubt about proper usage or garment protection values, consult your Radiation Safety Officer or a qualified radiation physicist or radiologist. Their advice will minimize total dose based on equipment, kV, filtration, procedure, exposure time, distance, scatter and other important factors. It is proper practice, at a minimum, to wear at least one personal dosimeter inside the garment, at chest level; preferred practice may require a further abdomen dosimeter, worn inside, and/or a further chest dosimeter worn outside - usually on the chest pocket.

TYPE	MODEL CODE # & NAME	FRONT mm Pb	BACK mm Pb	RECOMMENDED USE/LIMITS	
FRONT APRON	X10A Adjustable -weight	0.25/0.35/0.50	0	X-Ray garment for FRONT protection only. For use in general radiology and X-ray or operating rooms etc, where radiation comes from the front NOT for nuclear/ gamma use	
	X10Q/X10R (Quick-Drop)	0.25/0.35/0.50	0		
	X10K Back Support	0.25/0.35/0.50	0		
	X10S Strap, X10-L	0.25/0.35/0.50	0		
	X10B Buckle/ X10NV	0.25/0.35/0.50	0		
	X10E/X10PHP	0.25/0.35/0.50	0		
COAT TYPE	X201 Special Procedure	0.25/0.35/0.50	0.25/0.35/0.50		X-Ray garment for FRONT & BACK protection. For use in X-ray, OR, angio, cardiac cath labs, etc especially for long duration procedures NOT for nuclear/ gamma use
	X250 Full Overwrap Apron	0.25/0.35/0.50	0.25/0.35/0.50		
	X30V Vest, X30S Skirt	0.25/0.35/0.50	0.25/0.35/0.50		
	X35V Vest, X35S Skirt	0.25/0.35/0.50	0.25/0.35/0.50		
	X20V Vest, X20S Skirt	0.25/0.35/0.50	0.25/0.35/0.50		
	X25V Vest, X25S skirt	0.25/0.35/0.50	0.25/0.35/0.50		
GONAD	X200TS X320 Wrap	0.25/0.35/0.50	0.25/0.35/0.50	Gonadal protection for X-ray to be used with other for total 1.0 mm Pb	
	X40H Half-apron	0.50	0		
THYROID	X40T Thyroid shield	0.50	-	Collars for thyroid protection Upper arm shield for apron	
HUMERUS	X50H Humerus shield	0.25/0.35/0.50	-		

Vest and skirt must be worn together. Where possible avoid direct beam exposure.

ERGONOMICS & USE OF ACCESSORIES

Lite Tech XENOLITE B, NL, TB, and Strata+ garments use patented composite mixtures providing weight-savings of up to 30% compared conventional materials. These lightweight aprons, especially those with front and back protection, are most appropriate for use in long duration fluoro procedures, reducing fatigue and back strain. All garments, except skirts, thyroids and half-aprons have shoulder pads. Models X201/ X250/ X10K are further provided with an elastic belt to transfer weight off the shoulders. The X10Q, and X10R quick-drops are designed to be worn over your scrub and under your O.R. gown where it can be quickly removed without breaking the sterile field. We suggest the protection garments are worn over cotton clothes to remain cool. The use of a thyroid collar, X40T, is recommended at all times.

USE & LIMITS OF USE

Lite Tech XENOLITE B, NL TB, and Strata+ garments provide personal protection against external X-ray (photon) radiation up to 120 kV, with beam HVL up to 7 mm Al. Above these kV/HVL values, lead-equivalency protection values (mm Pb) may be less. Eval grade uses lead only as attenuator and retains its mm Pb values at all kV levels.

Attenuation/lead equivalence, mm Pb, is by testing to IEC/EN 61331-1, +/- 7%

WARNING: Except for lead-based Eval, these garments will not adequately protect against gamma radiation and should not be used in Nuclear Medicine.

Most conditions of gamma exposure invalidate the lead equivalent values shown.