



BLOXR

Purpose of BLOXR® XPF® Radiation Shields

BLOXR XPF Radiation Attenuating Apparel is intended for use as shields against ionizing radiation such as X-rays, Fluoroscopy or CT technology. These products are not sterile.

Storage

Products should be stored on a shelf or on an appropriate hanger. Recommended storage and use temperature is below 35°C (95°F). Avoid contact with hot surfaces and sharp objects. For transport, garments can be folded and placed inside a bag and/or box.

Disposal

BLOXR® products contain no lead, lead by-products or heavy metals. BLOXR products are non-toxic. No special handling is required. Dispose of per institutional protocols and all applicable laws and regulations.

BLOXR® Product Warranty

BLOXR Solutions manufactures its reusable, machine-washable XPF® Attenuating Apparel to the highest industry standards and warrants, to the original purchaser, that products will be free from cracks or radiation leaks due to defects in material or workmanship for a period of three years from date of purchase. Product found to be defective during the warranty period will be repaired or replaced at our discretion, at no charge (customer pays freight). Warranty does not cover breakage or failure due to misuse, tampering, normal use, modification, neglect or shipping. Warranty is void if product is not used in accordance with the Instructions for Use.

BLOXR SOLUTIONS, LLC

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 0120 ISO 9001, ISO 13485, CMDCAS

Made in the USA.
U. S. Patent No. 8993989
and 8754389.

ALC 500010-02 REV H



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Instructions for Use (IFU)

BLOXR® XPF® Radiation Attenuating Apparel

Machine-Washable Aprons, Vests, Skirts, Caps, Thyroid Collars and Mitts

Thank you for purchasing BLOXR® Radiation Protection Products. Your satisfaction is important to us. If you have any questions about our products, please contact your local distributor or call our Customer Care team at 1-855-256-9729.

To learn more about BLOXR® XPF® technology and our full line of products, visit us at www.bloxr.com.



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Performance of BLOXR® XPF® % Attenuation at Four ASTM F2547-06 X-Ray Qualities		
X-ray Quality and Filter	BLOXR XPF 0.50 mm Lead (Pb) Equivalent	BLOXR XPF 0.25 mm Lead (Pb) Equivalent
60 kVp HVL: 2.95 mm Al	98.7	95.2
80 kVp HVL: 3.99 mm Al	94.7	87.3
100 kVp HVL: 5.25 mm Al	88.9	78.7
120 kVp HVL: 6.26 mm Al	84.9	73.8

Recommendations for Care, Cleaning and Washing

BLOXR washable products are reusable, but it is the user's responsibility to determine if the product is fit for use.

- Always inspect radiation shields for damage before use.
- If product is damaged, do not modify. This could alter protection and invalidate the product warranty. Contact the manufacturer to inquire about repairs.
- Discard if radiation leaks are detected during periodic inspection.
- If products are exposed to any biohazard, follow healthcare facility protocols and all applicable laws and regulations.

Inspection Recommendations: The proprietary manufacturing process in the production of our non-metallic attenuation material eliminates concern over metal fatigue and provides outstanding resistance against cracking and fracturing as verified in multiple independent and internal evaluations.* Periodic inspection should be completed per hospital and regulatory guidelines and may include the following inspection methods: Visual – look for areas where product may be damaged by puncture, possibly indicated by tear or rupture of outer material; Tactile – physical examination of the garment by feeling with hands for imperfections, gaps or separation of the attenuation material; Fluoroscopic – x-ray examination per facility guidelines for non-metallic attenuation garments.

XPF Radiation Attenuating Apparel may be cleaned by hand or machine washed. Cleaning chemicals and solutions may harm the outer fabric. Check compatibility of material with cleaning agents in a small area before you use such chemicals.

Precautions

- Fasten hook and loop closure (similar to VELCRO®) before washing.
- Do not use solvents, abrasive cleaners, metal brushes or abrasive pads.
- If products are tethered together, untether before washing and drying.
- Do not hang any product by its tether.
- Because washing and drying cycles may vary, BLOXR Solutions is not responsible for any damage caused to the device due to washing and drying.

Hand Cleaning: Wipe down exterior using a soft sponge or cloth and detergent suitable for nylon or polyester fabrics following the detergent manufacturer's instructions. Once the item has been cleaned, wipe or rinse it with clean water to remove any detergent or chemical residue.

Machine Wash: Machine-wash using gentle wash cycle with water temperatures of 160°F (70°C) or lower. Follow the recommendations of the washing machine manufacturer for proper placement.

Drying: Hang dry or machine dry on low gentle cycle (suitable for delicate fabrics such as nylons and polyesters) until thoroughly dry.

*Available upon request

How to Don BLOXR® XPF® Radiation Attenuating Apparel

Frontal Aprons - Place arms through the arm holes of the apron and lift the apron onto the shoulders. The hook and loop closure should be fastened across the shoulders (this may require assistance). The straps with buckles should cross in the back and wrap around to buckle in the front. After fastening the buckle, pull the belt so it is snug. The apron should cover the front torso and down over the thighs. Orientation is important. The BLOXR logo should face the radiation source. *Frontal Aprons provide 0.50 mm Pb equivalent protection in the front.*

Drop Aprons - Place apron straps over the shoulders and hold in place. The straps cross in the back and wrap around to the front. Fasten the hook and loop closure. The drop apron should cover the front torso and down over the thighs. Orientation is important. The BLOXR logo should face the radiation source. *Drop Aprons provide 0.50 mm Pb equivalent protection in the front.*

Wrap Aprons and Vests - Place arms through the arm holes of the garment and pull up onto shoulders. The garment should overlap at the front of the body. Place the right front side against the front of the torso. Overlap the left front side on top of the right front side. This order is important. The hook and loop closures are placed to only work in this order. Adjust the garment so the overlap of the right front and left front pieces is maximized. Secure in place. Orientation is important. The BLOXR logo should face the radiation source. *Wrap Aprons and Vests provide 0.50 mm Pb equivalent protection in the front where the panels overlap and 0.25 mm Pb equivalent coverage on the back.*

Skirts - Place the skirt around the waist with the widest panel in back. The skirt will overlap at the front of the body. The right front of the skirt should be placed against the body. The left front of the skirt should overlap on top of the right front and be initially secured in place with the hook and loop closures. After the skirt is initially secured, the belt should be buckled. Tighten the belt to secure the skirt in place. Orientation is important. The BLOXR logo should face the radiation source. *Skirts provide 0.50 mm Pb equivalent protection in the front where the panels overlap and 0.25 mm Pb equivalent coverage on the back.*

Attenuating Caps - Put the cap on. Orient ties to the back, adjust for proper fit and secure using ties. Orientation is important. The nylon diamond pattern fabric should face the radiation source. *Caps provide 0.50 mm Pb equivalent protection around the circumference of the head.*

Thyroid Collars - Place the thyroid collar over the throat and secure the collar at the back of the neck using the hook and loop closure. Orientation is important. The BLOXR logo should face the radiation source. *Thyroid Collars provide 0.50 mm Pb equivalent protection over the thyroid.*

Open Hand Mitts - Open hand mitts are left hand and right hand specific. Place hands inside mitts and place fingers through finger loops. *Open Hand Mitts provide 0.50 mm Pb equivalent protection for the back of the hand, the front of the hand (where covered) and the forearm.*

Closed Hand Mitts - Closed hand mitts are symmetrical and can be worn on either hand. There is a slit in the palm of the mitt to allow the user to remove their hand if necessary. *Closed Hand Mitts provide 0.50 mm Pb equivalent protection for the front and back of the hand and forearm.*