



FIND US

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DEMRONTM

ALARA Shield Blanket

The DemronTM ALARA Shield Blanket is a contemporary shielding solution for gamma and X-ray radiation. The fabric can be configured in industry standard shielding blankets or curtain designs as well as unique, customizable designs.

DEMIRON™

ALARA Shield Blanket

KEY BENEFITS

- Significantly lighter weight (pounds / square foot) compared to lead; Results in reduced resources and person dose required to deploy / collect.
- Non-toxic material; Eliminate mixed hazardous waste concerns typically encountered with lead.
- Customizable size and thickness solutions; Can develop specific solution for given application.
- Outer layer of material is easily wiped down / decontaminated due to Herculite outer layer.
- Large area blankets / curtains can be designed with grommets or magnets to facilitate easy hanging and attaching to surfaces and locations.



Utilizing a patented material that is a mixture of heavy metal and polymers, the **ALARA** shielding material allows for an industrial shielding solution that is lighter in weight than lead and is non-toxic. Therefore, when the Demron™ material becomes contaminated with residual radioactive contamination, it is **NOT A MIXED HAZARDOUS MATERIAL** such as traditional lead.

Custom use cases / Industry example

- In-core detector shielding bag
- Reactor coolant / demineralizer filter transfer container shielding
- 55-gallon drum lid shield covers
- Shielded work or hot tool bag (used to move material with hot particle)
- Low dose shielding decon tents
- Fuel handling crane and tool customized shielding
- Neutron flux (Gamma metrics) detector box slip covers

Blanket use cases

- Pipe / component shielding
- Outage / reactor head / cavity shielding
- Tool / component shielding
- Rad monitoring or contamination / portal monitoring shielding
- Shadow or large area shielding
- Rad waste / HIC container shielding
- Glovebox / sampling skid shielding

Characteristics

- Material available in standard 6 or 12 layer thickness.
- Industry standard Herculite protective outer later.
- Approximately 30-45% (or better) attenuation of nuclear power plant standard plant mix gamma fields as measured in numerous nuclear plant environments for ALARA (6 layer) blankets. Standard blanket dimensions: 1' x 2' to 1' x 6' standard dimensions.
- Approximately 1.5 pounds / square foot for standard blanket design.
- Highly non-flammable material; Material heat rating of 370 degrees F; Non-flammable Herculite outer layer.
- Specific molecular engineering of material provides attenuation to gamma and X-ray radiation and maximum heat dissipation.
- Material can be folded for added layers of protection.
- Material (Blankets and curtains) available with magnets, handles and grommets for easy deployment.
- Non-toxic, non-mixed hazardous waste blend of metallic material and polymer beads.

	% Reduction using ALARA 6 layer blanket	Plant location of test
Site 1	36%	Reactor building
Site 2	45%	Rad waste
Site 3	30%	Rad waste
Site 4	82%	PWR reactor core barrel
Site 5	24%	PWR CVCS room

	Average % reduction
ALARA (6-layer) blanket	12%
ALARA (12-layer) blanket	19%

Cs-137 (662 keV) Free Air Irradiation
 (At NIST traceable lab; As measured with calibrated EPD's)
 Note: Data collected at 2 R/hr, and 10 R/hr