



Demron Suit

CBRN



A Demron radiation suit is a lightweight, reusable protective garment designed for first responders and industrial workers to shield against certain types of radiation (like high-energy beta and some gamma) while offering breathability and heat dissipation via unique self-cooling technology, making it cooler than traditional impermeable suits for extended wear in CBRN (Chemical, Biological, Radiological, Nuclear) situations. It is also designed to shield the wearer from exposure to ionizing and non-ionizing radiation. Made from a proprietary blend of materials, it is considered to be one of the most effective and versatile forms of radiological protection available today.

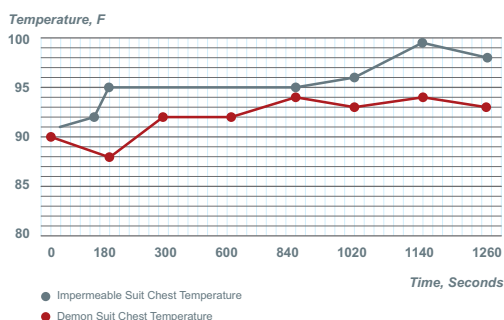


Source	Type	Energies	Dose Reduction (%)
50 kVp	X-ray	50 kVp	≥ 75%
75 kVp	X-ray	50 kVp	≥ 60%
100 kVp	X-ray	100 kV	≥ 60%
241 Am	Gamma (γ)	4.9% – 20.8 keV 13.3% – 13.9 keV 19.3% – 17.8 keV 35.7% – 59.54 keV	≥ 85%
109 Cd	Gamma (γ)	22 keV (Major) 88 keV (Minor)	≥ 91%
137 Cs	Gamma (γ)	0.662 MeV	~ 1%
60 Co	Gamma (γ)	1.173 MeV 1.332 MeV	26.7%
90 Sr / 90 Y	Beta (β)	546 keV (Sr) 2.27 MeV (Y)	91.6%



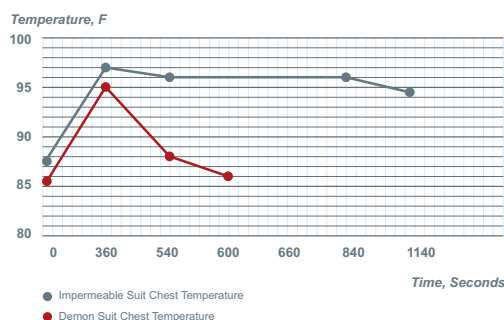
Full Body Suit Heat Stress Temperature Comparison

Each suit was worn on a treadmill at 3.5 mph for 10 min (600 sec) and allowed to passively cool at ambient temperature.



Full Body Suit Showing Active External Cooling Capability Comparison

Each suit was worn on a treadmill at 3.5 mph for 7 min, then actively cooled with a wet t-shirt and fanned at 25 mph. Water temperature on t-shirt: 74°F



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Effectiveness: Demron is highly effective against various types of radiation. It significantly reduces high-energy alpha and beta radiation and provides substantial protection against low-energy gamma radiation, although it cannot completely block all gamma rays. Tests have shown that one layer of Demron can reduce cobalt-60 gamma radiation by 26.7% and high-energy beta radiation by 91.6%. Its flexibility and lightweight design make it suitable for various applications, including medical, industrial, and emergency response settings. It can significantly reduce high-energy gamma radiation (e.g., 26.7% reduction for Co-60 gamma rays with one layer) and high-energy beta radiation (91.6% reduction for Sr-90).

Weight and Flexibility: Unlike heavy and rigid lead, Demron is lightweight, flexible, and comfortable for extended wear, making it suitable for various applications, including medical, industrial, and emergency response.

Safety: Demron is non-toxic and lead-free, eliminating health risks associated with lead exposure.

Demron is utilized for radiation protection across several industries: -Military -Medical -Nuclear Power -Industrial -Research & Laboratories -Space Exploration. Demron's versatility allows it to be used in various forms, including full-body suits, blankets, vests, and shields, making it adaptable to different industry needs.

Standard Features:

- ▶ Full chemical and biological resistance
- ▶ CBRN heat sealed seams
- ▶ CBRN zipper
- ▶ Self-cooling
- ▶ Reduces IR detection
- ▶ Built-in booties and gloves
- ▶ CBRN face seal

Options and Accessories:

- ▶ CBRN mask, gloves and boots



CHEMICAL
TOXINS



BIOLOGICAL
HAZARDS



NUCLEAR
RADIATION



HEAT
STRESS