



by **RST**
Radiation Shield Technologies

A new Protection Breakthrough against CBRNe

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DEMIRON[™]

ISO **9001**
ISO **13485**
C E R T I F I E D



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A New PROTECTION BREAKTHROUGH

Radiation Shield Technologies is a global leader in multi-hazard universal protective apparel. RST® has developed Demron®, a patented nano-composite that offers unique protection against chemical, biological, radiological, nuclear, and ballistic (CBRNE) threats. Additionally, because of its thermo conductive capabilities, it is self-cooling and reduces IR detection.

With an ever-increasing risk of biological, chemical, radiological, nuclear, heat, and ballistic threats there is an obvious need to provide military and first responder personnel with universal multi-hazard protection. Current PPE's such as CBRNe suits only provide BC protection and because they are thermo-insulators they also trap heat and cannot be externally cooled. Ballistic vests and shields also provide no protection against ionizing gamma radiation, produce significant heat stress, and offer no reduction in IR surveillance detection.

Demron® is unique in that it is the only CBRNe class 2 certified (NFPA 1994/2007) PPE multi-hazard fabric that offers protection against ionizing gamma radiation, reduces heat stress, is anti-ballistic, and attenuates heat signatures for IR detection reduction. Demron® is flexible, light weight, tear resistant, splash resistant and has the feel and coolness of liquid metal. It does not lose its effectiveness when exposed to liquids and salts, has a long shelf life, and is re-usable.

Our current line of products includes a full body CBRNe class 2 style, level B suit, high energy Radiologic/Nuclear ballistic suppression blankets, tactical anti-nuclear/radiological vests, and we have nearly completed the development of a IIIa ballistic vest that has anti-radiation protection, passive cooling, and IR detection reduction for stealth operations and friendly fire reduction risk.



The only True Anti-Nuclear, CBRN

Now with Self cooling Stealth Technology

The only CBRN NFPA 1994/2007 Class 2 Certified Fabric that has true anti nuclear protection (Full body suit certification pending contact info@radshield.com for full details).

Demron is the only CBRNe fabric that offers true resistance against Radiological and Ionizing Nuclear Radiation

The Demron-W Radiation Protection Suit is a level B CBRN suit. The suit was engineered to provide universal protection against chemical, biological, non ionizing radiation, and ionizing radiation. Demron-W reduces heat stress by allowing better heat dissipation than any other impermeables. According to Lawrence Livermore National Defense Laboratory, the suit is an excellent shield of high energy beta particles, such as those emitted from Strontium-90, and provides at least 50% shielding of gamma rays up to 130 Kev. Demron-W fabric has been certified by United Laboratories as meeting all Class 2 requirements of NFPA 1994/2007 Standard on Protective Ensembles for First Responders to CBRN Terrorism Incidents.

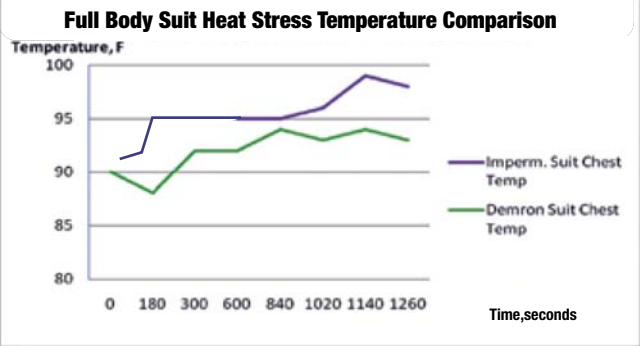
Other BC suits are heat sinks. With very little activity, heat will build up in the suit and it will continue to climb at rest. Because they are insulating, they can not be cooled externally. Only the Demron suit reduces heat stress production, passively cools, and the first responder can be externally cooled without the need to be de-gowned.

- Standard Features:**
- Full chemical and biological resistance
 - CBRN heat sealed seams
 - CBRN zipper
 - Self Cooling
 - Reduces IR detection

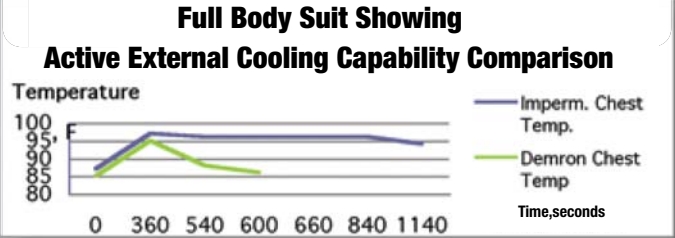
- Options & Accessories**
- CBRN mask, gloves & boots

Self Cooling Technology

Each Suit was worn a treadmill at 3.5mph for 10min (600 sec) and allowed to passively cool at amb T



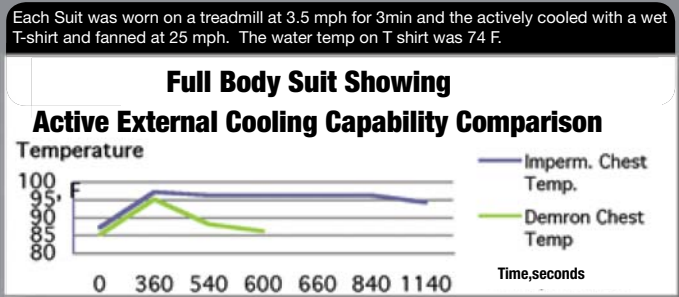
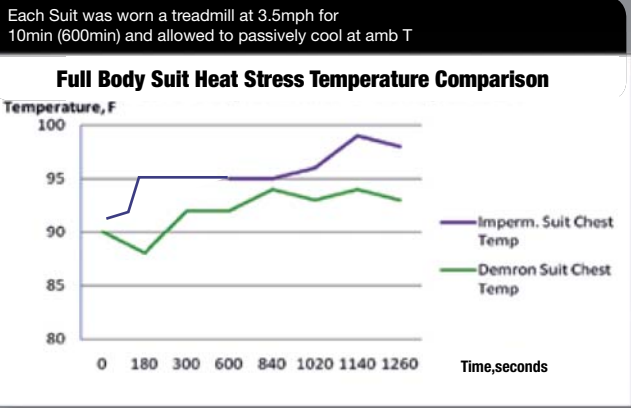
Each Suit was worn on a treadmill at 3.5 mph for 3min and the actively cooled with a wet T-shirt and fanned at 25 mph. The water temp on T shirt was 74 F.




Demron™ Full Body CBRN Tactical Suit	Source	Type	Energies	Dose Reduction (%)
	50 kvp	X-ray	50 kv	≥ 75%
	75 kvp	X-ray	75 kv	≥ 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	≤ 1%
	90 Sr/ 90 Y	Beta (β)	546 KeV (Sr) 2.27 MeV (Y)	75%



Self Cooling Technology



Demron™ Full Body CBRN Tactical Suit	Source	Type	Energies	Dose Reduction (%)
	50 kvp	X-ray	50 kv	≥ 75%
	75 kvp	X-ray	75 kv	≥ 60%
	100 kvp	X-ray	100 kv	≥ 60%
	241 AM	Gamma (γ)	4.9% 20.8 KeV	≥ 85%
			13.3% 13.9 KeV	
			19.3% 17.8 KeV	
			35.7% 59.54 KeV	
	109 Cd	Gamma (γ)	22 KeV Major	≥ 91%
			88 KeV Minor	
	137 Cs	Gamma (γ)	0.662 MeV	~ 1%
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The only CBRN NFPA 1994/2007 Class 2 Certified Fabric that has true anti nuclear protection (Full body suit certification pending contact info@radshield.com for full details).

Demron is the only CBRN fabric that offers true resistance against Radiological and Ionizing Nuclear Radiation

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- Standard Features:**
- Full chemical and biological resistance
 - CBRN heat sealed seams
 - CBRN zipper
 - Self Cooling
 - Reduces IR detection
 - Revolutionary Bayonet cuff and lock glove system

- Options & Accessories**
- CBRN mask, gloves & boots

