

**IONIZING RADIATION TEST RESULTS  
2002 SHIELDING MATERIAL**



**Radiation Shield Technologies**

**TEST FACILITIES: Columbia University & Georgia Institute of Technology**

## **SYNOPSIS**

Expert physicists and nuclear technicians have repeatedly tested Demron™ to ensure its effectiveness in blocking various levels of ionizing radiation. Testing was performed at the Department of Radiology in the College of Physicians and Surgeons at Columbia University in New York City, and at the Neely Nuclear Research Center of the Georgia Institute of Technology in Atlanta, Georgia. The testing contact at Columbia University is James So, B.S.M.E. The testing contact at the Georgia Institute of Technology is Dr. Rodney Ice, PhD.

Ongoing testing at government laboratories is performed to ensure quality. The following pages provide excerpts of the data gathered from tests performed on Demron™. All testing values are for Demron™ material at its current suit thickness of 0.43mm (0.7grams/sq.inch). All values are approximate.

## RADIATION SOURCES VS DEMIRON™ SUIT ATTENUATION

RADIATION TYPE	SOURCE	AVERAGE Kv LEVEL	BLOCKING POWER
<b>Alpha</b>	<u>Po-210</u>	5,300	100%
<b>Beta</b>	<u>C-14</u>	155	100%
	<u>Si-32</u>	1,800	40%
<b>Gamma*</b>	<u>Am-241</u>	60	DEMIRON 100% Lead 100%
	<u>Co-57</u>	122	DEMIRON 52% Lead 52%
	<u>Cs-137</u>	660	DEMIRON 0% Lead 0%
	<u>Co-60</u>	1,200	DEMIRON 0% Lead 0%
<b>X-Ray</b>	<b>Broad Beam Apparatus</b>	50	82%
		70	72%
		100	65%
		130	58%

**\*With Lead (0.5mm) Comparison (Standard Lead Vest Protection).**