

## **RF** Shielding



**Installation in Corporate Board Room Provides Privacy** 



**Roof Installation Provides Significant** Shielding





**¬**ruProtect's components and their arrangement make it an amazing barrier to radio waves.

Three layers of aluminum (0.13mm, .05mm, and .05mm) each separated by two layers of 6mm fiberboard and air spaces leads to TruProtect's high test results for RF shielding. When the 4' x 8' panels are joined with 5mil aluminum tape, TruProtect provides a light weight, sturdy solution for RF shielding.

Security is an important issue for businesses. When an information thief can steal credit card data while driving by a store, more security measures are needed. Corporations need to be assured that their proprietary information is secure from electronic eavesdroppers. Additional uses are government, military, and commercial secure facilities; EMC, RF, and wireless test laboratories; RF shield test chamber; secure conference rooms: SCIF facilities: recording studios; anechoic chambers; computer rooms; office rooms; and secure buildings.

Radio waves are electromagnetic waves occurring on the radio frequency portion of the electromagnetic spectrum. A common use is to transport information through the atmosphere without wires. The voltage

in a radio wave alternates back and forth between plus and minus many times per second. This frequency of radio wave is measured in cycles per second.

There are two types of matter in the universe that affect electromagnetic waves: conductors and insulators. When a radio wave hits a material, some of the power is reflected at the surface, and some of the power is transmitted into and possibly through the material. Power absorbed in or blocked by an insulator (dielectric) is called the Attenuation Coefficient of the material. The higher the Attenuation Coefficient, the more efficient blockage of radio waves, with 100 indicating a complete blockage.

Electromagnetic radiation consists of coupled electric and magnetic fields. With the use of an RF shield, the result is that electromagnetic radiation is reflected from the surface of the conductor: internal fields stay inside, and external fields stay outside.

Electromagnetic energy is an environmental issue that is often overlooked. This invisible environmental factor should be considered as carefully as air and water quality.

RF Shielding			
		1/2 " TruProtect	1 " TruProtect
Tested on TruProtect using conductive 5 mil Al tape.	Frequency	Attenuation (dB)	Attenuation (dB)
	200 KHz, Magnetic Field	25	25
	200 KHz, Electric Field	80	100
Testing preformed by R.A. Mayes, Inc., Franktown, Colo- rado.	1 MHz, Electric Field	80	100
	10 MHz, Electric Field	80	100
	80 MHz, Electric Field	100	100
	400 MHz, Plane Wave	>90	100
	700 MHz, Plane Wave	100	100
	1 GHz, Plane Wave	100	100
	10 GHz, Plane Wave	100	100

## **TruProtect - Future Solutions Now!**

Mike McDonald 5507 10th Street Lubbock, TX 79416 www.truprotect.com (806) 281-9698 (806) 781-2554 cell m.mcdonald@truprotect.com