



## EMI-SHIELD AL20

### EMI Foil 4' x 8' Sheet Shielding (PSA is NOT Available)

**EMI-SHIELD AL20** is a 0.022" ± 0.002" thick, 98% ±1% pure aluminum foil sheets for use as an EMI/RFI shield against electromagnetic interference. The foil sheets are easy to work with and offers good shielding effectiveness across a wide range of frequencies, shielding against unwanted signals in or out of rooms and buildings.

**EMI-SHIELD AL20** may be used to form shielded enclosures of almost any size or shape, with primary use in construction with low-cost shielded rooms, shielded anechoic chambers and other shielded test rooms.

**EMI-SHIELD AL20** is specifically designed to be placed on the rough surface floor, usually glued directly to the concrete floor with or without a substrate placed over the top. The sheets are butt jointed and taped with 1 layer or 2 layers 5 mil, 4" electrically conductive tape. One layer of 5 mil aluminum tape is 80 dB, One layer of 5 mil copper tape is 90 dB (see shielding performance chart below).

<b>AL20 TYPICAL SHIELDING EFFECTIVENESS</b>			
<b>(Insertion Loss per IEEE-299 : 2006)</b>			
<b>Installation</b>	<b>As Installed Butt Jointed &amp; Taped with 4" EC Tape</b>		<b>As Installed 1" Overlap, Screwed &amp; Taped with 4" EC Tape</b>
<b>Install Locations</b>	<b>Floor, Wall, Ceiling</b>	<b>Floor, Wall, Ceiling</b>	<b>Wall, Ceiling</b>
<b>Electrically Conductive Seaming Tape</b>	<b>1 Layer 5 mil Copper</b>	<b>1 Layer 5 mil Aluminum</b>	<b>1 Layer 5 mil Aluminum</b>
<b>FREQUENCY</b>	<b>SE (dB)</b>	<b>SE (dB)</b>	<b>SE (dB)</b>
10 KHz, Magnetic Field	45	45	45
100 KHz, Magnetic Field	65	65	65
200 KHz, Magnetic Field	65	65	65
10 KHz, Electric Field	≥95	≥90	≥100
100 KHz, Electrical Field	≥95	≥90	≥100
200 KHz, Electrical Field	≥95	≥90	≥100
1 MHz, Electrical Field	≥95	≥90	≥100
10 MHz, Electrical Field	≥100	≥95	≥100
400 MHz, Plane Wave	≥100	≥95	≥100
1 GHz Plane Wave	≥92	≥90	≥100
10 GHz Plane Wave	≥90	≥85	≥100
18 GHz Plane Wave	≥88	≥85	≥100
40 GHz Plane Wave	≥75	≥75	≥100



**EMI-SHIELD AL20** is applied like sheet or panel floor covering, covering all floor surfaces. Other than normal cleanliness, and dust free, no special preparation is required. The foil sheets are typically glued to the floor using a contact adhesive (3M™ Scotch-Weld™ 1357 Adhesives). The AL20 allows you to apply your final flooring directly on top of the AL20 sheets.

**E-SHIELD** products typically are butt jointed, with the seams taped with 4" electrically conductive aluminum or copper tape to avoid RF leakage. Overlap method requires plywood backing.

**Concrete Warning** - Since aluminum is subject to attack by alkaline(s) it should NOT be allowed to come in direct contact with concrete or mortar. If aluminum is in contact with concrete (or even other metals) and is subject to wetting (as would happen outdoors), the aluminum should be insulated from the concrete, mortar, or metal by adding a barrier like: asphalts, paint, sealer, 6 mil plastic polyurethane sheeting or a neoprene adhesive. Use waterproofing concrete sealer if you know water might get in, on or through the concrete.

**ORDERING INFORMATION** **EMI-SHIELD AL20** is available in the standard size of 0.022" ± 0.002" thick by 48" – 50" wide and 96" long. Weight: ≈ 10 lbs. per sheet.



**Wear correct gloves when installing the foil, the edge is like a razor blade**