



EMI-SHIELD AL5

EMI Foil Shielding With or Without PSA



EMI-SHIELD AL5 is a 0.005" (5 mil) (0.127mm) thick aluminum foil for use as an EMI/RFI shield against electromagnetic interference. The foils are easy to work with and offer good shielding effectiveness across a wide range of frequencies, tested from 9 KHz to 40 GHz, shielding against unwanted signals in or out of rooms and buildings.

AL5 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 products are unique as they come with 2 mil Pressure Sensitive Adhesive (PSA) as the bonding mechanism. PSA offers a no-mess, no odor simple method of application method for applying the E-SHIELD to substrates. E-SHIELD is also available without PSA backing.

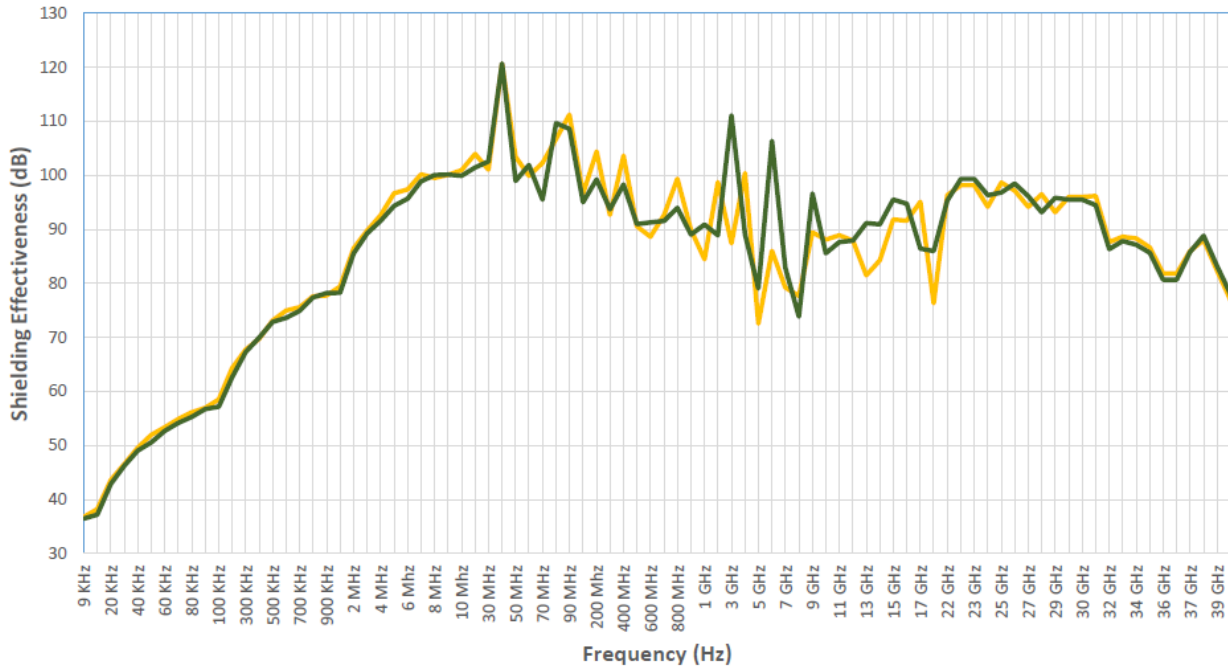
AL5 can be used as a single layer or double layer, see shielding performance below. Staggered or offset overlap of seams are recommended for double layer application.

AL5 TYPICAL SHIELDING EFFECTIVENESS	
As Installed 2" Overlap & Seam Taped with 4" wide EC Tape	
FREQUENCY	dB
1 KHz, Magnetic Field	12
10 KHz, Magnetic Field	20
100 KHz, Magnetic Field	25
10 KHz, Electric Field	≥38
100 KHz, Electrical Field	≥58
10 MHz, Electrical Field	≥95
100 MHz, Plane Wave	≥95
400 MHz, Plane Wave	≥95
1 GHz Plane Wave	≥90
10 GHz Plane Wave	≥85
18 GHz Plane Wave	≥80
40 GHz Plane Wave	≥80



AL5 TYPICAL SHIELDING EFFECTIVENESS As Installed Butt Jointed & Seam Taped with 4" wide EC Tape (Insertion Loss per IEEE-299 : 2006)	
FREQUENCY	dB
1 KHz, Magnetic Field	12
10 KHz, Magnetic Field	20
100 KHz, Magnetic Field	25
10 KHz, Electric Field	≥35
100 KHz, Electrical Field	≥55
10 MHz, Electrical Field	≥95
100 MHz, Plane Wave	≥95
400 MHz, Plane Wave	≥95
1 GHz Plane Wave	≥85
10 GHz Plane Wave	≥85
18 GHz Plane Wave	≥75
40 GHz Plane Wave	≥75

AL5 Shielding Effectiveness (Butt Joint & Seam Taped) Tested per IEEE-299 : 2006



— 1235/1145-0.005" aluminum with .005" x 4.00" EC aluminum tape (no abrasion prior to taping)

— 1235/1145-0.005" aluminum with .005" x 4.00" EC aluminum tape (scotch brite tape area prior to putting tape down)



EMI-SHIELD AL5 is applied like wallpaper, covering all surfaces: floor, walls and ceiling. Other than normal cleanliness, and dust free, no special preparation is required. Raw sheetrock will be required to be primed if you are using the AL5 with PSA. The foil should be glued in-place or ordered with a Pressure Sensitive Adhesive (PSA).

EMI-SHIELD AL5 INSTALLATION OPTIONS:

Good SE Performance: AL5 is butt jointed and then seam taped with 4" wide EC AL5 Tape (see graph above).
Better SE Performance: AL5 is overlapped by a minimum of 3" and then seam taped with 4" wide EC AL5 Tape.
Best SE Performance: AL5 joints are Z-Folded and then seam taped with 4" EC AL5 tape.

ORDERING INFORMATION

EMI-SHIELD AL5 is available in standard widths of 12", 24" & 48" and lengths of 150 Ft with other dimensions available on special order. Either with or without PSA.

EMI-SHIELD AL5 Tape is available in 6" x 150 Ft rolls with PSA and ECPSA backing.

EMI-SHIELD AL5 Tape is also available in electrically conductive backing PSA, 1", 2", 3", 4" & 6" x 180 Ft rolls.

Note: Standard AL5, 2 mil PSA, does not stick to: unsealed concrete, cinder block, unprimed sheet rock, unprimed particle board and other unprimed rough or porous surfaces.



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