



FAS ABSORBER

PU FOAM BASED ANTENNA SHROUD MICROWAVE ABSORBERS

(Microwave Absorbent Material – Flat Absorber Sheet)

FEATURES:

- ❖ Semi Open PU Foam based broadband type embedded pyramidal microwave absorbers.
- ❖ Specially formulated coatings for better ageing characteristics.
- ❖ Light weight, flexible and easy to cut.
- ❖ Polyurethane foam sheet dipped in absorbing slurry providing desired electrical grading.
- ❖ Standard size is 600 mm X 600 mm. Custom tailored sizes can also be supplied.
- ❖ Thicknesses are 45mm, 35mm, 30mm, 25mm, 15mm, 12.5mm and 10 mm (FAS-45, FAS-35, FAS-30, FAS-25, FAS-15, FAS-12.5 and FAS-10). Larger thickness can be produced to suit low frequency applications.
- ❖ Colored surface should face the incident radiation.
- ❖ The back surface (black) should be close to the metallic surface to achieve best performance.
- ❖ **Provides better wider angle performance than multilayer flat absorber.**

AREAS OF APPLICATION:

- ❖ Used for isolation of adjacent antennas such as parabolic dish and horn antennas and array elements.
- ❖ Mainly used to line the interior walls of shrouds on antenna dishes in order to suppress
- ❖ Side/back lobes in shadow region.
- ❖ Various camouflaging and interference suppression applications.
- ❖ Used for Low performance Anechoic Chambers in non critical areas.

MATERIAL PROPERTIES:

- ❖ Ozone resistant.
- ❖ **RoHS Compliant.**
- ❖ Front Surface Color is Blue.
- ❖ Regains its absorbing property after drying.



REFLECTIVITY:

Frequency Range (GHz)	Maximum Reflection Loss (dB)						
	At near normal incidence wrt metal plate of same size						
	FAS-45	FAS-35	FAS-30	FAS-25	FAS-15	FAS-12.5	FAS-10
4.5-5.5	-15.0	-----	-----	-----	-----	-----	-----
7.0-8.0	-16.0	-16.0	-15.0	-15.0	-----	-----	-----
8.0-10.0	-16.0	-16.0	-15.0	-15.0	-----	-----	-----
10.0-12.0	-20.0	-20.0	-20.0	-20.0	-15.0	-13.0	-----
12.0-15.0	-20.0	-20.0	-20.0	-20.0	-15.0	-15.0	-13.0
15.0-40.0	-20.0	-20.0	-20.0	-20.0	-15.0	-15.0	-15.0

TYPICAL WEIGHT:

Absorber Type	Typical Weight of 2 ft x 2 ft sized sheet.
FAS-45	Less than 775 gm
FAS-35	Less than 600 gm
FAS-30	Less than 500 gm
FAS-25	Less than 460 gm
FAS-15	Less than 375 gm
FAS-12.5	Less than 350 gm
FAS-10	Less than 325 gm



TEST PROCEDURE TO TEST MICROWAVE ABSORBER SHEET:

Tested as Per IEEE Std.1128/1998: IEEE Recommended practice for RF Absorber Evaluation using NRL Arch Method. Measured Reflection Loss at near normal incidence (approx. 10° from the normal) with reference to metal sheet of similar to absorber size for two polarizations (VV & HH). Test setup is as below:

