

ECCOSORB® SFU

Thin, Flexible, Resonant Absorbers

Material Characteristics

- Thin, flexible, narrowband resonant absorber
- Magnetically loaded urethane rubber sheets
- Urethane absorbers offer increased abrasion resistance
- Frequency range from 1-18 GHz
- Does not support fungal growth per MIL-STD-810E
- Reflectivity of 1% (-20dB) or less of the normal incident microwave energy at the design frequency
- Will withstand temperatures from -40°F to 195°F (-40°C to 90°C)

Applications

- ECCOSORB® SFU is ideally suited for applications requiring a very thin microwave absorber where broadband performance is not essential. Such as; lining radar nacelles and the lining of cavity backed and shrouded telecommunication antennas.

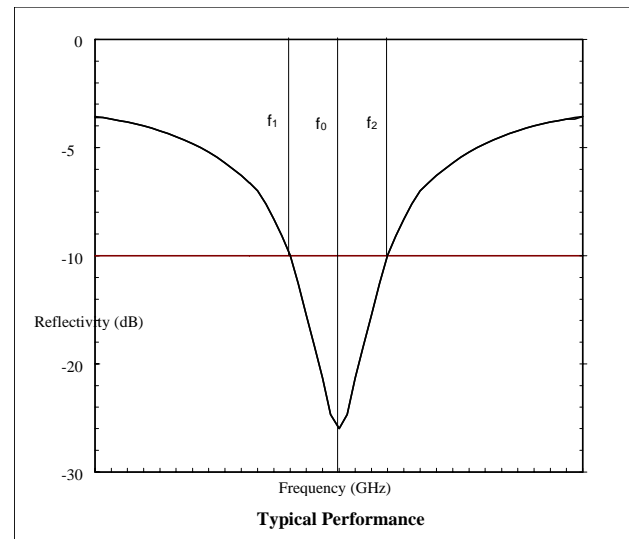
Availability

- Standard sheets are 12" x 12" (30.5cm x 30.5cm)
- Thickness depends on resonant frequency desired
- Can be supplied with a [Pressure Sensitive Adhesive \(PSA\)](#) specifically designed for urethanes. Product designation denoting ECCOSORB® SFU with a PSA is ECCOSORB® SFU-XX/SS-3
- For optimum performance, material is recommended and can be supplied with a metal backing (ML)
- Other resonant frequencies from 0.7 GHz to 40 GHz can be supplied on special order
- ECCOSORB® SFU is available in customer specified configurations

Instructions for Use

- The performance of ECCOSORB® SFU requires that it be intimately backed with a metal surface. If a metal surface is not available, ECCOSORB® SFU can be supplied metal backed with aluminum foil (ML)
- For applications where the service temperature is between -40 and 149°C, and where the speed and convenience of a pressure sensitive adhesive is desired, ECCOSORB® SFU can be bonded to a surface using the factory installed SS-3 pressure sensitive adhesive

Typical Reflectivity Performance



The performance of ECCOSORB® SFU is defined by reflectivity at a single frequency. A generalized performance curve is shown above. The design frequency f_0 , has a $\pm 5\%$ bandwidth, designated as f_1 and f_2 . Although performance degrades with increased incidence angle, at incident angles out to 45°, reflectivity of -16dB has been demonstrated

Physical Characteristics

Designation	Nominal Thickness		Nominal Weight	
	inch	mm	lb/ft ²	kg/m ²
SFU-2.5	0.098	2.50	2.4	11.7
SFU-3.5	0.094	2.38	2.1	10.2
SFU-4.5	0.111	2.82	2.5	10.0
SFU-5.5	0.098	2.49	1.8	8.9
SFU-6.0	0.090	2.28	1.7	8.2
SFU-7.0	0.079	2.00	1.5	7.1
SFU-8.0	0.091	2.30	1.4	6.7
SFU-9.0	0.081	2.07	1.3	6.1
SFU-10.0	0.075	1.90	1.2	5.6
SFU-12.0	0.067	1.70	1.1	5.1
SFU-14.0	0.061	1.56	0.9	4.6
SFU-16.0	0.057	1.45	0.9	4.3