EC-SORB® LS

Microwave Factory Co.,Ltd.

Foam Sheet High-Loss Flexible Radio Wave Absorber

EC-SORB LS is a series of low-density high-loss flexible foam sheet materials.

This series is used to absorb electromagnetic energy in various applications.
Any given sheet of EC-SORB LS is uniform in characteristics from point to point across the sheet and from front to back.

These are used to line the interior of a cavity to lower its Q and to wrap around a radiating element to eliminate surface currents.
These are not free space absorbing materials so please do not get confused with many free space absorbers for lining microwave darkrooms and nacelles.

This series physically resembles EC-SORB AN, however, it is entirely different electrically. EC-SORB AN is graded absorber, being made from 3 or more layers of absorptive foam, each layer of which is itself graded.
It should be noted that the reflectivity of an object (material or otherwise) can be reduced by applying one or more layers of EC-SORB LS to its surface.
This series is a foam in structure, black in color. Its weight is about 0.08g/cc (5lbs./cuft) and it can be cut readily with a scissors. It can be applied by using chloroprene adhesive. Standard sheet size is 61cm x 61cm (24in x 24in) and thickness is 0.3cm (1/8in), 0.6cm (1/4in), 0.9cm (3/8in), and 1.8cm (3/4in).

One sheet of EC-SORB LS can be applied onto the top of another sheet using chloroprene adhesive and a graded absorber can be created in this way.
EC-SORB LS has 3 types and it is available in a wide range of dielectric properties which are best characterized by insertion loss and dielectric loss factor.
Dielectric properties of each have been adjusted by the amount of carbon in the firing substance. The suffix of product names indicate carbon content as LS-22, LS-24, LS-26.

Electric Property of EC-SORB® LS

		Frequency									
LS-	Item	1K	10K	100K	1M	10M	100M	1G	3G	10G	100G
22	ε′	28	28	28	28	28	27	6.5	2.2	1.6	1.5
	ε″	10000	1000	100	10	1	0.46	2.6	2.4	0.9	0.092
	dB/cm	0	0	0	0	0	0.01	0.91	4.0	6.3	6.8
	IL-dB/In	0.02	0.02	0.02	0.02	0.05	1.7	5.3	10	16.02	17
24	ε′	29	29	29	29	29	29	20	6.7	1.9	1.3
	ε″	7100	710	71	7.1	1.0	3.0	19	14	4.9	0.5
	dB/cm	0	0	0	0	0	0.05	3.5	11	24	39
	IL-dB/In	0.02	0.02	0.02	0.02	0.05	2.3	14	32	61	100
26	ε′	34	34	34	34	34	34	28	12	3	2.2
	ε″	6800	680	68	6.8	0.68	4.8	32	27	9.8	1.0
	dB/cm	0	0	0	0	0	0.07	4.9	16	34	60
	IL-dB/In	0.02	0.02	0.02	0.02	0.05	3.0	19	46	89	150

*The absorption performance evaluation of radio wave absorber is based on our company's waveguide method and NRL arch method.
(In the case that the product has metal back surface)
*The numbers on the table are typical values, not guaranteed values.
Also, the specification may change without advance notice.

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