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ECCOSORB[®] LS

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

They are used to absorb electromagnetic energy in a variety of applications.

Any given sheet of ECCOSORB LS is uniform in characteristics from point to point across the sheet and from front to back.

ECCOSORB LS is used to line the interior of a cavity to lower its Q, to wrap around a radiating element to eliminate surface currents.

ECCOSORB LS is not a free space absorbing material.

It should not be confused with the many free space absorbers for lining microwave darkrooms and antennacelles.

ECCOSORB LS physically resembles ECCOSORB AN.

Electrically, however, it is entirely different. ECCOSORB AN is graded absorber, being made from 3 or more layers of absorptive form, each layer of which is itself graded.

It should be pointed out, however, that the reflectivity of an object (material or otherwise) can be reduced by applying one or more layers of ECCOSORB LS to its surface.

ECCOSORB LS is a foam in structure, black in color.

Weight is about 0.08g/cc (5 lbs./cu.ft.) It can be cut readily with a scissors.

It can be cemented in place by the use of chloroprene adhesion.

Standard sheet size is 61cm x 61 cm(24" x 24") thickness is 0.3cm(1/8"), 0.6cm(1/4"), 0.9cm(3/8"), and 1.8cm(3/4").

One sheet of ECCOSORB LS can be cemented on top of another sheet using chloroprene adhesion in order to build up thickness. In this way, a graded absorber can be made.

ECCOSORB 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 name indicate carbon content as LS-22, LS-24, LS-26



Electric Property

		Frequency (Hz)									
LS-	項目	1K	10K	100K	1M	10M	100M	1G	3G	10G	100G
20	ϵ'	24	24	24	24	24	23	6.3	2.1	1.5	1.4
	ϵ''	11000	1100	110	11	1.1	0.31	1.6	1.7	0.69	0.071
	dB/cm	0	0	0	0	0	0.01	0.58	3.0	5.0	5.5
	IL-dB/In	0.03	0.03	0.03	0.03	0.04	1.3	4.4	7.8	13	14
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	0.90	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	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	0.50
	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	3.4	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