THE ELECTRICAL PROPERTIES

Dielectric constant and loss tangents of ROHACELL.

	FREQUENCY GHz			
ROHACELL DIELETRIC CONSTANT	**2.0**	**5.0**	**10.0**	**26.0**
31	1.08	1.05	1.05	1.06
51	1.07	1.09	1.06	1.11
71	1.08	1.11	1.13	1.10
LOSS TANGENT				
31	.0001	.0004	.0008	.0034
51	.0002	.0004	.0011	.0050
71	.0003	.0005	.0018	.0076

Measured by: Seavey Engineering Associates, Inc.

SURFACE RESISTANCE

ROHACELL	31	51	71
ohm	2×10^{13}	9×10^{12}	5.5×10^{12}

The excellent dielectric values of ROHACELL are a major advantage for its use in radomes and antenna engineering.

The moisture pick-up of ROHACELL without skins does not influence the remarkable specific properties of ROHACELL in antenna applications. This due to the water molecules being fixed in the imide groups and are unable to oscillate freely.

In order to fulfil the aircraft service and production process requirements, we have created a specification guide with the help of our customers

When ROHACELL is covered with skins as usual, the skin material influences the properties of the antenna more than ROHACELL itself. The change of the antenna properties by water absorption of the skins must also be taken into account as the water molecules may oscillate freely here.