inkbit

Cyclic Olefin Thermoset

A low loss, tough, and chemically resistant material

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MECHANICAL PROPERTIES	STANDARD TYPE IV 5 MM/MIN	VALUE XY ORIENTATION	VALUE Z ORIENTATION	UNIT
Tensile Yield Strength	ASTM D638	43.3 ± 1.0	32.9 ± 1.7	MPa
Strain at Yield	ASTM D638	5.8 ± 0.7	-	%
Ultimate Tensile Strength	ASTM D638	43.3 ± 1.0	32.9 ± 1.7	MPa
Elongation at Break	ASTM D638	20.1 ± 8	2.7 ± 0.2	%
Tensile Modulus	ASTM D638	1690 ± 190	1530 ± 50	MPa
Impact Strength, Notched Izod (23 °C)	ASTM D256	33 ± 3	-	J/m

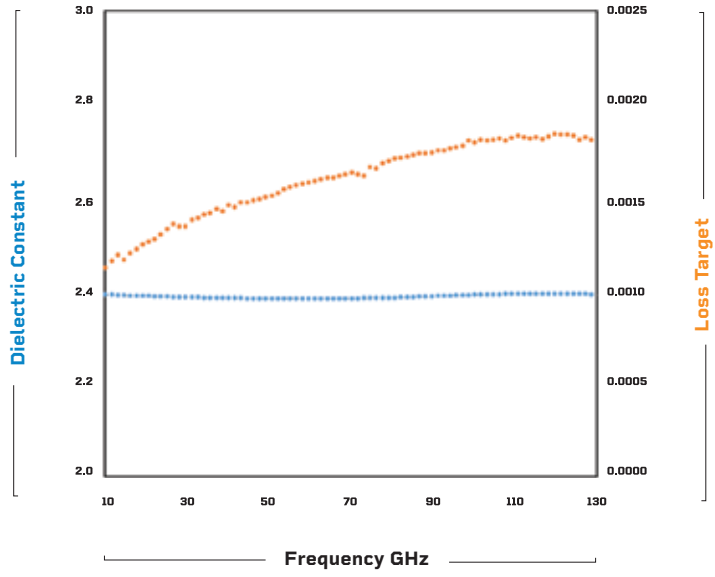
THERMAL PROPERTIES	STANDARD	VALUE	UNIT
			°C
HDT, 0.455 MPa	ASTM D648	117 ± 3	PPM/°C
Coefficient of Thermal Expansion (25 °C)	ASTM D648	90.64	

DIELECTRIC PROPERTIES	STANDARD	VALUE	UNIT
Dielectric Constant (100 GHz)	ASTM 2520 Part C	2.4	-
Loss Tangent (100 GHz)	ASTM 2520 Part C	0.0018	-

DIELECTRIC CONSTANT AND LOSS TANGENT

Cyclic Olefin Thermoset is an intrinsically low loss tangent and dielectric constant material across a wide range of microwave and mmWave frequencies. The dielectric constant and loss tangent from 10-130 GHz was measured in two orthogonal in-plane directions according to ASTM 2520 Part C.

Measurements were performed with a double-concave (DC) Fabry-Perot open resonator (FPOR).



All data shown is preliminary and subject to change due to the in-development status of the material. As of October 2025, to the best of our knowledge the information contained herein is accurate.

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