INNOVATIVE PAPER TECHNOLOGIES, LLC

Technical Reference Sheet

TufQUIN® Inorganic-based Papers

Description

TufQUIN products are a hybrid inorganic/organic paper based upon advanced manufacturing techniques. TufQUIN offers the high-temperature capabilities of inorganic materials combined with the high mechanical strength gained by the use of organic fiber. TufQUIN is a flexible, conformable paper exhibiting physical toughness in the form of high tensile strength and excellent tear resistance

TufQUIN® 110 *			2.5 mil	3 mil	5 mil	10 mil
Typical Thickness		mm	0.07	0.08	0.13	0.25
		mil	2.5	3.0	5.0	10
Basis Weight		kg/m^2	0.07	0.08	0.14	0.27
		lb/yd^2	0.13	0.15	0.25	0.5
Tensile Strength	kN/m	MD	2.6	2.6	4.2	8.7
		CD	1	1	2.1	4.2
	lb/in	MD	15	15	24	50
		CD	6	6	12	24
Elongation to Break, MD		%	12	15	19	18
Elongation to Break, CD		%	3	3	8	12
Elmendorf Tear grams		MD	60	110	280	640
Breakdown Voltage		kV	0.6	0.7	0.8	1.5
Dielectric Constant@ 23 °C		%	N/A	2.2	2.2	2.7
Dissipation Factor @ 23 °C		%	N/A	1.1	0.7	1.4
Thermal Conductivity @ 180 °C		W/m-°K	N/A	0.14	0.14	0.17
Moisture		%	<1	<1	<1	<1

* All data is for nominal product properties and is not for specification purposes
N/A=Not Available

TufQUIN® 120 *			7.5 mil	12 mil	15 mil	20 mil
Typical Thickness		mm	0.19	0.30	0.38	0.50
		mil	7.5	12	15	20
Basis Weight		kg/m^2	0.2	0.35	0.42	0.57
		lb/yd^2	0.37	0.64	0.77	1.05
Tensile Strength	kN/m	MD	6.3	9.6	13	19
		CD	2.5	N/A	5	N/A
	lb/in	MD	36	55	75	110
		CD	14	N/A	28	N/A
Elongation to Break, MD		%	14	14	14	15
Elmendorf Tear grams		MD	340	N/A	N/A	N/A
Breakdown Voltage		kV	1	1.9	2.1	3.3
Dielectric Constant@ 23 °C		%	2.6	N/A	N/A	N/A
Dissipation Factor @ 23 °C		%	3.2	N/A	N/A	N/A
Thermal Conductivity @ 180 °C		W/m-°K	0.17	N/A	N/A	N/A
Moisture		%	<1	<1	<1	<1