

# AGILISTA-3200W/3110W

## Material Characteristics

Description			Unit	UL94HB	Result		
					AR-M2	AR-H1	
					before temper	after temper	
Tensile Test	Ultimate Tensile Strength		MPa	D638	40-55	16,1 - 31,4	15,4 - 38,4
	Tensile Modulus				1800 - 2100	2188 - 2365	2110 - 2447
	Elongation at Break		%		5 - 35	0,8 - 1,5	0,7 - 1,8
	Poisson's ratio		-		0,37	-	0,34
Elastic Modulus	Tensile Test		MPa	-	1870-2181	-	1673-1940
	Shear Modulus (also Rigidity Modulus, Modulus of Torsion)			-	657-766	-	787-913
Bending Test	Flexural Strength		MPa	D-790	60-80	60,6 - 85,9	43,6 - 65,6
	Flexural Modulus of Elasticity				1900-2400	2866 - 2987	2766 - 2829
High-Pressure Test	Compressive Strength		MPa	D-695	70-80	87,7 - 89,9	97,3 - 100,1
	Compressive Modulus		MPa	-	2307-2692	-	2198-2549
Shock Test	Impact Strength		kJ/m <sup>2</sup>	D-256	1,7-2,1	1,48 - 2,17	1,50 - 1,78
Hardness Test (Shore durometer) [Unit D]			-	D-2240	85-86	86,7 - 87,1	86,9 - 87,8
Rockwell (Härte) [Einheit R]			-	D-785	119 - 122	123,7 - 125,4	126,3 - 127,5
Heat Deflection Temperature	Heat Deflection Temperature °C at 0,45 Mpa		°C	D-648	52-54	67,4 - 72,3	103
	Heat Deflection Temperature °C at 1,8 Mpa				45-50	63,5 - 64,3	73,9 - 77,1
Glass Transition Temperature/ Transformation Point T <sub>G</sub>			°C	-	77-80	98	99,8
Thermal Conductivity			W/m·K	ISO/CD 22007-2 (not ASTM)	0,166-0,167	-	0,147-0,160
Inflammability			-	UL94HB (not ASTM)	passed	-	passed
Water Absorption			%	D570-98	0,35	0,33 - 0,38	0,37
Cured Mass Density			kg/m <sup>3</sup> bei 23 °C	-	1111	1104	1103

## Mechanical Characteristics

Description	Unit	ASTM	AR-G1L
Tensile Strength	Mpa	D-412	0,5-0,8
Elongation at Fracture	%	D-412	160
Hardness Scale (Shore A)		D-2240	35
Ultimate Tensile Strength	kg/cm	D-624	3,1
Cured Mass Density	g/cm <sup>3</sup>	D-792	1,03
Water Absorption	%		< 0,4

Description	Unit	ASTM	AR-G1H
Tensile Strength	Mpa	D-412	2,0-2,5
Elongation at Fracture	%	D-412	160
Hardness Scale (Shore A)		D-2240	65
Ultimate Tensile Strength	kg/cm	D-624	9
Cured Mass Density	g/cm <sup>3</sup>	D-792	1,03
Water Absorption	%		<0,4

ASTM = American Society for Testing and Materials

## Electrical Characteristics AR-M2

Description	Unit	ASTM	Result
Relative Permittivity (1 Mhz)	-	D-150	2,99 - 3,01
Dissipation Factor (1 Mhz)	-	D-150	1,14*10 <sup>-2</sup> - 1,22*10 <sup>-2</sup>
Specific Resistance	Ω · cm	D-257	6,1*10 <sup>15</sup> - 7,6*10 <sup>15</sup>
Specific Surface Resistance	Ω	D-257	3,8*10 <sup>15</sup> - 4,9*10 <sup>15</sup>
Dielectric Strength	kV/mm	D-149	34,2 - 39,0

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## Electrical Characteristics AR-H1

Description	Unit	ASTM	Result after temper
Relative Permittivity (1 Mhz)	-	D-150	2,77 - 2,84
Dissipation Factor (1 Mhz)	-	D-150	1,16*10 <sup>-2</sup> - 1,23*10 <sup>-2</sup>
Specific Resistance	Ω · cm	JIS K6911	3,7*10 <sup>15</sup> - 4,5*10 <sup>15</sup>
Specific Surface Resistance	Ω	JIS K6911	8,0*10 <sup>15</sup> - 2,8*10 <sup>16</sup>
Dielectric Strength	kV/mm	JIS C2110-1	32,3 - 38,4

ASTM = American Society for Testing and Materials

JIS = Japan Industrial Standard

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