




FR4 Laminate

Epoxy Glass Fiber Laminate

Thickness 0.1mm ~ 72mm

Dimension 920mm x 1220mm, 1020mm x 1220mm, 1060mm x 1220mm

Available Color Light Green , Yellow , Black 

NEMA Grade		FR4-G10	FR4-G11 (High Tg)
JIS Grade		EL-GEH/GEF	EL-GEH/GEF
Model No.	-	SR1400	SR1400Y
Volume Resistivity , minimum	MΩ-cm	1*10 ⁶	1*10 ⁶
Surface Resistivity , minimum	MΩ	1*10 ⁴	1*10 ⁴
Dielectric Constant (1MHZ)	-	5.4↓	4.5±0.5
Moisture Absorption	%	< 0.8	< 0.5
Dielectric Breakdown minimum	kV	45~60	45~60
Flexural Strength Lengthwise Crosswise	1b/in ²	60,190 50,140	60,190 50,140
Electric Strength	kV/mm	30~45	30~45
Flame Resistance	-	UL 94V-0	UL 94V-0
Glass Transition Temperature	°C	140±5°C	180±10°C
Decomposition Temperature	°C	305	370
Thermal Resistance (thickness>0.5mm) A. T260 B. T288	Minutes Minutes	15 2	>60 >60

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FR5 Laminate

High-Tg Epoxy Glass Fiber Laminate

Thickness 0.1mm ~ 72mm

Dimension 920mm x 1220mm, 1020mm x 1220mm, 1060mm x 1220mm

Available Color Yellow 

Thickness	-	< 0.50mm	> 0.50mm
Model No.		SR1800	
Volume Resistivity , minimum	MΩ-cm	1*10 ⁶	1*10 ⁶
Surface Resistivity , minimum	MΩ	1*10 ⁴	1*10 ⁴
Dielectric Constant (1MHZ)	-	4.5± 0.5	4.5±0.5
Moisture Absorption	%	< 0.8	< 0.5
Dielectric Breakdown minimum	kV	45~60	45~60
Flexural Strength Lengthwise Crosswise	1b/in ²	-	60,190 50,140
Electric Strength	kV/mm	30~45	-
Flame Resistance	-	UL 94V-0	UL 94V-0
Glass Transition Temperature	°C	180±10°C	180±10°C
Decomposition Temperature	°C	370	370
Thermal Resistance A. T260 B. T288	Minutes Minutes	-	> 60 > 60

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Environmental Laminate

Halogen Free Epoxy Glass Fiber Laminate

Thickness 0.1mm ~ 72mm

Dimension 920mm x 1220mm, 1020mm x 1220mm, 1060mm x 1220mm

Available Color Light Yellow 

Thickness	-	< 0.50mm	> 0.50mm
Model No.		SR1500HF	
Volume Resistivity , minimum	MΩ-cm	1*10 ⁶	1*10 ⁶
Surface Resistivity , minimum	MΩ	1*10 ⁴	1*10 ⁴
Dielectric Constant (1MHZ)	-	5.4 ↓	5.4 ↓
Moisture Absorption	%	-	< 0.8
Dielectric Breakdown minimum	kV	45~60	45~60
Flexural Strength Lengthwise Crosswise	1b/in ²	-	60,190 50,140
Electric Strength	kV/mm	30~45	-
Flame Resistance	-	UL 94V-0	UL 94V-0
Glass Transition Temperature	°C	145±5°C	145±5°C
Decomposition Temperature	°C	350	350
Thermal Resistance A. T260 B. T288	Minutes Minutes	-	> 60 > 60

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Anti-Static and High Heat Resistance


Epoxy Glass Fiber Unclad Laminate

Application Electronic, electrical, semiconductor components

Characteristic Anti-Static, high heat resistance

Thickness 0.2mm ~ 72mm

Dimension 920mm x 1220mm, 1020mm x 1220mm, 1060mm x 1220mm





Available Color Black 

Product Code	-	SR1400AK	SR380
Surface Resistance (ESD)	Ω	$10^6 \sim 10^8$	$10^6 \sim 10^8$
Flexural Strength	kg/mm^2	35~45	35~45
Flexural Strength	kg/mm^2	20~40	20~40
Impact Strength Lengthwise Crosswise	kg-cm/cm^2	68~78 35~45	68~78 35~45
Specific Gravity	-	1.9	1.9
Glass Transition Temperature	$^{\circ}\text{C}$	125~130	-
Water Absorption	%	<0.2	<0.2
Heat Resistance	180 $^{\circ}\text{C}$	180 mins	-
	280 $^{\circ}\text{C}$	-	>90 mins
	288 $^{\circ}\text{C}$	-	>60 mins
	300 $^{\circ}\text{C}$	-	>30 mins
	380 $^{\circ}\text{C}$	-	3~6 mins
	400 $^{\circ}\text{C}$	-	2~4 mins
Flame Resistance	-	V0	HB

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Application	Electronic, electrical components
Characteristic	Excellence for CNC
Dimension	1020mm x 1020mm, 1020mm x 1220mm
Available Color	Orange  , Black  , Light Orange  , Dark Orange (Coffee) 

RESIN & BASE		Phenol Resin Paper		Phenol Resin Paper	Phenol Resin Paper	Phenol Resin Cotton Cloth
		XX	XP	XPC	C	LE
NEMA Grade		XX	XP	XPC	C	LE
JIS Grade		PL-PEM	PL-PEM-P	PL-PEM-P	PL-FCM	PL-FLE
Product Code	-	SRB 1200N SRB 1200K		SRB 1200NC	SRB 1200C	SRB 1200LE
Common Thickness	mm	3.0~50	1.2~2.5	0.3~2.5	3.0~50	0.25~30
Dielectric Breakdown Perpendicular to Lamination	KV/mm	>13 (OK)	10 (OK)	10 (OK)	10~18	10~20
Insulation Resistance	Ω	$>10^8$	$>10^8$	$>5 \times 10^8$	$>10^7$	$>10^8$
Flexural Strength, perpendicular	kgf/mm ²	10~15	8~15	8~10	8.5~11	8~11
Heat Resistance	mins/°C	120 x 130	120 x 120	120 x 120	120 x 140	120 x 140
Izod Impact Strength, parallel	kgf-cm/cm	3~18	3~18	-	-	-
Warp	%	<0.9	<3.0	<0.9	-	-
Water Absorption	%	0.8	2	2	≤ 1.5	≤ 2.3
Water Absorption	°C	-	140~160 Good	32~65 Very Good	-	-

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Anti-Static Bakelite

Characteristic Anti-Static, excellent for CNC

Thickness 0.2mm~25mm

Dimension 1020mm x 1220mm

Available Color Black 

Resin	-	Phenolic Resin
Base	-	Bleached Kraft Paper
Product Code	-	SRB1200K
Resin	-	Phenol
Gravity	-	Approx. 1.4
Insulation Resistance (ESD)	Ω	$10^6 \sim 10^8$
Flexural Strength (Crosswise)	A	≥ 12 (Kgf / mm ²)
Water Absorption	E-24/50 +D-24/23	$\leq 1.6\%$
Hardness	A	90 \pm 2

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Durostone

Application

Electronic, electrical, semiconductor components

Characteristic

Anti-Static, high heat resistance

Thickness

3mm, 4mm, 5mm, 6mm, 8mm, 10mm, 12mm

Dimension

1220mm x 2440mm

Available Color

Blue



, Black



Product Code	-	CDML	CDMB
Grade	-	Standard	Anti-static
Density	g/cm ³	1.85	1.85
Flexural Strength perpendicular 3 point support	Mpa	360	360
Water Absortion	%	<0.2	<0.2
Coefficient of Linear Expansion between 30°C & 200°C	10 ⁻⁶ /K	13	11
Themal conductivity	W/m°k	0.25	0.25
Glass Transition Temperature	°C	125~130	-
Maximum Operating Temperature (10-20 seconds)	-	350	350
Standard operating Temperature	°C	260	260
Surface Resistivity	Ω	>10 ¹²	10 ⁵ ~10 ⁸
Modulus of Elasticity	Mpa	18,000	18,000
Specific Heat capacity	l/Kg k	930	930

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