



Polymeric Materials – Filament-wound Tubing, Industrial Laminates, Vulcanized Fiber, and Materials for Use in Fabricating Recognized Printed Wiring Boards Certified for Canada – Component

COMPANY

KINGBOARD LAMINATES HOLDINGS LTD

23/F., Delta House

No. 3 On Yiu Street

Shatin, Hong Kong

E123995

Industrial laminates:

Mtl Dsg	ANSI Type	Color	Build up	R.T.I.			H				Meets 746E Non-HAL	Meets 746E DSR
			Min Thk (mm)	Flame Class	Elec (°C)	Mech (°C)	H W I	H A I	V T R	C T I		
Industrial laminates furnished as sheets												
<i>KB-150</i>	XPC	NC, BK	0.71	HB	130	130	2	0	0	-	-	Yes
			1.57	HB	130	130	1	0	1	4	-	Yes
<i>KB-2150</i>	FR-2	NC	1.45	V-0	105	105	4	3	1	4	-	Yes
<i>KB-2150G</i>	FR-2	TN	0.71	V-0	75	75	0	3	6	-	-	Yes
			1.45	V-0	105	105	0	3	6	3	-	Yes
<i>KB-3151S (with Adhesive)</i>												
	FR-1	NC	1.45	V-0	130	130	0	0	-	0	-	Yes
			0.71	V-0	130	130	0	0	-	-	-	Yes
<i>KB-3151S (without Adhesive)</i>												
	FR-1	NC	1.45	V-0	130	130	3	3	4	4	-	Yes
			0.71	V-0	130	130	3	3	4	-	-	Yes
<i>KB-3152</i>	FR-1	NC	0.71	V-0	130	130	0	0	-	-	-	Yes
			1.45	V-0	130	130	0	0	-	0	-	Yes
<i>KB-5150</i>	CEM-1	NC	0.63	V-0	130	140	3	2	4	-	-	Yes
			1.40	V-0	130	140	1	2	4	3	-	Yes
<i>KB-5150&</i>	CEM-1	NC	0.63	V-0	130	140	1	3	4	-	-	Yes
			1.40	V-0	130	140	1	3	4	0	-	Yes
<i>KB-5252</i>	CEM-1	NC	0.63	V-0	130	140	3	2	-	-	-	Yes
			1.40	V-0	130	140	1	2	-	3	-	Yes
<i>KB-6160A</i>	FR-4.0	YL	0.38	V-0	130	130	0	0	-	-	-	Yes
			0.63	V-0	130	140	0	3	4	-	-	Yes
			1.40	V-0	130	140	0	2	4	3	-	Yes
<i>KB-6160C</i>	FR-4.0	NC	0.38	V-0	130	130	0	0	-	-	-	Yes
			0.63	V-0	130	140	0	3	4	-	-	Yes

			1.40	V-0	130	140	0	2	4	0	-	Yes
KB-6160LC(C)	FR-4.0	NC	0.63	V-0	130	140	0	3	4	-	-	Yes
			1.40	V-0	130	140	0	2	4	0	-	Yes
KB-6165	FR-4.0	YL	0.38	V-0	130	130	2	0	-	-	-	Yes
			0.63	V-0	130	140	0	3	4	-	-	Yes
			1.40	V-0	130	140	0	2	4	3	-	Yes
KB-6165C	FR-4.0	NC	0.05	-	-	-	-	-	-	-	-	-
			0.63	V-0	130	140	0	3	4	-	-	Yes
			1.40	V-0	130	140	0	2	4	0	-	Yes
KB-6165G	FR-4.1	NC	0.05	V-0	120	100	0	3	-	-	Yes	Yes
			0.38	V-0	130	130	0	1	-	-	-	Yes
			0.63	V-0	130	140	0	1	-	-	-	Yes
			1.40	V-0	130	140	0	1	-	3	-	Yes
KB-6165GC	FR-4.1	NC	0.05	V-0	120	100	0	3	-	-	Yes	Yes
			0.38	V-0	130	130	0	1	-	-	-	Yes
			0.63	V-0	130	140	0	1	-	-	-	Yes
			1.40	V-0	130	140	0	1	-	0	-	Yes
KB-6165LE	FR-4.0	NC	0.38	V-0	130	130	0	1	-	-	-	Yes
			0.63	V-0	130	140	0	1	-	-	-	Yes
			1.40	V-0	130	140	0	1	-	3	-	Yes
KB-6168	FR-4.0	NC	0.38	V-0	130	130	0	3	-	-	-	Yes
			0.63	V-0	130	140	0	3	4	-	-	Yes
			1.40	V-0	130	140	0	2	4	3	-	Yes
KB-6169GT	FR-15.1	NC	0.38	V-0	140	140	0	1	-	-	Yes	Yes
			0.63	V-0	150	150	0	1	-	-	-	Yes
			1.40	V-0	150	150	0	1	-	0	-	Yes
KB-7150	CEM-3.0	NC	0.63	V-0	130	140	0	2	4	-	-	Yes
			1.40	V-0	130	140	0	2	4	3	-	Yes
KB-7150C	CEM-3.0	NC	0.63	V-0	130	140	0	2	4	-	-	Yes
			1.40	V-0	130	140	0	2	4	0	-	Yes
Industrial laminates furnished as sheets or rolls												
FL-170	FR-4.0	NC	0.38	V-0	130	130	1	1	-	-	-	Yes
			0.63	V-0	130	140	0	1	-	-	-	Yes
			1.40	V-0	130	140	0	1	-	3	-	Yes
KB-5150A	CEM-1	NC	0.63	V-0	130	140	3	2	4	-	-	Yes
			1.40	V-0	130	140	1	2	4	2	-	Yes
KB-5150G	CEM-1	NC	0.63	V-0	130	140	3	2	4	-	-	Yes
			1.40	V-0	130	140	1	2	4	0	-	Yes
KB-5150H	CEM-1	NC	0.63	V-0	130	140	3	2	4	-	-	Yes
			1.40	V-0	130	140	1	2	4	2	-	Yes
KB-5150L	CEM-1	NC	0.63	V-0	130	140	3	2	4	-	-	Yes
			1.40	V-0	130	140	1	2	4	3	-	Yes
KB-616(X)	FR-4.0	YL	0.38	V-0	130	130	3	3	-	-	-	Yes
			0.63	V-0	130	140	0	3	4	-	-	Yes
			1.40	V-0	130	140	0	2	4	3	-	Yes

<i>KB-6164F</i>	FR-4.0	NC	0.38	V-0	130	130	0	4	-	-	-	-
			0.63	V-0	130	140	0	2	-	-	-	Yes
			1.40	V-0	130	140	0	1	-	3	-	Yes
<i>KB-6165F</i>	FR-4.0	NC(YL)	0.38	V-0	130	130	3	3	-	-	-	Yes
			0.63	V-0	130	140	0	3	4	-	-	Yes
			1.40	V-0	130	140	0	2	4	3	-	Yes
<i>KB-6167A</i>	FR-4.0	NC	0.38	V-0	130	130	0	2	-	-	-	Yes
			0.63	V-0	130	140	0	2	4	-	-	Yes
			1.40	V-0	130	140	0	1	4	4	-	Yes
<i>KB-6167F</i>	FR-4.0	NC	0.38	V-0	130	130	0	3	-	-	-	Yes
			0.63	V-0	130	140	0	3	4	-	-	Yes
			1.40	V-0	130	140	0	2	4	3	-	Yes
<i>KB-6167G</i>	FR-4.1	NC	0.05	V-0	120	100	0	3	-	-	Yes	Yes
			0.38	V-0	130	130	0	1	-	-	-	Yes
			0.63	V-0	130	140	0	1	-	-	-	Yes
			1.40	V-0	130	140	0	1	-	0	-	Yes
<i>KB-6167GMD</i>	FR-4.1	NC	0.38	V-0	130	130	0	1	-	-	Yes	Yes
			0.63	V-0	130	140	0	1	-	-	-	Yes
			1.40	V-0	130	140	0	0	-	0	-	Yes
<i>KB-6168LE</i>	FR-4.0	NC	0.38	V-0	130	130	1	1	-	-	-	Yes
			0.63	V-0	130	140	0	1	-	-	-	Yes
			1.40	V-0	130	140	0	1	-	3	-	Yes
<i>KB-6200G</i>	FR-4.1	NC	0.05	V-0	120	100	0	3	-	-	Yes	Yes
			0.38	V-0	130	130	0	1	-	-	-	Yes
			0.63	V-0	130	140	0	1	-	-	-	Yes
			1.40	V-0	130	140	0	1	-	2	-	Yes
<i>KB-7150T</i>	CEM-3.0	NC	0.63	V-0	130	140	0	2	4	-	-	Yes
			1.40	V-0	130	140	0	2	4	0	-	Yes
Industrial laminates furnished as sheets, rods or tubes												
<i>HF-140</i>	FR-4.1	NC	0.38	V-0	130	130	0	2	-	-	Yes	Yes
			0.63	V-0	130	140	0	2	-	-	-	Yes
			1.40	V-0	130	140	0	2	-	3	-	Yes
<i>HF-170</i>	FR-4.1	NC	0.38	V-0	130	130	0	3	-	-	Yes	Yes
			0.63	V-0	130	140	0	3	-	-	-	Yes
			1.40	V-0	130	140	0	2	-	3	-	Yes
<i>KB-3150N</i>	FR-1	NC	0.71	V-0	130	130	0	0	-	-	-	Yes
			1.45	V-0	130	130	-	-	-	3	-	Yes
<i>KB-3150NU %</i>	FR-1	NC	0.71	V-0	130	130	3	3	4	-	-	Yes
			1.45	V-0	130	130	3	3	4	4	-	Yes
<i>KB-3151HS</i>	FR-1	NC	0.71	V-0	130	130	0	0	4	-	-	Yes
			1.45	V-0	130	130	0	0	4	0	-	Yes
<i>KB-3153*</i>	FR-1	NC	0.71	V-0	130	130	0	0	4	-	-	Yes
			1.45	V-0	130	130	0	0	4	0	-	Yes
<i>KB-5152</i>	No ANSI	NC	0.60	V-0	-	-	-	-	-	-	-	-
			1.40	V-0	-	-	-	-	-	-	-	-

<i>KB-6150</i>	FR-4.0	NC	0.10	V-0	120	125	0	3	-	-	-	Yes
			0.63	V-0	130	140	0	3	4	-	-	Yes
			1.40	V-0	130	140	0	2	4	4	-	Yes
			0.38	V-0	130	130	0	3	-	-	-	Yes
<i>KB-6162</i>	No ANSI	NC	0.63	V-0	-	-	-	-	-	-	-	-
			1.40	V-0	-	-	-	-	-	-	-	-
<i>KB-6167GLD</i>	FR-4.1	NC	0.38	V-0	130	130	0	3	-	-	Yes	Yes
			0.63	V-0	130	140	0	3	-	-	-	Yes
			1.40	V-0	130	140	0	2	-	3	-	Yes
<i>P-138</i>	FR-4.0	YL	0.38	V-0	130	130	0	0	-	-	-	-
			0.64	V-0	130	140	0	0	-	-	-	-
			1.40	V-0	130	140	0	0	2	3	-	-
Industrial laminates												
<i>EEL-128</i>	FR-4.0	NC	0.38	V-0	130	130	3	0	-	-	-	-
			0.63	V-0	130	140	0	3	-	-	-	Yes
			1.40	V-0	130	140	0	2	-	3	-	Yes
<i>EEL-145</i>	FR-4.0	NC	0.38	V-0	130	130	3	0	-	-	-	-
			0.63	V-0	130	140	0	3	-	-	-	Yes
			1.40	V-0	130	140	0	2	-	3	-	Yes
<i>KB-3151C (with Adhesive)</i>												
	FR-1	NC	0.71	V-0	130	130	0	0	-	-	-	Yes
			1.45	V-0	130	130	-	-	-	0	-	Yes
<i>KB-3151C (without Adhesive)</i>												
	FR-1	NC	0.71	V-0	130	130	3	3	4	-	-	Yes
			1.45	V-0	130	130	3	3	4	4	-	Yes
<i>KB-3151C175 (with Adhesive)</i>												
	FR-1	NC	0.71	V-0	130	130	0	0	-	-	-	Yes
			1.45	V-0	130	130	-	-	-	3	-	Yes
<i>KB-3200G</i>	FR-4.1	NC	0.38	V-0	130	130	0	0	-	-	Yes	Yes
			0.63	V-0	130	140	0	0	-	-	-	Yes
			1.40	V-0	130	140	0	1	-	3	-	Yes
<i>KB-6155</i>	FR-4.0	NC	0.38	V-0	130	130	0	3	-	-	-	Yes
			0.63	V-0	130	140	0	3	4	-	-	Yes
			1.40	V-0	130	140	0	2	4	4	-	Yes
<i>KB-6165GMD</i>	FR-4.1	NC	0.38	V-0	130	130	0	0	-	-	Yes	Yes
			0.63	V-0	130	140	0	1	-	-	-	Yes
			1.40	V-0	130	140	0	1	-	2	-	Yes
<i>KB-7152</i>	CEM-3.0	NC	0.63	V-0	130	140	0	2	4	-	-	Yes
			1.40	V-0	130	140	0	2	4	3	-	Yes

Ultrathin build ups:

Mtl Dsg	Build Up				Laminate			Prepreg			
	ANSI Type	Min Thk (mm)	TI Elec	TI Mech	Mtl Dsg	Thk (mic)	TI Elec	Mtl Dsg	Thk (mic)	TI Elec	
<i>EEL-128</i>	FR-4.0	0.38	130	130	EEL-128	50	90	EP	50	90	
<i>EEL-145</i>	FR-4.0	0.38	130	130	EEL-145	50	90	ETP	50	90	

Metal Clad Dsg	Lam- inate Dsg	Pre- preg Dsg	ANSI Type	Bld up	Clad Cond Thk			Max	Flame Class	Max	Assembly Process Temp(°C)	Solder Process Cycles	Solder Temp (°C)	Solder Time (sec)
				Min Thk (mm)	Min Ext (mic)	Max Ext (mic)	Max Int (mic)	Area Dia (mm)		Oper Temp (°C)				
Metal clad industrial laminates for use in multilayer printed wiring boards with copper on one or both sides, furnished as sheets														

<i>FL-170</i>	FL-170	PP-FL170	FR-4.0	0.38	9	102	68	50.8	V-0	130	-	-	288	30
				0.45	9	102	102	50.8	V-0	130	-	-	288	30
<i>KB-6160A</i>	KB-6160A	KB-6060A	FR-4.0	0.38	12	102	70	50.8	V-0	130	-	-	288	20
<i>KB-6160C</i>	KB-6160C	KB-6060C	FR-4.0	0.38	12	102	60	50.8	V-0	130	-	-	288	20
<i>KB-6164F</i>	KB-6164F	KB-6064F	FR-4.0	0.38	12	102	102	50.8	V-0	130	-	-	288	60
<i>KB-6165</i>	KB-6165	KB-6065	FR-4.0	0.38	12	102	54	50.8	V-0	130	-	-	288	60
<i>KB-6165C (ASP 1)</i>														
	KB-6165C	KB-6065C	FR-4.0	0.63	12	102	102	50.8	V-0	130	260	4	288	60
<i>KB-6165F</i>	KB-6165F	KB-6065F	FR-4.0	0.38	12	102	102	50.8	V-0	130	-	-	288	60
				0.63	12	102	204	50.8	V-0	130	-	-	288	60
<i>KB-6165G</i>	KB-6165G	KB-6065G	FR-4.1	0.38	12	102	102	50.8	V-0	130	-	-	288	20
<i>KB-6165GC</i>	KB-6165GC	KB-6065GC	FR-4.1	0.38	12	102	102	50.8	V-0	130	-	-	288	20
<i>KB-6165LE</i>	KB-6165LE	KB-6065LE	FR-4.0	0.38	9	102	68	50.8	V-0	130	-	-	288	30
				0.45	12	102	102	50.8	V-0	130	-	-	288	30
<i>KB-6167F</i>	KB-6167F	KB-6067F	FR-4.0	0.38	12	102	102	50.8	V-0	130	-	-	288	60
<i>KB-6167G/KB-6067G</i>														
	KB-6167G	KB-6067G	FR-4.1	0.38	12	102	102	50.8	V-0	130	-	-	288	20
<i>KB-6168</i>	KB-6168	KB-6068	FR-4.0	0.38	12	102	70	50.8	V-0	130	-	-	288	60
<i>KB-6168LE</i>	KB-6168LE	KB-6068LE	FR-4.0	0.38	9	102	68	50.8	V-0	130	-	-	288	30
				0.45	9	102	102	50.8	V-0	130	-	-	288	30
<i>KB-6169GT</i>	KB-6169GT	KB-6069GT	FR-15.1	0.38	12	102	102	50.8	V-0	130	-	-	288	20
<i>KB-6200G</i>	KB-6200G	PP-KB6200G	FR-4.1	0.38	12	102	102	50.8	V-0	130	-	-	288	20
<i>P-138</i>	P-138	PP-138	FR-4.0	0.63	12	102	-	50.8	V-0	130	-	-	288	30
Metal clad industrial laminates for use in multilayer printed wiring boards with copper on one or both sides, furnished as sheets or rolls														
<i>KB-616(X)</i>	KB-6160, KB-6164	KB-6060, KB-6064	FR-4.0	0.38	17	102	35	50.8	V-0	130	-	-	288	30
<i>KB-6167A</i>	KB-6167A	KB-6067A	FR-4.0	0.38	17	102	35	50.8	V-0	130	-	-	288	30
Metal clad industrial laminates for use in multilayer printed wiring boards with copper on one or both sides, furnished as sheets, rods or tubes														
<i>HF-140</i>	HF-140	PP-HF140	FR-4.1	0.38	12	102	102	50.8	V-0	130	-	-	288	30
<i>HF-170/PP-</i>	HF-170	PP-HF170	FR-4.1	0.38	12	102	102	50.8	V-0	130	-	-	288	30

HF170														
KB-6167GLD/KB-6067GLD, KB-6165GMD/KB-6065GMD, KB-3200G/PP-KB3200G and KB-6167GMD/KB-6067GMD														
	KB-6167GLD, KB-6165GMD, KB-3200G, KB-6167GMD	KB-6067GLD, KB-6065GMD, PP-KB3200G, KB-6067GMD	FR-4.1	0.38	12	102	102	50.8	V-0	130	-	-	288	30
Metal clad industrial laminates for use in multilayer printed wiring boards with copper on one or both sides,														
EEL-128	EEL-128	EP	FR-4.0	0.38	17	102	68	38.1	V-0	130	-	-	288	30
				0.63	17	102	68	50.8	V-0	130	-	-	288	30
EEL-145	EEL-145	ETP	FR-4.0	0.38	17	102	170	50.8	V-0	130	-	-	288	30
Metal clad industrial laminates for use in single layer printed wiring boards with copper on one or both sides, furnished as sheets														
FL-170	FL-170	-	FR-4.0	0.38	9	102	-	50.8	V-0	130	-	-	288	30
KB-2150G	KB-2150G	-	FR-2	0.71	35	102	-	50.8	V-0	75	-	-	265	15
				1.45	35	102	-	38.1	V-0	105	-	-	265	15
KB-3152	KB-3152	-	FR-1	0.71	35	102	-	50.8	V-0	130	-	-	288	10
KB-5150	KB-5150	-	CEM-1	0.63	17	102	-	38.1	V-0	130	-	-	288	20
KB-5252	KB-5252	-	CEM-1	0.63	17	102	-	13	V-0	130	-	-	260	10
KB-6150	KB-6150	-	FR-4.0	0.63	17	102	-	50.8	V-0	130	-	-	288	20
KB-616(X)	KB-6160, KB-6164	-	FR-4.0	0.38	17	102	-	50.8	V-0	130	-	-	288	30
KB-6160A	KB-6160A	-	FR-4.0	0.38	12	140	-	50.8	V-0	130	-	-	288	20
KB-6160C	KB-6160C	-	FR-4.0	0.38	12	102	-	50.8	V-0	130	-	-	288	20
KB-6160LC(C)	KB-6165C	-	FR-4.0	0.63	17	102	-	50.8	V-0	130	-	-	288	20
KB-6164F	KB-6164F	-	FR-4.0	0.38	12	102	-	50.8	V-0	130	-	-	288	60
KB-6165	KB-6165	-	FR-4.0	0.38	12	102	-	50.8	V-0	130	-	-	288	60
KB-6165C (ASP 1)														
	KB-6165C	-	FR-4.0	0.63	12	102	-	50.8	V-0	130	260	4	288	60
KB-6165F	KB-6165F	-	FR-4.0	0.38	12	102	-	50.8	V-0	130	-	-	288	60
KB-6165G	KB-6165G	-	FR-4.1	0.05	17	102	-	50.8	V-0	100	-	-	288	20
				0.38	17	102	-	50.8	V-0	130	-	-	288	20
KB-6165GC	KB-6165GC	-	FR-4.1	0.05	17	102	-	50.8	V-0	100	-	-	288	20
				0.38	17	102	-	50.8	V-0	130	-	-	288	20

<i>KB-6165LE</i>	KB-6165LE	-	FR-4.0	0.38	9	102	-	50.8	V-0	130	-	-	288	30
<i>KB-6167A</i>	KB-6167A	-	FR-4.0	0.38	17	102	-	50.8	V-0	130	-	-	288	30
<i>KB-6167F</i>	KB-6167F	-	FR-4.0	0.38	12	102	-	50.8	V-0	130	-	-	288	60
<i>KB-6167G</i>	KB-6167G	-	FR-4.1	0.05	17	102	-	50.8	V-0	100	-	-	288	20
				0.38	17	102	-	50.8	V-0	130	-	-	288	20
<i>KB-6168</i>	KB-6168	-	FR-4.0	0.38	12	102	-	50.8	V-0	130	-	-	288	60
<i>KB-6168LE</i>	KB-6168LE	-	FR-4.0	0.38	9	102	-	50.8	V-0	130	-	-	288	30
<i>KB-6169GT</i>	KB-6169GT	-	FR-15.1	0.38	17	102	-	50.8	V-0	130	-	-	288	20
<i>KB-6200G</i>	KB-6200G	-	FR-4.1	0.05	17	102	-	50.8	V-0	100	-	-	288	20
				0.38	17	102	-	50.8	V-0	130	-	-	288	20
<i>KB-7150</i>	KB-7150	-	CEM-3.0	0.63	17	102	-	50.8	V-0	130	-	-	290	20
<i>KB-7150C</i>	KB-7150C	-	CEM-3.0	0.63	17	102	-	50.8	V-0	130	-	-	288	20
<i>KB-7150T</i>	KB-7150T	-	CEM-3.0	0.63	17	102	-	50.8	V-0	130	-	-	288	20
<i>P-138</i>	P-138	-	FR-4.0	0.63	12	102	-	50.8	V-0	130	-	-	288	30

Metal clad industrial laminates for use in single layer printed wiring boards with copper on one or both sides, furnished as sheets, rods or tubes

<i>HF-140</i>	HF-140	-	FR-4.1	0.38	12	102	-	50.8	V-0	130	-	-	288	30
<i>HF-170</i>	HF-170	-	FR-4.1	0.38	12	102	-	50.8	V-0	130	-	-	288	30
<i>KB-3153*</i>	KB-3153	-	FR-1	0.71	34	102	-	50.8	V-0	130	-	-	260	10

KB-6167GLD,KB-6165GMD,KB-3200G,KB-6167GMD

	KB-6167GLD, KB-6165GMD, KB-3200G, KB-6167GMD	-	FR-4.1	0.38	12	102	-	50.8	V-0	130	-	-	288	30
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Metal clad industrial laminates for use in single layer printed wiring boards with copper on one or both sides,

<i>EEL-128</i>	EEL-128	-	FR-4.0	0.38	17	102	-	38.1	V-0	130	-	-	288	30
				0.63	17	102	-	50.8	V-0	130	-	-	288	30
<i>EEL-145</i>	EEL-145	-	FR-4.0	0.38	17	102	-	50.8	V-0	130	-	-	288	30
<i>KB-3151C*</i>	KB-3151C	-	FR-1	0.71	17	102	-	50.8	V-0	130	-	-	260	10
<i>KB-3151S</i>	KB-3151S	-	FR-1	0.71	17	102	-	38.1	V-0	130	-	-	260	10
<i>KB-5150A</i>	KB-5150A	-	CEM-1	0.63	17	102	-	50.8	V-0	130	-	-	288	20

<i>KB-5150H</i>	KB-5150H	-	CEM-1	0.63	17	102	-	50.8	V-0	130	-	-	288	20
<i>KB-5150L</i>	KB-5150L	-	CEM-1	0.63	17	102	-	50.8	V-0	130	-	-	260	10
<i>KB-6155</i>	KB-6155	-	FR-4.0	0.38	12	102	-	50.8	V-0	130	-	-	288	60
<i>KB-7152</i>	KB-7152	-	CEM-3.0	0.63	17	102	-	50.8	V-0	130	-	-	288	20

Metal clad industrial laminates for use in single layer printed wiring boards with copper on one side only, furnished as sheets

<i>KB-1150</i>	KB-150	-	XPC	0.71	35	117	-	25.4	HB	130	-	-	260	10
<i>KB-5150</i>	KB-5150	-	CEM-1	0.63	35	102	-	50.8	V-0	130	-	-	260	10
<i>KB-5150G</i>	KB-5150G	-	CEM-1	0.63	17	102	-	50.8	V-0	130	-	-	288	10
<i>KB-5252</i>	KB-5252	-	CEM-1	0.63	17	102	-	50.8	V-0	130	-	-	288	10
<i>P-138</i>	P-138	-	FR-4.0	0.63	12	102	-	50.8	V-0	130	-	-	288	30

Metal clad industrial laminates for use in single layer printed wiring boards with copper on one side only, furnished as sheets, rods or tubes

<i>KB-3150N</i>	KB-3150NU %	-	FR-1	0.71	17	102	-	50.8	V-0	130	-	-	260	10
<i>KB-3151HS</i>	KB-3151HS	-	FR-1	0.71	34	102	-	50.8	V-0	130	-	-	260	10

Metal clad industrial laminates for use in multilayer printed wiring boards with copper on one or both sides,

<i>KB-6155</i>	KB-6155	KB-6055	FR-4.0	0.38	12	102	70	50.8	V-0	130	-	-	288	60
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Metal clad industrial laminates (Flammability Only Recognition):

Metal Clad Dsg	Lam- inate Dsg	Pre- preg Dsg	ANSI Type	Bld up	Clad Cond Thk			Max	Flame Class	Max	Assembly Solder		Solder Lts	
				Min Thk (mm)	Min Ext (mic)	Max Ext (mic)	Max Int (mic)	Area Dia (mm)		Oper Temp (°C)	Process Temp(°C)	Process Cycles	Temp (°C)	Time (sec)
Metal clad industrial laminates for use in single layer printed wiring boards with copper on one or both sides, furnished as sheets														
<i>KB-5152</i>	KB-5152	-	No ANSI	0.60	-	-	-	-	V-0	-	-	-	260	10
<i>KB-6162</i>	KB-6162	-	No ANSI	0.63	-	-	-	-	V-0	-	-	-	288	30

% – Corresponds to Unclad values without adhesive. For declad values (single sided) see corresponding grade "KB-3150N"

& – Corresponds to Declad values with adhesive. For Unclad values see corresponding grade designation.

(ASP 1) – Assembly solder process evaluated to IPC-TM-650, 2.6.27 Thermal Stress Assembly Simulation.

* – With adhesive

X – may be 0, 4

Marking: Company name, model designation and the Recognized Component Mark for Canada, 

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