



QMTS2.E136069

Polymeric Materials - Filament-wound Tubing, Industrial Laminates, Vulcanized Fiber, and Materials for Use in Fabricating Recognized Printed Wiring Boards - ComponentEnhanced searching capability for this category can be found in UL's iQ Family of Databases (iq.ul.com).[Page Bottom](#)**Polymeric Materials - Filament-wound Tubing, Industrial Laminates, Vulcanized Fiber, and Materials for Use in Fabricating Recognized Printed Wiring Boards - Component**[See General Information for Polymeric Materials - Filament-wound Tubing, Industrial Laminates, Vulcanized Fiber, and Materials for Use in Fabricating Recognized Printed Wiring Boards - Component](#)**ZHEJIANG HUAZHENG NEW MATERIAL CO LTD**

E136069

2 HUAYI RD YUHANG TOWN

YUHANG DISTRICT

HANGZHOU, ZHEJIANG 311121 CHINA

Industrial laminates:

			Build up		R.T.I.				H		
Mtl Dsg	ANSI Type	Color	Min Thk (mm)	Flame Class	Elec (°C)	Mech (°C)	H W I	H A I	V T R	C T I	Meets 746E DSR
Industrial laminates, furnished as sheets.											
H01, HIE-01											
	XPC	TN	0.71	HB	105	105	1	4	2	-	-
			1.45	HB	105	105	1	3	2	4	Yes
H130, FR4-74											
	FR-4	NC	0.38	V-0	130	130	0	3	-	-	Yes
			0.63	V-0	130	140	0	3	-	-	Yes
			1.40	V-0	130	140	0	2	-	3	Yes
H140-1	FR-4	YL	0.38	V-0	130	130	0	0	5	-	Yes
			0.63	V-0	130	140	0	3	5	-	Yes
			1.4	V-0	130	140	0	2	5	4	Yes
H150	No ANSI	YL	0.38	V-0	-	-	-	-	-	-	-
H155H	FR-4	NC	0.38	V-0	130	130	3	0	-	-	Yes
			0.63	V-0	130	140	3	0	-	-	Yes
			1.40	V-0	130	140	2	0	-	3	Yes
H2130	No ANSI	NC	0.63	V-0	-	-	-	-	-	-	-
H2135hf	CEM-3	NC	0.63	V-0	130	140	0	2	-	-	Yes
			1.40	V-0	130	140	0	2	-	3	Yes
HA30	CEM-3	NC	0.63	V-0	130	140	0	2	-	-	Yes
			1.40	V-0	130	140	0	2	-	3	Yes

Industrial laminates.											
H1170	FR-4	NC	0.38	V-0	130	130	0	3	-	-	Yes
			0.63	V-0	130	140	0	3	-	-	Yes
			1.40	V-0	130	140	0	2	-	3	Yes
H1308	No ANSI	NC (YL)	0.38	V-0	-	-	-	-	-	-	-
			0.63	V-0	-	-	-	-	-	-	-
			1.40	V-0	-	-	-	-	-	-	-
H140A	FR-4	NC	0.38	V-0	130	130	0	3	-	-	Yes
			0.63	V-0	130	140	0	3	-	-	Yes
			1.40	V-0	130	140	0	2	-	3	Yes
H140H	FR-4	NC	0.38	V-0	130	130	0	3	-	-	Yes
			0.63	V-0	130	140	0	3	-	-	Yes
			1.40	V-0	130	140	0	2	-	3	Yes
H150(LF)	FR-4	NC	0.38	V-0	130	130	0	3	-	-	Yes
			0.63	V-0	130	140	0	3	-	-	Yes
			1.40	V-0	130	140	0	2	-	4	Yes
H1600	No ANSI	NC (YL)	0.63	V-0	-	-	-	-	-	-	-
			1.40	V-0	-	-	-	-	-	-	-
H1600A	FR-4	NC	0.63	V-0	130	140	3	0	-	-	Yes
			1.40	V-0	130	140	2	0	-	0	Yes
H170LF	No ANSI	NC (YL)	1.40	V-0	90	90	-	-	-	-	-
			0.63	V-0	90	90	-	-	-	-	-
			0.38	V-0	90	90	-	-	-	-	-
H2135	CEM-3	NC	0.63	V-0	130	140	0	2	-	-	Yes
			1.40	V-0	130	140	0	2	-	3	Yes

Metal base industrial laminates:

		Metal		Dielectric		R.T.I.		H					
Mtl Dsg	Color	Min Thk (mm)		Min Thk (mic)	Max Thk (mic)	Flame Class	Elec (°C)	Mech (°C)	H W I	H A I	V T R	C T I	Meets 746E DSR
Aluminum base with Epoxy (EP) dielectric, industrial laminates, furnished as sheets.													
HA50, HA50PP													
	NC	0.7		75	400	V-0	90	90	4	0	-	0	Yes
Aluminum base with Epoxy (EP) dielectric, industrial laminates.													
HA40, HA40P\$													
	NC	0.80		75	190	V-0	-	-	-	-	-	-	-

Ultrathin build ups:

Build Up					Laminate			Prepreg		
Mtl Dsg	ANSI Type	Min Thk (mm)	TI Elec	TI Mech	Mtl Dsg	Thk (mic)	TI Elec	Mtl Dsg	Thk (mic)	TI Elec
Ultrathin industrial laminates and bonding layers, furnished in sheet form, for use in multilayer printed wiring boards where the thickness is built up to the minimum specified.										
H1170	FR-4	0.38	130	130	H1170	75	90	H1170P	75	90
		0.63	130	140	H1170	75	90	H1170P	75	90
H130, FR4-ML	FR-4	0.38	130	130	H130, FR4-ML	75	90	H130P, FR4-ML	75	90
		0.63	130	140	H130, FR4-ML	75	90	H130P, FR4-ML	75	90
H140-1	FR-4	0.38	130	130	H140-1	100	120	H140-1P, 7628, 1080, 2116	80	90
H140A	FR-4	0.38	130	130	H140A	75	90	H140AP	75	90
H140H	FR-4	0.38	130	130	H140H	75	90	H140HP	75	90
		0.63	130	140	H140H	75	90	H140HP	75	90
H150(LF)	FR-4	0.38	130	130	H150(LF)	75	90	H150P(LF)	75	90
H155H	FR-4	0.38	130	130	H155H	75	90	H155HP	75	90
		0.63	130	140	H155H	75	90	H155HP	75	90

Metal clad industrial laminates:

				Bld up	Clad Cond Thk			Max		Max	Solder Lts	
Metal Clad Dsg	Lam- inate Dsg	Pre- preg Dsg	ANSI Type	Min Thk (mm)	Min Ext (mic)	Max Ext (mic)	Max Int (mic)	Area Dia (mm)	Flame Class	Oper Temp (°C)	Temp (°C)	Time (sec)
Metal clad industrial laminates for use in multilayer printed wiring boards with copper on one or both sides, furnished as sheets.												
H130, FR4-ML												
	H130, FR4-ML	H130P, FR4-ML	FR-4	0.38	17	102	68	50.8	V-0	130	288	20
H140-1												
	H140-1	H140-1P, 7628, 1080, 2116	FR-4	0.38	17	102	68	50.8	V-0	130	288	20
Metal clad industrial laminates for use in multilayer printed wiring boards with copper on one or both sides, furnished as sheets or rolls.												
H155H	H155H	H155HP	FR-4	0.38	17	102	54	50.8	V-0	130	288	20
Metal clad industrial laminates for use in multilayer printed wiring boards with copper on one or both sides.												
H1170	H1170	H1170P	FR-4	0.38	17	102	68	50.8	V-0	130	288	20
H140A	H140A	H140AP	FR-4	0.38	17	102	68	50.8	V-0	130	288	20
H140H	H140H	H140HP	FR-4	0.38	17	102	68	25.4	V-0	130	288	20
H150(LF)												
	H150 (LF)	H150P (LF)	FR-4	0.38	17	102	68	50.8	V-0	130	288	20
Metal clad industrial laminates for use in single layer printed wiring boards with copper on one or both sides, furnished as sheets.												
H01, HIE-01												
	H01, HIE-01	-	XPC	0.71	17	70	-	50.8	HB	105	260	10
H130, FR4-74												
	H130, FR4-74	-	FR-4	0.38	17	102	-	50.8	V-0	130	288	20
H140-1												
	H140-1	-	FR-4	0.38	17	102	-	50.8	V-0	130	288	20
H155H	H155H	-	FR-4	0.38	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 or both sides.												
H1170	H1170	-	FR-4	0.38	17	102	-	50.8	V-0	130	288	20
H140A	H140A	-	FR-4	0.38	17	102	-	50.8	V-0	130	288	20
H140H	H140H	-	FR-4	0.38	17	102	-	25.4	V-0	130	288	20
H150(LF)												
	H150 (LF)	-	FR-4	0.38	17	102	-	50.8	V-0	130	288	20
H1600A												
	H1600A	-	FR-4	0.63	17	102	-	50.8	V-0	130	288	20
H170LF												
	H170LF	-	No ANSI	0.38	17	102	-	50.8	V-0	90	288	20
H2135	H2135	-	CEM- 3	0.63	17	102	-	50.8	V-0	130	260	30
H2135hf												
	H2135hf	-	CEM- 3	0.63	17	102	-	50.8	V-0	130	260	30
HA30	HA2130	-	CEM- 3	0.63	17	102	-	50.8	V-0	130	260	30

Metal clad metal base industrial laminates:

			Metal	Dielectric		Clad Cond Thk			Max		Max	Solder Lts	
Metal Clad Dsg	Lam-inate Dsg	Pre-preg Dsg	Min Thk (mm)	Min Thk (mic)	Max Thk (mic)	Min Ext (mic)	Max Ext (mic)	Max Int (mic)	Area Dia (mm)	Flame Class	Oper Temp (°C)	Temp (°C)	Time (sec)
Aluminum base with Epoxy (EP) dielectric, Metal clad industrial laminates with copper on one side only, furnished as sheets.													
HA50	HA50	-	0.7	75	400	34	102	-	50.8	V-0	90	300	60

Metal clad industrial laminates (Flammability Only Recognition):

				Bld up	Clad Cond Thk			Max		Max	Solder Lts	
Metal Clad Dsg	Lam-inate Dsg	Pre-preg Dsg	ANSI Type	Min Thk (mm)	Min Ext (mic)	Max Ext (mic)	Max Int (mic)	Area Dia (mm)	Flame Class	Oper Temp (°C)	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 (Flammability Only Recognition).												
H150	H150	-	No ANSI	0.38	-	-	-	-	V-0	-	288	20
H2130	H2130	-	No ANSI	0.63	-	-	-	-	V-0	-	260	10
Metal clad industrial laminates for use in single layer printed wiring boards with copper on one or both sides (Flammability Only Recognition).												
H1308	H1308	-	No ANSI	0.38	-	-	-	-	V-0	-	288	20
H1600	H1600	-	No ANSI	0.63	-	-	-	-	V-0	-	288	20

Metal clad metal base industrial laminates (Flammability Only Recognition):

			Metal	Dielectric		Clad Cond Thk			Max		Max	Solder Lts	
Metal Clad Dsg	Lam-inate Dsg	Pre-preg Dsg	Min Thk (mm)	Min Thk (mic)	Max Thk (mic)	Min Ext (mic)	Max Ext (mic)	Max Int (mic)	Area Dia (mm)	Flame Class	Oper Temp (°C)	Temp (°C)	Time (sec)
Aluminum base Metal clad industrial laminates with copper on one side only (Flammability Only Recognition).													
HA40	HA40	-	0.80	75	190	-	-	-	-	V-0	-	288	20

\$ - May be shipped as a B-stage insulation sheet without being adhered to a metal substrate. PWB manufacturer must adhere to aluminum metal base as specified above, within thickness range Recognized.

Marking: Company name or trademark  ,  ,  ,  and material designation on container or wrapper.
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