

R-5725 and R-5620 Megtron 4 Functionalized PPO / Epoxy Blend

Material Storage

Laminate should be stored in a cool dry environment. Avoid bending or scratching the laminate surface. When possible, store the laminate in its original packaging and protect the surface. Prepreg should be stored flat in a temperature controlled environment (cool and dry) : 68°F (21°C) and less and 50% RH. For prolonged storage, keep prepreg at a reduced temperature of 40°F (4.5°C). Open bags should be resealed when not in use. **Megtron 4** prepreg should not be exposed to open environments for more than 8 hours total cumulatively.

Laminate Surface Preparation

Regular shiny copper can be cleaned using industry standard chemical clean or mechanical clean. Reverse treat copper should be cleaned using industry standard chemical clean.

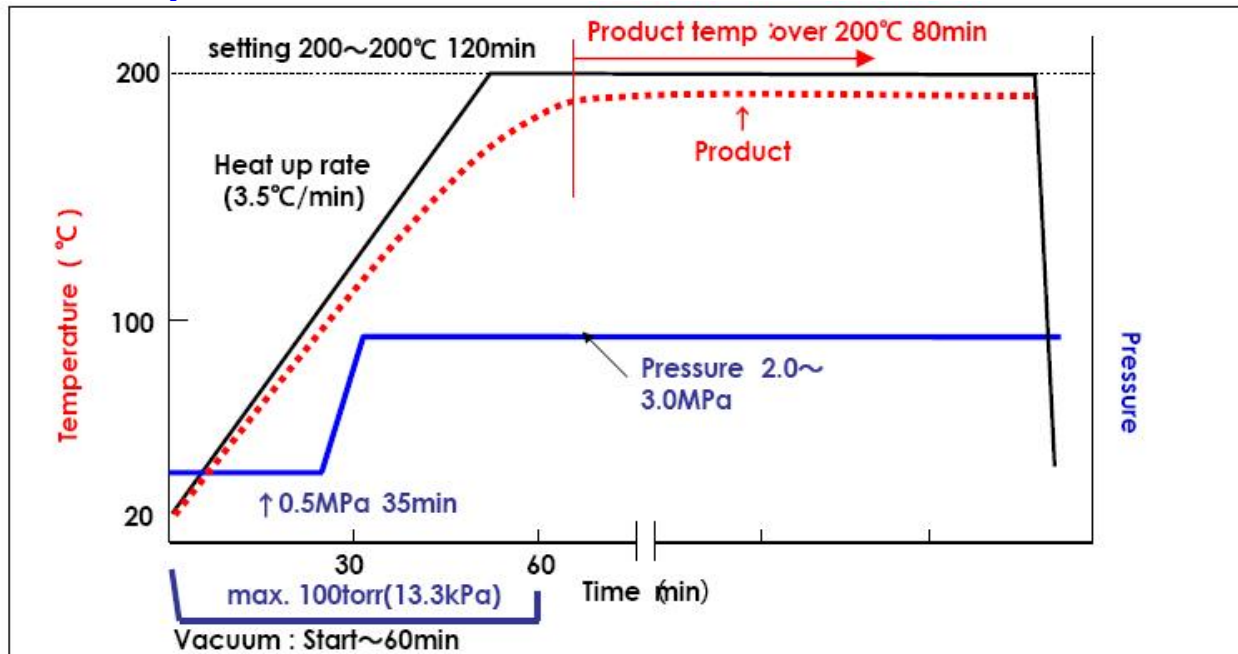
Inner Layer Bond Treatment

Black or Brown Oxide with reduction (DMAB) or equivalent can be used. Alternative Oxide Treatment using Peroxide / Sulfuric Etch technology can also be used. Note that black and brown (especially brown) oxide treatments often have lower thermal resistance.

Drying

Dry finished inner layers completely to remove any absorbed moisture or surface moisture. A racked bake at 225°F (105°C) for 20-30 minutes is preferred for black and brown oxide. For conveyORIZED alternative oxide processing, some equipment have sufficient drying capability, however, a similar rack bake is suggested.

Lamination Cycle



Megtron 4

R-5725 and R-5620

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Hole Preparation and Smear Removal

Standard Permanganate desmear is adequate in most cases. Plasma may be used as a more aggressive etchback, however, a standard permanganate process should follow the plasma process. Desmear parameters should be adjusted depending on board thickness, stack count and stack thickness. Contact our Technical Service Group for more information.

Drilling

Drilling parameters should be adjusted depending on hole size, layer count, panel thickness and stack height. Below are the base-line drilling parameters. Please contact our Technical Service Department for more information. Hans Vandervelde is our Carbide Drill and Router engineer and can be reached at 1-858-342-9852.

	US		Metric	
Drill Size	0.010" – 0.018"	0.020" – 0.055"	0.25 – 0.46 mm	0.5 – 1.4 mm
Surface speed	260 – 450 SFM	450 – 600 SFM	80 – 130 m/min	140 – 180 m/min
Chip Load	0.5 – 1.0 mils/rev	1.0 – 2.75mils/rev	12 – 25 μ/rev	25 – 70 μ/rev
Hit Count (Max)	500 - 1500	1500 - 1750	500 - 1500	1500 - 1750

IST Results – 18 Layer PCB

Item	R-5725		R-2125	
	Precondition	230°C×6cycle	260°C×6cycle	230°C×6cycle
IST	1000c OK	1000c OK	1000c OK	1000c OK

IPC-TM-650 2.6.26

Precondition : 230~260°C 3~6 times

Cycle Test : 1000 cycle

(Test Condition : 25°C/2min ⇔ 150°C/3min)

