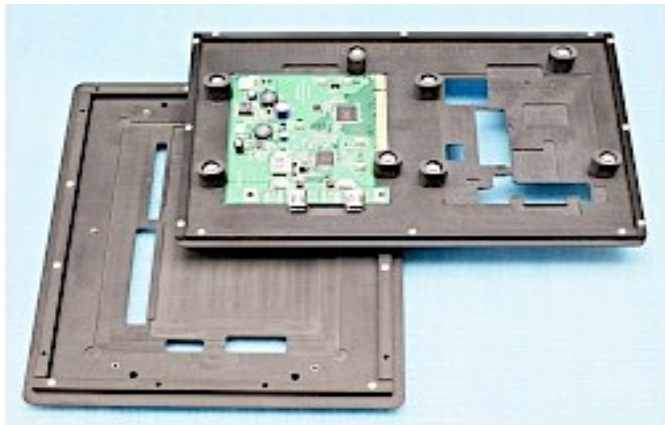
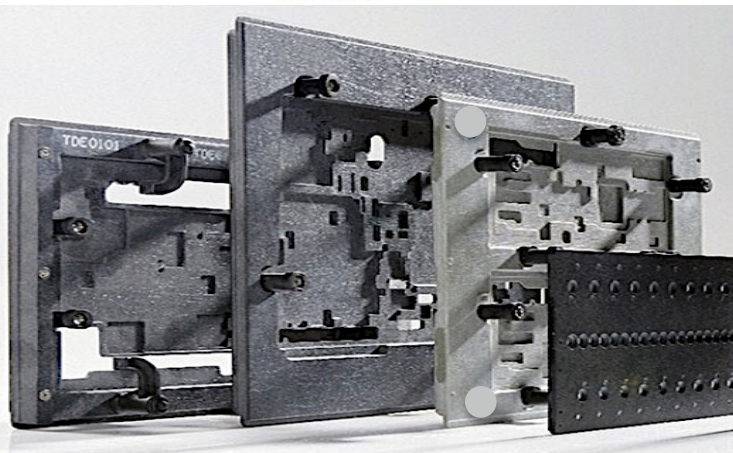
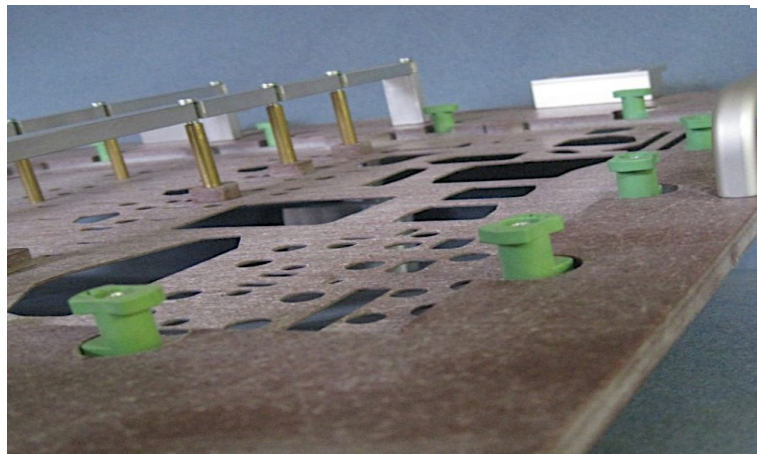
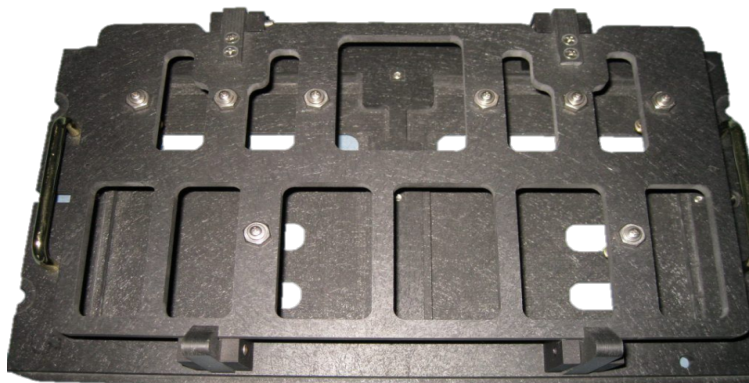


RICOCEL[®] PCBA Pallets

Ricocel[®] ES3261A is a State-Of-The-Art material designed to meet all concern that are required of PCBA pallet.

Tested side by side with 2 other top range European PCBA pallet materials; all the materials were dipped into a closed vessel filled with Kester flux #977 for 24 hours @ 200°C, ES3261A remained almost unaffected while the 2 European materials showed obvious sign of decomposition.

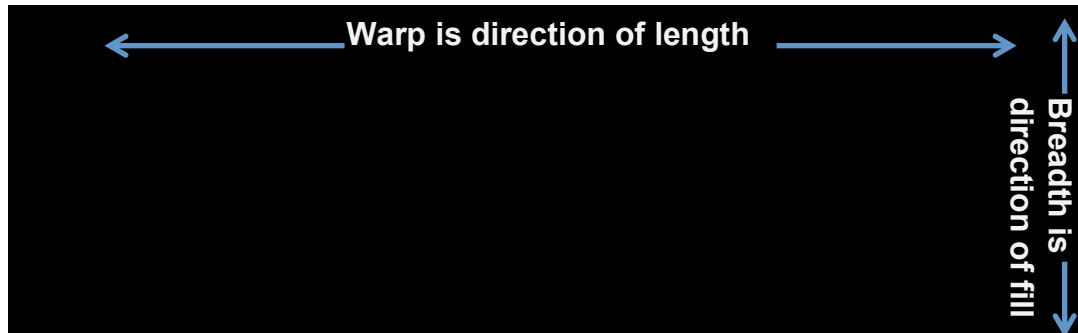


Product code: ES-3261A		
Properties		Result
Heat resistance	Weight loss after 300°C for 120 hours is <8%. Decomposition temperature (TG/TDA) @ 430°C is 5%	Excellent
Drilling performance	Less burrs, less crack or less chipping during drilling process.	Good
Static diffusion	Static charged objects in contact with ES-3261A will dissipate quickly without sparks	Excellent
Durability	Over 10,000 cycles of repeating soldering process	Excellent
Chemical resistance	Excellent chemical resistance against fluxes and pallet cleaner.	o Excellent

Test Data of Ricocel® ES-3261A

Test Items	Unit	ES-3261A
Colour tone	Visual	Black
Surface resistivity	Ω	1 x 10 ⁷
Specific gravity	-	1.95
Water absorption	%	0.02
Chemical resistance (Solvent flux)	-	0
Heat loss 250°C @ 500 hours	%	1.8
Bending strength @ RT	Warp	550
	Fill	470
Flexural modulus @ RT	Warp	28
	Fill	26
5% decomposition temperature	TG/DTA	°C
Solder limit	300°C	second
CTE (Thickness direction)	a1	x10 ⁻⁶ /K
	a2	
Thermal expansion	50° - 250°C	x10 ⁻⁶ /K
Teflon® coating		Not necessary
Machine workability	-	Good

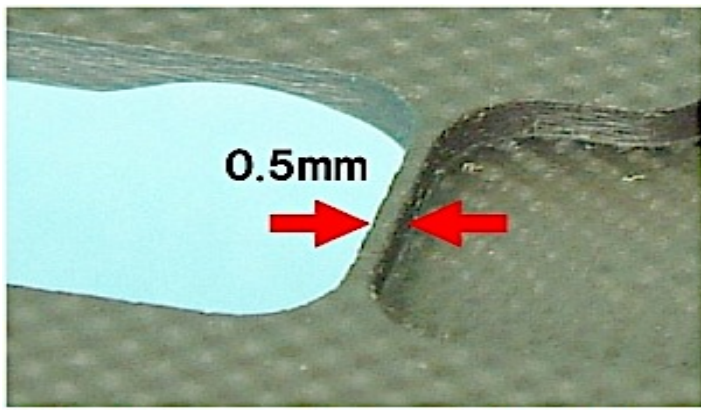
Test data are nominal value of our laboratory and may differ from actual application.



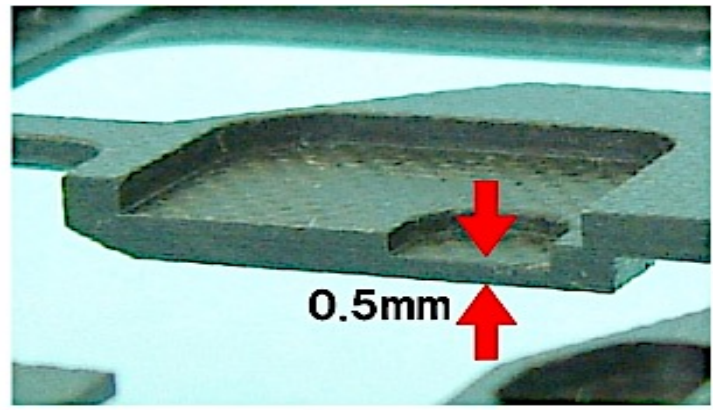
*Recommended conditions for machining ES-3261A					
Diameter of end mill	Blade	Feeding speed	Revolution	Incision	
				Width	Depth
∅	-	mm/min	rpm	mm	mm
2	4	450	5000	1.0	2.0
3	4	400	4300	1.5	2.0
4	4	380	4000	2.0	2.0
6	4	380	3800	3.0	2.0
8	4	400	3200	4.0	2.0
10	4	400	3000	5.0	2.0

This table is a guide to the best of our knowledge of our material. In case of burrs or delamination, kindly make adjustments. Choose the end mills for machining centre.

Thicknesses available and Tolerance		
Product No.	Thickness (mm)	Tolerance (mm)
ES-3261A	3.0	+/- 0.1
	4.0	+/- 0.1
	5.0	+/- 0.1
	6.0	+/- 0.1
	8.0	+/- 0.1
	10.0	+/- 0.1
	12.0	+/- 0.1
	15.0	+/- 0.1



▲ Excellent strength even at thin wall part



▲ Excellent strength even at thin bottom part



▲ Ricocel is durable with fine machining, therefore is flexible for pallet designing.

Test Result: Appearance of European Products vs. Ricocel ES-3261A

Test piece 25mm x 25mm x 4mm Raw material	Before Treatment	After soaking into Kester flux #977 for 24 hours @ 200°C
European Product A		
European Product B		
Ricocel ES-3261A		

We provide both raw sheets and quick turn around machining at competitive prices.