

Apex RT Aluminum Entry and Lamination Sheet



Solid Sheet Aluminum 0.007" and 0.015" for Drilling and Lamination GR 3105 - Solid aluminum for drilling and lamination

Benefits

- Cools the drill bit to reduce the risk of smearing and resin buildup that can clog drill flutes and reduce debris evacuation
- Greater heat dissipation due to the cooling effect of aluminum
- Reduces the chance of 'oil canning' and burrs
- Material is recyclable, reducing overall cost.
- Protects the circuit board from surface damage during drilling and handling
- Excellent locational accuracy

Our Aluminum entry material is produced from 99.998% aluminum (highest grade) and is designed to suit the technical requirements of drilling and Printed Circuit Board manufacturing.

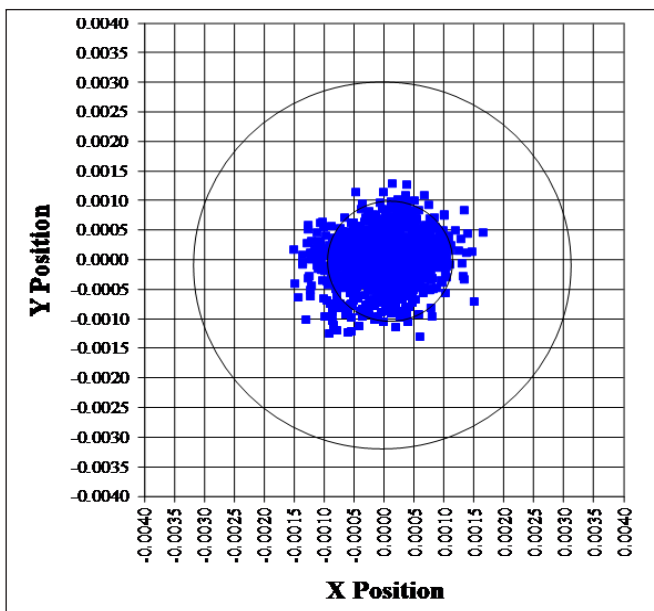
Consistency and reliability in the manufacturing of our Aluminum ensures consistency in the drilling of circuit boards and our material is manufactured in accordance with ISO 9001 standards.

Aluminum Entry panels are available in any size and any tooling specifications needed to suit a circuit board manufacturer specific needs.

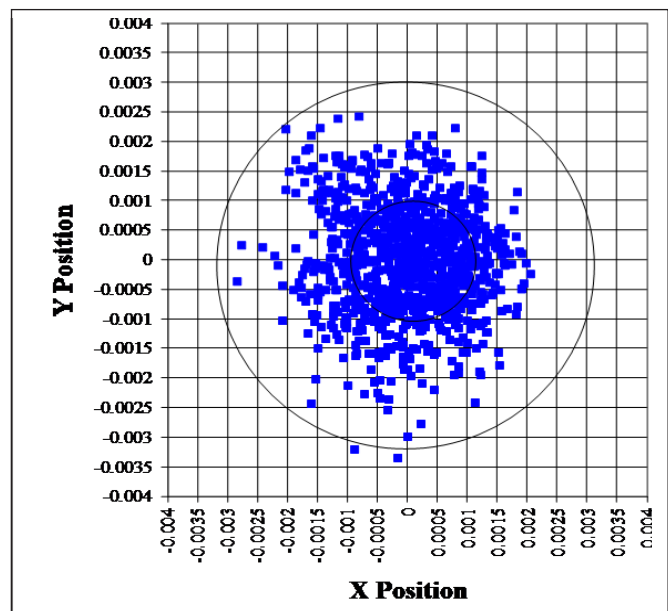
The Aluminum grade has a 3003 H19 Hardness rating and the surface is textured which helps reduce drill wander and breakage.

The general rule of thumb for drill entry selection is based on the smallest diameter holes that are routinely processed. Ideally, entry thickness should not exceed the diameter of the smallest drill used. By optimizing entry thickness to drill diameter, breakage rates can be reduced.

.007" Solid Aluminum Hole-Position Accuracy



Composite Entry Hole-Position Accuracy

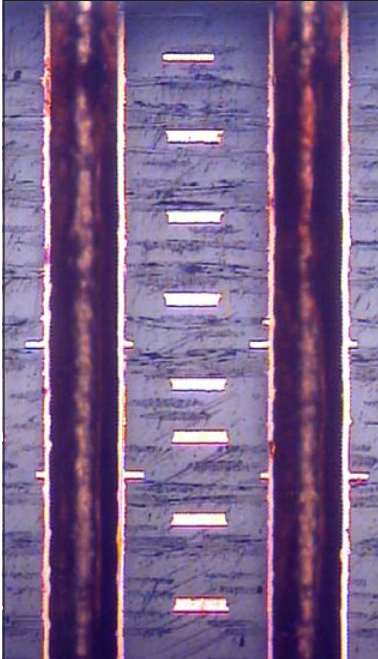


Using Solid Aluminum vs. a Composite Entry Material

Solid Aluminum provides better accuracy and drilling consistency as compared to a composite entry material

Specifications

Typical Physical Properties



High Tg FR4, 0.19" thick, 18 layer
Drilled with SR129UC .0120" @
2000 Hits

	GR3105
Density	2.6 - 2.8 g/cm ³ (0.0939 - 0.101 lb/in ³)
Melting Point	641°C (1185°F)
Elastic Modulus	70 - 80 GPa (10153 - 11603 ksi)
Thermal Conductivity @ 25°C / 77°F	173 W/mK (1201 BTU in/hr.ft ² °F)

Typical Mechanical Properties (GR3105 only)

Temper	UTS (N/mm ²)	YS (N/mm ²)	EI (A100) %	Erichsen (mm)
0	100 - 140	50 - 80	10	5.0
H22	130 - 170	120 - 150	7	4.5
H24	150 - 180	130 - 170	5	4.0
H19	230 - 260	220 - 240	0.5	—

