

## WORLD-CLASS SUPPLIERS

Insulectro, the largest distributor in North America of materials used in the manufacture of printed circuit boards, printed electronics, and advanced substrates salutes our premier suppliers.

**CALL 949.587.3200 FOR MORE INFORMATION**



# CAC

## COPPER STEEL COPPER

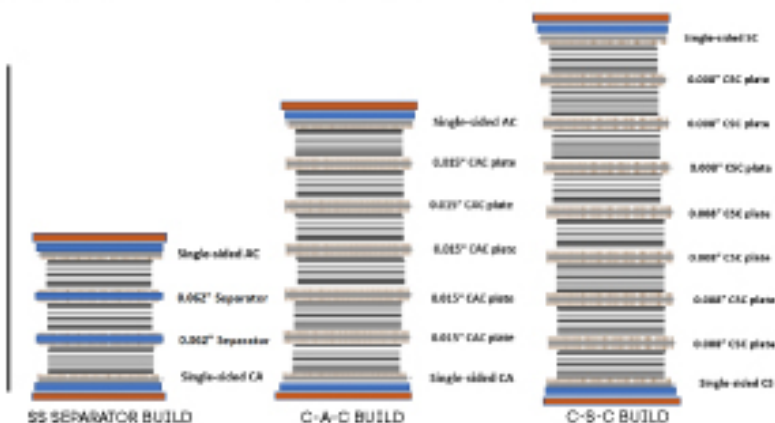
### PUSHING THE BOUNDARIES

- A dedicated production line, configured for middles, top & bottom construction
- Available in 8 mil gauge
- Panel sizes from 12 x 18" up to 25 x 38" – Average panel 19 x 25" for 18 x 24" layup
- All four edges are bonded to ensure a clean surface, eliminating circuit defects
- Able to tool online up to 8 holes (no closer than 3") other configuration done off-line

### WHEN TO USE C-S-C

- Reduce lamination press mass by using CSC middles, improving heating efficiency
- 8 mil steel >2x as effective than 15 mil alum in Image transfer reduction
- Increased throughput with CSC 8 mil middles eliminating 62 mil separators.
- Reduce handling scrap by using the CSC middles as carrier for foil, 6 µm up to 140 µm

### ADVANCED LAY-UP (RELEASE FILM & PRESS PADS NOT DEPICTED BUT REQUIRED)



### BENEFITS OF THIS TYPE OF LAY-UP

- **Reduce** stack height, Seven 8 mil CSC middles displace many 62 mil separator plates
- **Eliminate** surface defects as the factory finish copper surface is protected
- **Efficiency** gains by reducing the overall mass to heat AND cool
- **Consistency** in stack mass CTE due to Steel Tops, Bottoms and Middles usage
- **Increase** quality assurance as separator cleaning and image impressions are reduced.

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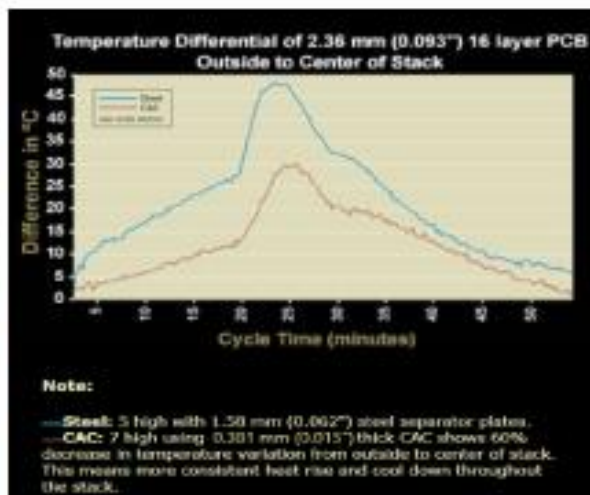


# CAC

## COPPER ALUMINUM COPPER

### DELIVERING HIGHER YIELDS

- Two dedicated production lines, configured for middles, top & bottom construction
- Available configuration CA/AC in 7 and 10 mil – CAC in 10 and 15 mil
- Panel sizes from 12 x 18" up to 26 x 38" – Average panel 19 x 25" for 18 x 24" layup
- All four edges are bonded to ensure a clean surface, eliminating circuit defects
- Able to tool online up to 8 holes, no closer than 3" from each other except SML 5 hole
- Other configurations done offline, please consult with the Product Manager or TAM



### WHEN TO USE C-A-C

- Increased efficiency by reducing the # of 0.062 separators to be cleaned & used
- Reduce surface imperfections as the aluminium carrier protects the Cu surface for SI
- Aluminium CTE expands under temperature, reducing surface wrinkles on Cu foil
- Ability to handle thin & low-profile Cu foils down to 6  $\mu\text{m}$  with a VLP2 or IPC A profile
- 7 mill aluminium if no indentations from the SS plate can be used as drill entry.
- Simplified supply chain: North American stocked Aluminium, Steel and Copper foils