Tape Casting

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Tape casting method is the useful fabrication process to cast a thin green sheet. This process has been applied for the green sheets of multilayer ceramic circuit board, multilayer capacitor, multilayer ceramic packages and many other electronic ceramics.

Slurry for tape casting generally be prepared by mixing of ceramic powder, organic binder, deflocculant, plasticizer and solvents. Tape casting is performed by using doctor blade. The slurry for doctor blade must have uniform powder dispersion with suitable viscosity. Most tape casting processes start with a ball milling. After the slurry has been prepared by mixing and milling, actual tape casting process starts. Viscosty of the slurry will be adjusted before casting.

Calendering is one of the methods of cast a green sheet, a high dense sheet can be obtained easily by calendering a injection molded thick green tape.

Both tape casting methods described above will be discussed.