Bond CJL
Wire insulations and coatings
Datasheet

Bond CJL is a high temperature thermoplastic polyester bondcoat, that exhibits good bond strength after activation with heat at 170-190°C. Bond CJL can also be activated with solvent. This allows windings that maintain their shape until permanently bonded with heat. The recommended solvents for activation of this material are acetone or methyl ethyl ketone.

Bond CJL is typically applied over wire that has already been coated with one of our Thermal Class 180 insulation offerings (polyesterimide for example). Such wire bonds to itself when heat softens the overcoat on adjacent turns and it flows together. Upon cooling, the overcoat hardens, locking the turns in place.

Bond CJL softens between 170-190°C. Full bond strength can be achieved after being baked for one hour at 190°C. Additional time or higher temperatures may increase the effective bonding area between conductors, giving a modest increase in performance.

The bonding cycle above refers to time that the wire is at temperature. Ovens or forced hot air stations may require additional time or higher temperatures to bring the magnet wire up to the required bonding temperature.

Bonding of the wire can be accomplished by resistance heating after winding or by heating in an oven. Bonding is also possible by application of hot air or solvents to the wire during winding.

The bond strength of the bonded windings decreases as a function of temperature. Bond CJL will retain approximately 10% of its room temperature strength at 190°C. Service testing should be performed to verify the adequacy of the winding construction and the bonding process.

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