CURING RECOMMENDATIONS & BOND CURVE FOR WEIDMANN EPOXY RESIN DIAMOND DOT PATTERN PRINTED PAPERS

PRESS PAPER P.4.1A TU DPP, PRESS PAPER P.4.3 DPP, TUF-FLEX, INSULutions DPE, AND INSULutions STRIP-FLEX K

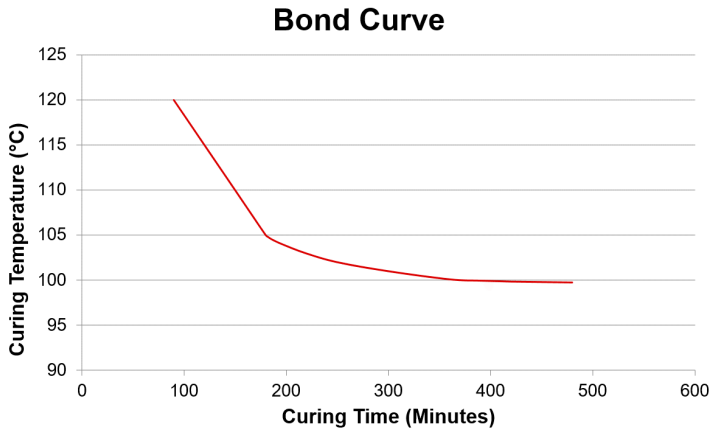
Weidmann offers several epoxy resin diamond dot pattern printed papers, where the diamond pattern epoxy dots provide superior short circuit strength for layer insulation in distribution transformer coils.

Once cured during the normal factory dry-out process, the epoxy resin dots bond to the conductors and adjacent paper layers providing superior short circuit strength. The diamond dot pattern also provides excellent channels for water vapor escape during drying, and liquid ingress during the dielectric liquid filling and impregnation processes.

CURING RECOMMENDATIONS:

- Coils need to have adequate pressure between layers in order to achieve effective bonding.
- The oven or other heating process equipment used to raise the temperature of the coils should provide relatively equal heating to the entire coil where diamond pattern printed papers are used.
- The minimum temperature needed to achieve proper curing of the epoxy dots is 100 °C.
- The curing temperature should be reached throughout the entire coil, including the coldest areas, within a maximum of 4 hours.
- After the entire coil has reached the curing temperature, the coil should be held at that temperature for the following times, according to the table and bond curve below*:

Curing Temperature (°C)	Curing Time (Minutes)
120	90
110	150
105	180
100	360



*NOTE: This bond curve was obtained from tests performed in a controlled laboratory environment, and is based on time to achieve a sufficient bond with surrounding materials at different temperatures.

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