

Bonding Strength ASTM C633  
Stork Labs. pdf (1MB)

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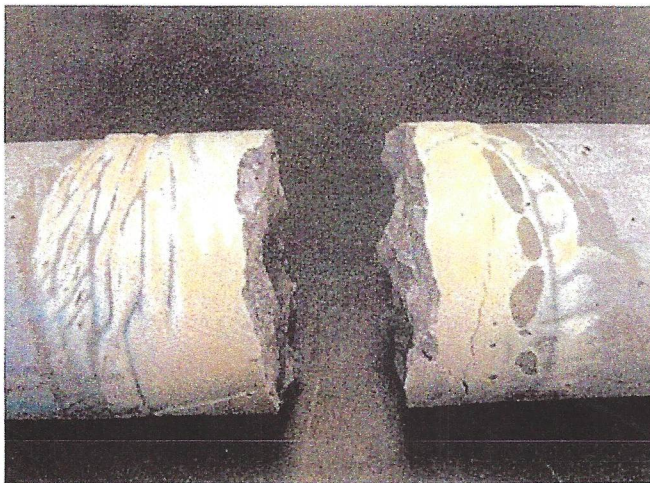
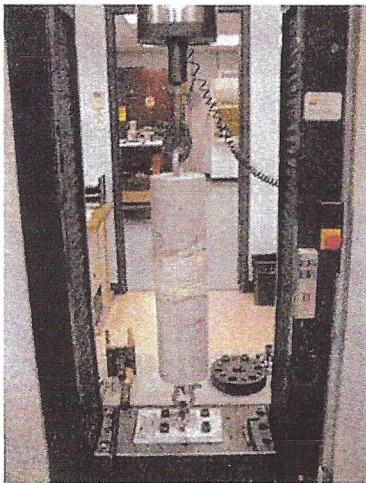
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**Bonding Strength Testing  
DIGLYCIDYL ETHER OF BISPHENOL-A EPOXY RESIN**

The purpose of the test is to verify that the bonding strength of the epoxy resin is stronger than the concrete it is adhered to. Two 6" diameter concrete cylinders, having compressive strengths\* of 8,880 and 8,910 psi respectively, were bonded together using the above noted epoxy resin. The bonded cylinders were placed into an Instron 4507 Universal Testing Frame, and pulled axially in opposite directions, until either the concrete or the bond failed.

Result: One concrete cylinder failed in separation at a load of 11,380 lbs., with no break in the epoxy resin, confirming that the epoxy is stronger than the concrete it is bonded to.



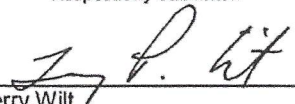
The axial alignment and loading method is taken from ASTM C633, which is used to determine the adhesion or cohesion strengths of coatings to substrates. The test was conducted at a loading rate of 0.05 in./min of cross head travel. The photograph to the right shows the break occurring through one of the two concrete cylinders, and not at the bonding line of the epoxy.

\* The compressive strength of the cylinders, 8880 and 8910 psi, is documented in a test report produced by Lafarge. The specified strength of the concrete was to be a minimum of 7000 psi.

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Respectfully Submitted

  
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