

RESIN STRENGTH TESTING

GlasWeld requested that Element perform resin strength testing using the tensile strength “pull test.” The purpose of the analysis was to construct bonded specimens to determine the strength and mode of failure associated with the created bonds.

To do this, individual glass rods were scored and broken across the center. The broken ends were then reattached using a resin. The bond joint was cured for two minutes with a UV lamp, and the specimens were allowed to cure at ambient laboratory conditions for a minimum of 24 hours.

The glass rods were then fitted to metal grips using high strength hot glue (Surebonder 739). The specimens were then evaluated in tension on an MTS universal mechanical tester equipped with 500 pounds load cell and operated at a crosshead of 0.1 in/min. The two ends of the glass are pulled apart until the bond fails, showing the tensile strength of the resin. [See Figure A]

Among the resins that were tested, Element found that GlasWeld’s resin was 34% stronger on average.

TENSILE TESTING

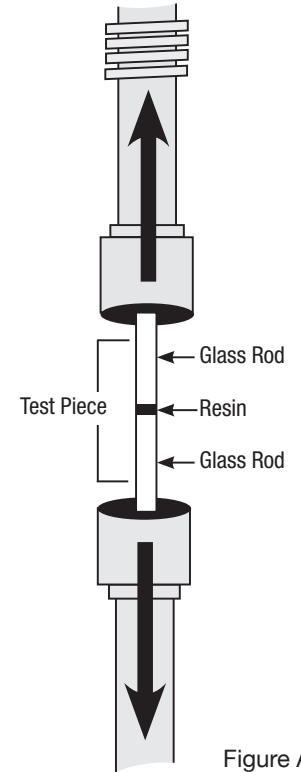
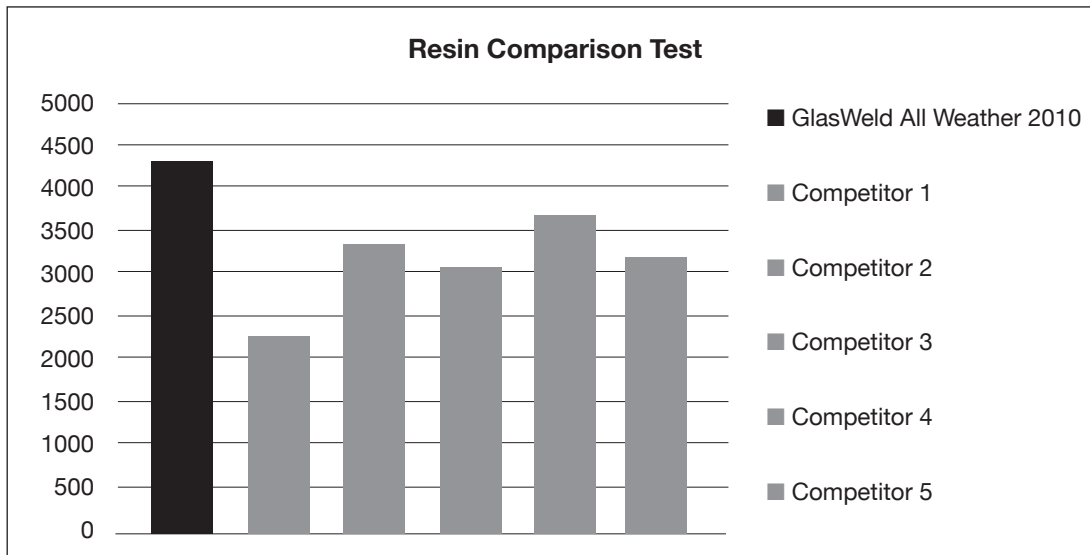


Figure A



Resin	Pull Force Avg.	Tensile Strength Avg.	% Difference
GlasWeld All Weather 2010	170	4307	
Competitor 1	93	2358	-45%
Competitor 2	133	3423	-21%
Competitor 3	120	3002	-30%
Competitor 4	154	3661	-15%
Competitor 5	126	3213	-25%

Additional resin brands were tested but failed to meet the minimum tensile strength required for readable results.