

APPENDIX A



Step 1: Take test sample (in this case, Sealant L) from freezer and place on lab table about 12–24 hrs before testing. This allows for test sample to adjust to ambient temperature (room temperature).



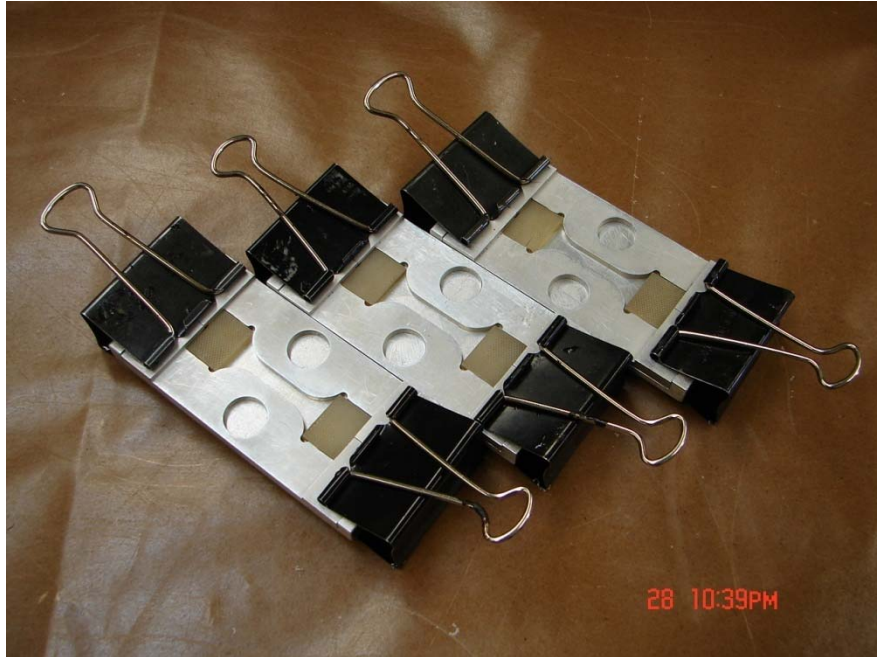
Step 2: Heat a conventional laboratory oven A to the recommended pouring temperature (T°C).



Step 3: Heat a conventional laboratory oven B to 50°C blow below the recommended pouring temperature.



Step 4: Spray release agent (Nix Stix X-9032 from Dwight Products) onto test sample mold.



Step 5: Place the end tabs into the mold and use 50-mm binder clips to hold the various mold pieces in place.



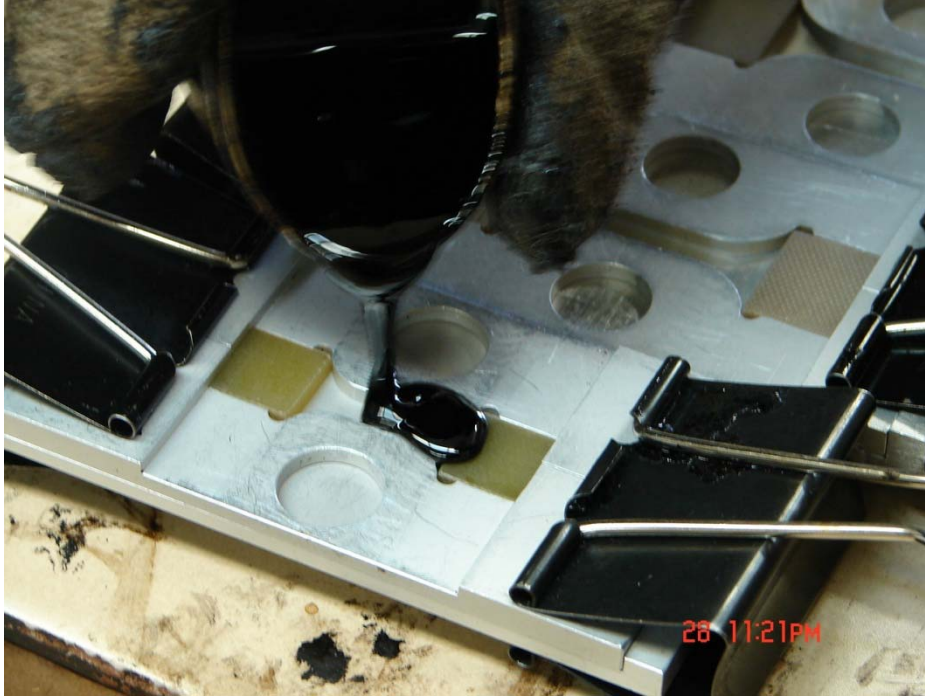
Step 6: Place test samples into oven A when oven temperature reaches $T^{\circ}\text{C}$. Be sure to log the time when test samples are placed into the oven.



Step 7: After sealant is placed in oven B for 15min, place empty molds on the preheated ceramic tile in oven B, which is preheated to 50°C lower than recommended pouring temperature ($T-50^{\circ}\text{C}$) for 15mins.



Step 8: 15min after placing test samples into heated oven A, stir the samples to ensure that sediments in the sample are thoroughly mixed and distributed. Be sure to scrape the bottom and sides of the canister. Place the test samples back into the oven after stirring.



Step 9: After sample is heated in oven A for 30min, take out sealant and pour the material into the preheated molds, which are still on the preheated ceramic tile. This action prevents the sealant from cooling down too rapidly. Be sure to pour from one end of the mold and proceed slowly towards the opposite end.



Step 10: Use a heated spatula to gently apply pressure at the interface of sealant and end tabs. This will improve bonding between the sealant and the end tabs.



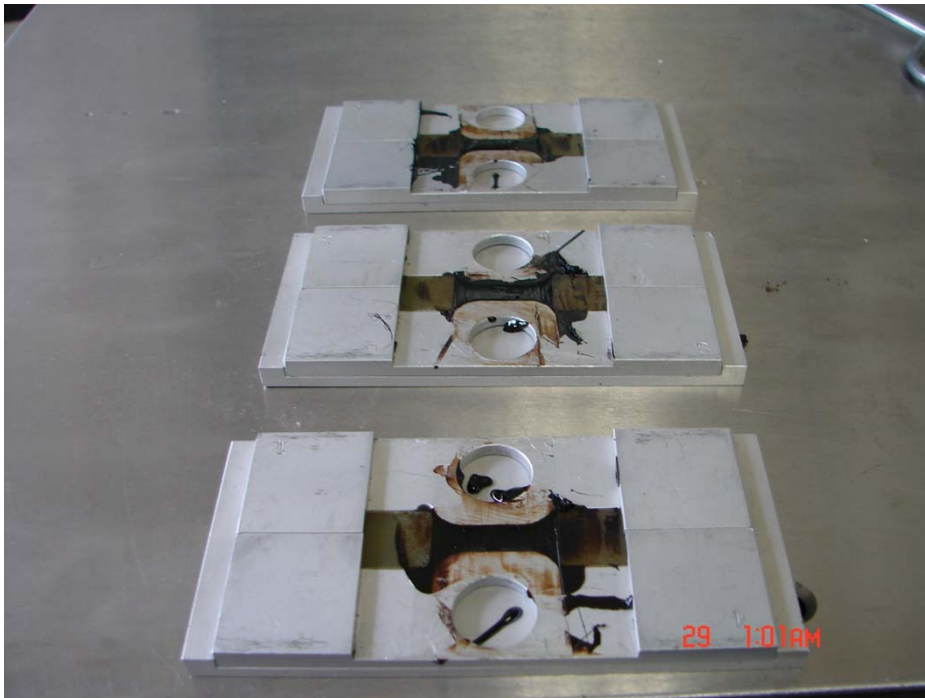
Step 11: Allow the test specimens to cool for 1hr at room temperature.



Step 12: Use a propane blow torch to heat a cutting knife.



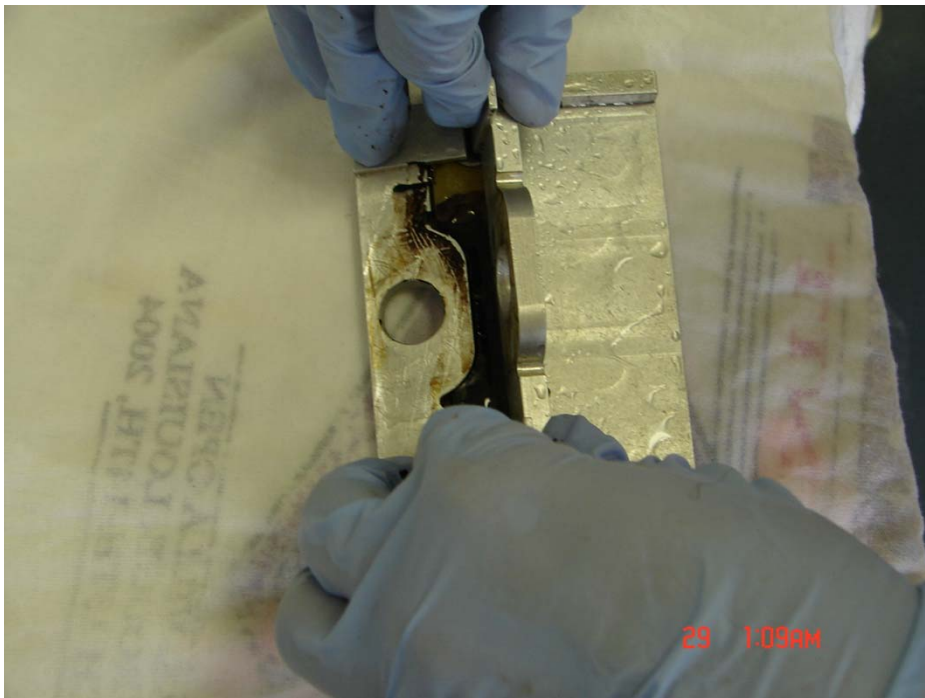
Step 13: Angle the mold downward and trim the excess sealants from the test mold.



Step 14: The specimens should be flush with the top of the molds without any visible deformation. Unclamp the mold.



Step 15: Once the molds have been unclamped, place them individually into an alcohol bath. Allow the samples to stay in the bath for 5min.



Step 16: Take out the mold and place it on a flat surface to demold the sealant.



Step 17: Place the demolded specimens in the bath for one hour, and then proceed with testing.