



ADHESION TEST FOR TERMINALS AND CONNECTORS ON AUTOMOTIVE GLASS OR COATED POLYCARBONATE SUBSTRATE

Application

These procedures are used to determine the adhesion properties of connectors when adhered to automotive glass or coated polycarbonate substrate. A shear test and a tension test will be administered.

Apparatus Required

Mechanical Testing Equipment

The mechanical testing equipment must be able to apply a tension force at a rate of 125 +/-25 mm/min. An example of the mechanical testing equipment is shown below in Figure 1.

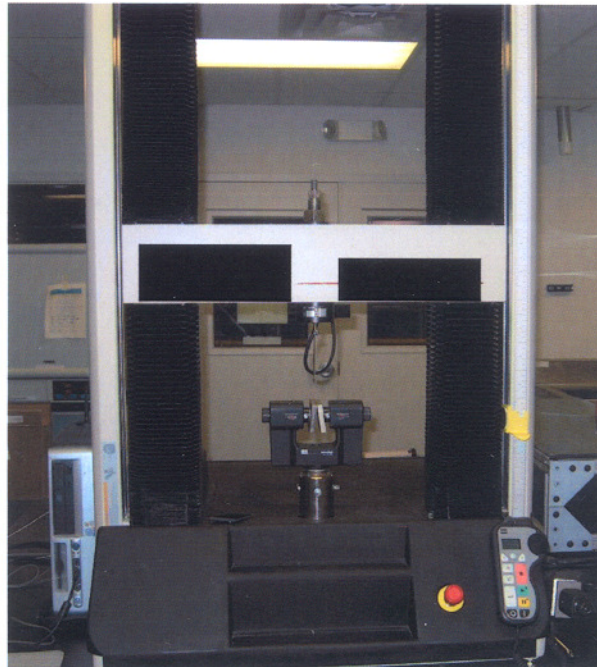


Figure 1

Load Cell

A load cell no larger than 455 kg is to be used.

Pull Wire

For the tension test in section two, wire or similar material that can be threaded through the connector and made to mate with the load cell portion of the test equipment will be needed. The only requirement is that the wire or similar material be able to withstand the 100 N tension force it will transmit to the test specimen.

Date	Action	Revisions	Rev. 01
2018 04 18	Revised	See Summary of Revision	P. Konopka, R. Surowiec, NA
2007 09 25	Activated		M. Melendru/C. Ridgard

Test Samples

Plaques for the tension test must be prepared with a connector that is pre-drilled such that pull-wire can be threaded through the connector.

Sample Preparation

Preparing the sample i.e. cleaning the surface, attaching the connector should be done according to manufacturer's recommendations that reflect their manufacturing process.

For the tension test, pre-drilling the connector should also be done according to the manufacturer's recommendations.

Conditioning and Test Conditions

All test values indicated herein are based on material conditioned in a controlled atmosphere of $23 \pm 2^\circ\text{C}$ and $50 \pm 5\%$ relative humidity for not less than 24 h prior to testing and tested under the same conditions unless otherwise specified.

Note: Chemicals, materials, parts, and equipment referenced in this document must be used and handled properly. Each party is responsible for determining proper use and handling in its facilities.

Procedure

- 1) **Shear:** Using mechanical tensile testing equipment, connectors must be pulled in a shear method (Parallel to the plaque surface).
 - 1.1 Lock the sample into the test apparatus/fixture and apply a female connector pull jig as shown in figure 2 below. Images of test set-up are provided in figures 2.1, 2.2, 2.3, and 2.4.



Figure 2

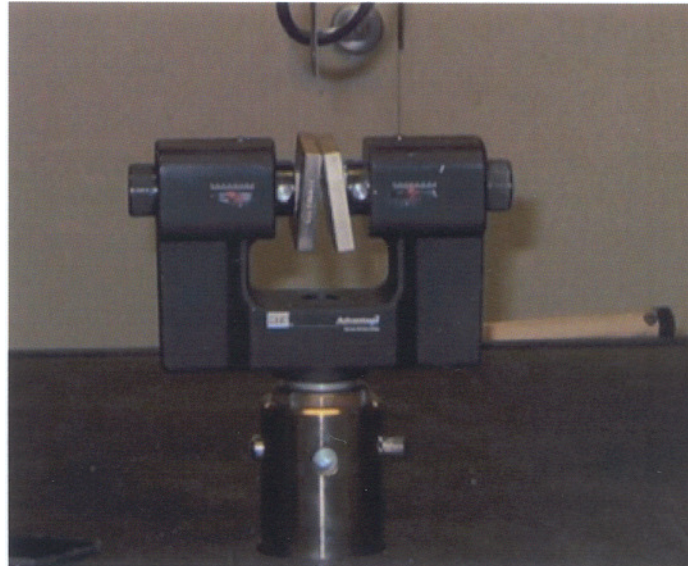


Figure 2.1
Fixture used in connector shear test



Figure 2.2
Female connector pull jig with hole