



IPC-TM-650 TEST METHODS MANUAL

1 Scope This method covers the punch-type shear test to determine the shear strength of flexible dielectric substrate materials.

2 Applicable Documents

ASTM-D-732 Shear Strength

3 Test Specimen

3.1 Five specimens 5 cm x 5 cm or 5 cm diameter by the thickness.

4 Apparatus

4.1 Tinius-Olson Super "L" tester or equal, having constant speed capability and a load indicator. The shear tool must be constructed so that the specimen is rigidly clamped both to the stationary block and movable block so that it can not be deflected during the test. A suitable shear tool is illustrated in ASTM-D-732, although a typical production shear tool is acceptable.

Number 2.4.11	
Subject Shear Strength Flexible Dielectric Materials	
Date 4/73	Revision
Originating Task Group N/A	

5 Procedure

5.1 Test

5.1.1 Place the specimen in the shear tool and fasten tightly, then assemble the shear tool into testing machine.

5.1.2 Set the crosshead speed to 1.3 mm per minute, measured when the machine is running idle.

5.1.3 Operate the testing machine and remove the specimen for evaluation.

5.2 Evaluation

5.2.1 Calculate the shear strength in KPa, by dividing the load by the area of the sheared edge, which shall be taken as the product of the thickness of the specimen by the circumference of the punch.

5.2.2 Report the individual and average values.

6.0 Notes For further technical information on Super "L" tester, write Tinius-Olson Co., Willow Grove, Penn.