

Tentative Method of Test for

FLEXURAL STRENGTH OF ELECTRICAL INSULATING MATERIALS¹



A.S.T.M. Designation: D 650 - 42 T

ISSUED, 1941; REVISED, 1942.²

This Tentative Method has been approved by the sponsoring committee and accepted by the Society in accordance with established procedures, for use pending adoption as standard. Suggestions for revisions should be addressed to the Society at 1916 Race St., Philadelphia 3, Pa.

Scope

1. This method of test covers a general procedure for determining the flexural strength of various solid electrical insulating materials. However, modifications are found desirable for different types of such materials and existing methods of the American Society for Testing Materials covering the requirements for test of a given material should be consulted for special details that may apply.

NOTE.—For molded materials, the type of mold used to produce test specimens has an effect on the results obtained. Cooperating laboratories should, therefore, standardize mold and testing procedure to obtain concordant results.

Apparatus

2. Any universal testing machine may be used provided it is accurate to 1 per cent of the lowest load to be applied. The specimen shall be tested as a simple beam, resting on two parallel supports, and loaded at the center by

means of a pressure piece to apply the load crosswise of the beam. The distance between supports shall be eight times the nominal height of the specimen in test position but not less than $\frac{1}{2}$ in., or for laminated round rods not more than 4 in. For electrical porcelain, the supports shall be 5 in. apart. Pins may be added to the supports to keep very narrow specimens in a vertical position. The radius of all contact edges shall be $\frac{1}{8}$ in. (3.18 mm.), except as otherwise specified.

Test Specimens

3. Test specimens shall be of the size specified for the material being tested, but unless more particularly specified elsewhere, should conform to the following:

(a) *Molded Materials*.—Specimens $\frac{1}{2}$ by $\frac{1}{2}$ by 5 in. or of such lesser thickness as is considered representative.

(b) *Sheet and Plate*.—Width of $\frac{1}{2}$ in., except for specimens over $\frac{1}{2}$ in. in thickness tested in the flatwise direction in which case the width shall be equal to

¹ Under the standardization procedure of the Society, this method is under the jurisdiction of the A.S.T.M. Committee D-9 on Electrical Insulating Materials.

² Revision accepted by the Society at annual meeting, June, 1942.