

Tentative Method of Test for

COMPRESSIVE STRENGTH OF ELECTRICAL INSULATING MATERIALS¹



A.S.T.M. Designation: D 649 - 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 compressive 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.—In the case of a material which fails in compression by a shattering fracture, the compressive strength has a very definite value. In the case of materials which do not fail in compression by a shattering fracture, the value obtained for compressive strength is of arbitrary value depending upon the degree of distortion which is regarded as indicating complete failure of the material.

Apparatus

2. Any universal testing machine may

be used provided it is accurate to 1 per cent of the lowest load to be applied. One end of the specimen shall bear upon an accurately centered spherical bearing block located wherever practicable at the top. The metal bearing plates shall be directly in contact with the ends of the specimen.

Test Specimens

3. Test specimens shall be of the size prescribed for the material being tested. A primary requirement for all test specimens is that the ends shall be flat and perpendicular to the axis. Unless more particularly specified elsewhere the dimensions should conform to the following:

(a) *Molded Materials*.—A cylinder having a height of 1.25 in. (31.8 mm.) and a diameter of 1.125 in. (28.6 mm.).

(b) *Laminated Tubes*.—A section of the tube 1 in. in length.

(c) *Sheet and Plate*.—A 1-in. cube for sheets 1 in. or over in thickness; for sheets less than 1 in. in thickness a pile of sheets 1-in. square with a minimum number of layers to produce a height of at least 1 in.

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.