

Standard Method of Test for MODULUS OF RUPTURE OF FIRED CAST OR EXTRUDED WHITEWARE PRODUCTS¹



ASTM Designation: C 369 - 56

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Scope

1. This method covers the procedure for determination of modulus of rupture of fired cast or extruded whiteware bodies and is applicable to both glazed and unglazed test specimens.

Apparatus

2. (a) *Testing Machine*.—Any suitable testing machine may be used, provided a uniform rate of direct loading can be maintained at 1000 ± 200 lb per min using the prescribed specimens.

(b) *Bearing Edges*.—For the support of the test specimens, two steel knife-edges rounded to a radius of 0.125 in. shall be provided. The load shall be applied by means of a third steel knife-edge rounded to a radius of 0.125 in.

Test Specimens

3. (a) *Preparation of Specimens*.—The

¹Under the standardization procedure of the Society, this method is under the jurisdiction of the ASTM Committee C-21 on Ceramic Whitewares and Related Products. A list of members may be found in the ASTM Year Book.

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specimens shall be formed by the casting or extrusion process.

(b) *Dimensions*.—The fired specimens shall be approximately 0.75 ± 0.10 in. in diameter by $6 \pm \frac{1}{2}$ in. in length to permit an overhang of at least $\frac{1}{4}$ in. at each end when mounted on the supports.

(c) *Handling*.—All due precautions shall be observed in the forming, drying, and firing to produce straight test specimens of uniform circular cross-section.

(d) *Storage*.—Test specimens from the kiln shall be cooled in a desiccator. If the testing must be delayed, the bars shall preferably be stored in a desiccator, or in an electric oven at 110 C and then cooled in a desiccator before testing. In removing specimens from the kiln, care shall be taken to avoid thermal shock which will induce errors in testing.

Procedure

4. (a) At least ten dry specimens, at room temperature, shall be tested.

(b) The test specimen shall be placed on two of the bearing edges, spaced 5 in. between centers, with the specimen overlapping each end by at least $\frac{1}{4}$ in. The