

Standard Methods of

MEASURING MICA STAMPINGS USED IN ELECTRONIC DEVICES AND INCANDESCENT LAMPS¹



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This Standard of the American Society for Testing Materials is issued under the fixed designation D 652; the final number indicates the year of original adoption as standard or, in the case of revision, the year of last revision.

Scope

1. These methods cover the procedures for measuring the hole spacing, thickness, and hole size of small pieces of fabricated natural mica such as bridges, spacers, and supports used in electronic devices and incandescent lamps.

HOLE SPACING

Apparatus

2. The apparatus shall consist of the following:

(a) *Microscope*.—A toolmaker's microscope, comparator, or any other traveling stage microscope conforming to the following requirements:

- (1) Magnification of approximately 40 $\times$,
- (2) Ocular equipped with crosslines, and
- (3) Stage equipped with one or more micrometers for movement in a horizontal plane. The micrometers shall be graduated to 0.0001 in. for direct reading.

NOTE.—It is preferable for fast checking to use a microscope having a stage equipped with two micrometers which travel at right angles to each other.

(b) *Illumination*.—A light source, which shall be reflected upward through the bottom of the microscope through the slide stage and into the field of vision.

Test Specimens

3. At least two test specimens shall be selected from each package of 5000 stampings or fraction thereof. If two or more dies have been used in fabricating stampings from the same type of mica, each group of stampings shall be kept separate and labeled so that separate measurements may be made on specimens from each group.

Procedure

4. (a) If the measuring device is equipped with two micrometers, the mica stamping to be measured shall be placed on the traveling slide stage and the microscope focussed on the specimen. The specimen shall be carefully lined up with the crosslines of the microscope in accordance with its horizontal axis. It will usually be found convenient to

¹ Under the standardization procedure of the Society, these methods are under the jurisdiction of the A.S.T.M. Committee D-9 on Electrical Insulating Materials.

² Prior to adoption as standard, these methods were published as tentative from 1941 to 1943.