

ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION R 67

MUSCOVITE MICA
BLOCKS, THINS AND FILMS
METHODS FOR GRADING BY SIZE

1st EDITION

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FOREWORD

I. For many years Indian mica producers have been using a uniform system of size-grading for muscovite mica, which has been adopted by various other producing countries, such as Brazil, Canada, the Union of South Africa, U.S.A., etc. and has been generally used in international trade. This ISO Recommendation, though based on the Indian system, has been prepared by Technical Committee ISO / TC 56, *Mica*, after taking due account also of the requirements of the consuming countries.

II. The scope of this ISO Recommendation is limited to the size-grading of muscovite mica blocks, thins and films, while another ISO Recommendation is under preparation by ISO / TC 56 for the grading of splittings. These two ISO Recommendations will cover the size-grading of the entire range of the commercial forms of muscovite mica.*

III. Besides size-grading, muscovite mica is classified visually as to quality. Since the methods of quality classification, based on visual appreciation, are subjective, while those for size-grading are objective, ISO / TC 56 decided to issue a separate ISO Recommendation for visual quality classification.**

IV. The present ISO Recommendation R 67 gives a new set of grade designations, together with the corresponding existing grade designations. The new designations are based on metric units and are taken from the Preferred Numbers *** with a view to simplifying the notation, rationalizing the grading method and facilitating understanding, in case the metric system is more universally adopted in the future. In order to differentiate between the old and the new grade designations,

- the word “size” is adopted for the new grades,
- while the word “grade” or “number” is retained for the old grades;

e.g. size 630, new system = grade OOOE Special, old system,
size 40, new system = grade No. 4, old system.

V. Requirements in respect of the minimum thickness of mica blocks appear to vary in different consuming countries. For this reason, in defining mica blocks, two minimum thicknesses are recognized:

either 0.20 mm (0.008 in),
or 0.18 mm (0.007 in),

as may be agreed between the buyer and the seller (see clause 2.1.12). Producing countries are prepared to supply mica blocks to either of these limits.

VI. The presence of “V” cuts in full-trimmed mica has been a point of much discussion in ISO / TC 56. While all Committee members agreed that specifying the minimum yield of a piece of mica (see clause 4.1.1) would automatically limit the presence of “V” cuts, the representative of the French Member Body expressed the opinion that it would be desirable not to allow any “V” cut at all.

VII. With a view to making allowance for unavoidable variations during mica processing and to facilitating commercial transactions, tolerances are admitted on all sizes of blocks, thins and films. However, for acceptance inspection, ISO / TC 56 decided that tolerances

* Grading of phlogopite mica, which represents, with muscovite mica, the two principal types of mica, may be dealt with by further ISO Recommendations.

** Under consideration.

*** See ISO Recommendations R 3, *Preferred Numbers - Series of Preferred Numbers*, and R 17, *Guide to the Use of Preferred Numbers and of Series of Preferred Numbers*.

are subject to agreement between the buyer and the seller and, unless otherwise stated, such agreed tolerances should be taken as substitutes for, and not as additional to, the tolerances given in this ISO Recommendation.

VIII. In drafting this ISO Recommendation, the following publications have been taken into consideration, in addition to some unpublished material of various standards organizations:

- (1) ASTM D 351-52 T. Tentative Specifications for Natural Muscovite Mica Based on Visual Quality. American Society for Testing Materials.
 - (2) ASTM D 748-49 T. Specifications for Natural Block Mica and Mica Films Suitable for Use in Fixed Mica-Dielectric Capacitors. American Society for Testing Materials.
 - (3) Pub. MEI-1952. Standards for Manufactured Electrical Mica. National Electrical Manufacturers' Association, U.S.A.
 - (4) Pub. No. 11 LXXVII. 11-1943. Standard Sizes and Qualities of Indian Muscovite Mica Including Notes on Establishing such a Standard. Geological Survey of India.
 - (5) I.C.* No. 7258. September 1943. Strategic Mica. U.S.A. Department of Interior, Bureau of Mines.
 - (6) IS: 13-1949. Tentative Indian Standard Methods for Grading Processed Mica. Indian Standards Institution.
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* Information Circular.