

Tentative Methods of

TESTING ASPHALT COMPOSITION BATTERY CONTAINERS¹



A.S.T.M. Designation: D 639 - 46 T

ISSUED, 1941; REVISED, 1943, 1946.²

These Tentative Methods have 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. (a) These methods are intended for use in testing battery containers made of asphalt compositions, as distinguished from those made of hard rubber.

(b) Although the procedures described in these methods have been prepared expressly for the testing of asphalt composition containers, it is not to be inferred that no other tests are applicable, since tests such as dielectric strength, specific gravity, ash, etc., apply to such compositions as well as to hard rubber.

CHEMICAL ANALYSIS

NOTE.—The development of methods for the chemical analysis of these compositions has been restricted to the determination of soluble manganese and iron, since excessive amounts of these elements, each of which is usually found in small proportions, are injurious to the performance of a battery.

¹Under the standardization procedure of the Society, these methods are under the jurisdiction of the A.S.T.M. Committee D-11 on Rubber and Rubber-Like Materials.

²Latest revision accepted by the Society at annual meeting, June, 1946.

Preparation of Sample

2. The sample shall be prepared by taking pieces from various parts of the container and separating from them any foreign matter. Surface coatings, in particular, shall be scraped off before there is further division of the pieces. These pieces, preferably, shall then be mounted in a shaper machine and cuts made by feeding the tool at 0.01 in. per stroke to a depth of approximately $\frac{1}{8}$ in. In lieu of a shaper, borings may be taken with a $\frac{1}{2}$ -in. drill at a rate of feed that will give a sample approximately 0.01 in. in thickness and fragments that approximate in size those obtained with a shaper. Oil shall not be used on the cutting tools. If water is used as a lubricant, the material shall be dried before it is weighed. Thorough blending of the sample shall be carried out before proceeding with the analysis.

Preparation of Acid Extract of Sample

3. Place 20 g. of the sample in a 500-ml. Erlenmeyer flask provided with a reflux condenser, and boil with 300 ml.