

Standard Method of Test for
**INDENTATION HARDNESS OF PLASTICS BY
MEANS OF A DUROMETER¹**



ASTM Designation: D 1706 - 61

ADOPTED, 1961.²

This Standard of the American Society for Testing Materials is issued under the fixed designation D 1706; the final number indicates the year of original adoption as standard or, in the case of revision, the year of last revision.

Scope

1. This method covers a procedure for determining the indentation hardness of plastics by means of a durometer. For the purpose of this method, a durometer is an instrument that conforms to the requirements given in Section 3. Examples of typical durometers are shown in Fig. 1. The Type A durometer is used for testing nonrigid and some semirigid materials, and the Type D durometer for rigid and some semirigid materials.

Significance of Test

2. (a) The results obtained by this method are a measure of the indentation into the plastic material of the indenter under load.

(b) Either the initial maximum reading or the reading after a specified time interval, or both, may be taken. The creep and recovery characteristics of a material will influence the readings ob-

tained, and the difference between initial and later readings will indicate the severity of these phenomena.

(c) The results obtained by this method are not generally considered a measure of abrasion or wear resistance of the plastic.

(d) Results obtained on one type of durometer cannot be correlated with results obtained on another type or on other instruments for measuring hardness.

Apparatus

3. Each durometer shall consist of the following components:

(a) *Presser Foot*.—A presser foot, pierced by a hole not greater than $\frac{1}{8}$ in. in diameter, the center of which shall be at least $\frac{1}{4}$ in. from the edge of the presser foot in any direction.

(b) *Indenter Point*.—An indenter point of hardened carbon steel conforming to the shape and size shown in Fig. 2 (Type A) or Fig. 3 (Type D) and operating through the hole in the presser foot.

¹ Under the standardization procedure of the Society, this method is under the jurisdiction of the ASTM Committee D-20 on Plastics.

² Prior to adoption as standard, this method was published as tentative from 1959 to 1961.