

hardness-durometer



Principle

Hardness is a measure of how resistant solid matter is to various kinds of permanent shape change when a compressive force is applied. Macroscopic hardness is generally characterized by strong intermolecular bonds, but the behavior of solid materials under force is complex.

The hardness of plastics is measured by means of a "durometer" according to Shore A and Shore D.

Method

The measuring device is equipped with a needle and pressed onto the surface of the specimen, which has a minimum diameter of 10 mm. A thickness of at least 6 mm is required for a good measurement.

A scale on the device indicates the hardness.

Shore A is used for soft materials and Shore D for hard materials.

Applications

- Determination of the Shore hardness of plastics and rubbers

