

Tentative Methods of Test for

TENSILE AND COMPRESSIVE PROPERTIES OF PLASTICS AT SUBNORMAL AND SUPERNORMAL TEMPERATURES¹



A.S.T.M. Designation: D 759 - 44 T

ISSUED, 1944.²

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 of test are intended for use in determining the tensile and compressive properties of organic plastics at temperatures above and below the standard laboratory temperature.

(b) These methods are not intended specifically for use in determining the effect of long continued exposure at elevated or reduced temperatures or of cyclic exposures to ranges of temperature, although they may be used for such special tests if desired.

Apparatus

2. The apparatus shall consist of the following:

(a) *Testing Machine*.—The tension testing machine and its accessory equipment shall conform to the requirements specified in the Tentative Method of Test for Tensile Properties of Plastics (A.S.T.M. Designation: D 638)³ and the compression testing machine shall con-

form to the requirements specified in the Tentative Method of Test for Compressive Strength of Plastics (A.S.T.M. Designation: D 695).³ All mechanical parts of the apparatus which are exposed to high or low temperatures during the test shall be adjusted to function normally at these temperatures, and their accuracy shall be verified by calibration tests at the specified test temperatures. Verification shall be repeated as often as necessary to insure correct test readings.

(b) *Insulated Test Chamber*.—An insulated test chamber, through which air is circulated at the desired temperature, to enclose the specimen during the actual test (Note). This chamber shall also enclose at least enough of the testing machine components, such as the tension grips or the compression tool, to insure that conduction of heat through these components will not materially change the temperature of the specimen from that of the test temperature. The temperature of the air in the test chamber may be regulated by any convenient means (Note).

¹ Under the standardization procedure of the Society, these methods are under the jurisdiction of the A.S.T.M. Committee D-20 on Plastics.

² Accepted by Committee E-10 on Standards, January 19, 1944.

³ Appears in this publication, see Contents in Numeric Sequence of A.S.T.M. Designations at front of book.