

# Tentative Specifications for

## NONRIGID VINYL CHLORIDE PLASTICS<sup>1</sup>



**A.S.T.M. Designation: D 744 - 44 T**

ISSUED, 1943; REVISED, 1944.<sup>2</sup>

These Tentative Specifications 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. These specifications cover nonrigid plastics consisting of vinyl chloride resins and the necessary plasticizers, stabilizers, lubricants, dyes, pigments, and fillers. These specifications do not cover special materials compounded for special applications.

NOTE.—The properties included in these specifications are those required to identify the types and grades of nonrigid plastics covered. There may be other requirements necessary to identify particular characteristics. These will be added to the specifications as their inclusion becomes generally desirable and the necessary test data and methods become available.

### Types and Grades

2. These specifications cover four types and nine grades of nonrigid vinyl chloride plastics as shown in Table I, the grades being classified in accordance with their hardnesses at 25 C. (77

F.). A low-temperature classification of these materials is also shown in Table I.

TABLE I.—TYPES AND GRADES OF NONRIGID VINYL CHLORIDE PLASTICS.

NOTE.—The hardness values and low-temperature classifications in this table are included in these specifications for purposes of classification only and are not specific requirements to be met.

| Type                                                           | Grade | Durometer Hardness <sup>a</sup> | A.S.T.M. Hardness <sup>b</sup> | Low-Temperature Classification <sup>c</sup> |
|----------------------------------------------------------------|-------|---------------------------------|--------------------------------|---------------------------------------------|
| I. Unfilled (plasticized with dioctyl phthalate or equivalent) | 1...  | 90 ± 10                         | 23 ± 4                         | N                                           |
|                                                                | 2...  | 80 ± 10                         | 30 ± 5                         | N                                           |
|                                                                | 3...  | 80 ± 10                         | 38 ± 5                         | F                                           |
|                                                                | 4...  | 70 ± 10                         | 48 ± 5                         | F                                           |
| II. Heat and flame resistant                                   | 5...  | 80 ± 10                         | 40 ± 7                         | N                                           |
| III. Cold resistant                                            | 6...  | 80 ± 10                         | 25 ± 6                         | F                                           |
|                                                                | 7...  | 80 ± 10                         | 30 ± 7                         | FF                                          |
| IV. Filled                                                     | 8...  | 90 ± 10                         | 22 ± 5                         | N                                           |
|                                                                | 9...  | 90 ± 10                         | 27 ± 6                         | N                                           |

<sup>a</sup> Tentative Method of Test for Indentation of Rubber by Means of the Durometer (A.S.T.M. Designation: D 676).<sup>3</sup>

<sup>b</sup> Standard Method of Test for Hardness of Rubber (A.S.T.M. Designation: D 314).<sup>3</sup>

<sup>c</sup> A low-temperature classification of FF indicates that the material does not fail at -70 F., a classification of F indicates that the material does not fail at -40 F., and a classification of N indicates that the material fails at -40 F. when tested in accordance with the Tentative Method of Test for Low-Temperature Brittleness of Rubber and Rubber-Like Materials (A.S.T.M. Designation: D 736).<sup>3</sup>

<sup>3</sup> Appears in this publication, see Contents in Numerical Sequence of A.S.T.M. Designations at front of book.

<sup>1</sup> Under the standardization procedure of the Society, these specifications are under the jurisdiction of the A.S.T.M. Committee D-20 on Plastics.

By publication of these specifications, the American Society for Testing Materials does not undertake to insure anyone utilizing the specifications against liability for infringement of Letters Patent nor assume any such liability, and such publication should not be construed as a recommendation of any patented or proprietary application that may be involved.

<sup>2</sup> Revision accepted by the Society at annual meeting, June, 1944.