



Designation: D 1564 – 71⁶

Standard Methods of Testing SLAB FLEXIBLE URETHANE FOAM¹

This Standard is issued under the fixed designation D 1564; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval.

These methods were prepared jointly by the American Society for Testing and Materials and The Society of the Plastics Industry.

⁶ NOTE—Table 1 was editorially deleted in February 1972.

1. Scope

1.1 These methods apply to slab flexible cellular foams known as urethane foam. Urethane foam may be generally defined as an expanded cellular product produced by the interaction of active hydrogen compounds, water, and isocyanates.

NOTE 1—These methods have been developed primarily for slab foam. Tests for molded foam are covered in ASTM Methods D 2406, Testing Molded Flexible Urethane Foam.²

1.2 This document covers test procedures only. The numerical specifications will be developed as separate documents by appropriate groups based on end use, such as automotive, etc.

1.3 Unless specifically stated otherwise, between the vendor and the purchaser, all tests shall be made in accordance with the methods specified in Sections 5 to 101 which include test procedures for the following:

Sections

Basic Tests:

Steam Autoclave Test	5 to 11
Constant Deflection Compression Set Test	12 to 18
Load Deflection Tests	
Method A, Indentation (to specified deflections)	19 to 25
Method B, Indentation (to specified loads)	26 to 31
Air Flow Test	32 to 38

Suffix Tests:

Compression Load Deflection Test (Suffix D)	39 to 44
Dry Heat Test (Suffix A)	45 to 51
Fatigue Test (Suffix H)	52 to 68

Sections

Density Test (Suffix W)	69 to 73
Tear Resistance Test (Suffix G)	74 to 80
Tension Test (Suffix T)	81 to 88
Resilience (Ball Rebound) Test (Suffix R)	89 to 94

2. Test Conditions

2.1 Tests shall be conducted under known conditions of temperature and humidity or as specified in the individual test procedure. After preflexing in cases of dispute, the tests shall be made at a temperature of 23 ± 1.1 C (73.4 ± 2 F) and in an atmosphere of 50 ± 2 percent relative humidity. The product shall be conditioned, undeflected, and undistorted at the temperature and humidity of test for at least 12 h before being tested.

2.2 It is recommended for referee purposes that all tests shall be performed 96 h or more after the foam has been manufactured.

3. Sampling

3.1 When possible, the completed manufactured product shall be used for the test specified. Representative samples of the lot being examined shall be selected at random as required.

3.2 When it is necessary or advisable to

¹ These methods are under the jurisdiction of ASTM Committee D-11 on Rubber and Rubber-Like Materials and is the direct responsibility of Subcommittee D-11.33 on Flexible Cellular Materials.

Current edition effective April 16, 1971. Originally issued 1958. Replaces D 1564 – 69.

² Annual Book of ASTM Standards, Part 28.