



Designation: D 1751 – 99

Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types)¹

This standard is issued under the fixed designation D 1751; 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. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

This standard has been approved for use by agencies of the Department of Defense.

1. Scope

1.1 This specification covers preformed expansion joint filler having relatively little extrusion and substantial recovery after release from compression.

1.2 The values stated in inch-pound units are to be regarded as standard.

NOTE 1—Attention is called to Specification D 1752 and to Specification D 994.

2. Referenced Documents

2.1 ASTM Standards:

D 545 Methods of Testing Preformed Expansion Joint Fillers for Concrete Construction (Nonextruding and Resilient Types)²

D 994 Specification for Preformed Expansion Joint Filler for Concrete (Bituminous Type)²

D 1752 Specification for Preformed Sponge Rubber and Cork Expansion Joint Fillers for Concrete Paving and Structural Construction²

3. Ordering Information

3.1 Products conforming to this specification are manufactured in sheet form to a range of thicknesses; namely $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{3}{4}$, and 1 in. Sheet sizes may be 3 or 4 ft in width and standard length of 10 ft. Purchaser must specify sheet sizes when ordering.

3.2 Joint filler in strip form is cut from the sheets as manufactured. When ordering joint filler strips, the purchaser must specify thickness, width, and length; strip widths are available from 2 in. in increments of one half inch.

¹ This specification is under the jurisdiction of ASTM Committee D-4 on Road and Paving Materials and is the direct responsibility of Subcommittee D04.34 on Preformed Joint Fillers and Sealers.

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² *Annual Book of ASTM Standards*, Vol 04.03.

4. Material

4.1 This product shall consist of preformed sheets or strips made from cane or other suitable fibers of a cellulosic nature securely bound together and then uniformly saturated with asphalt; or strips formed from clean granulated cork securely bound together by a suitable asphalt binder and encased between two layers of saturated felt or two layers of glass-fiber felt.

4.2 Preformed strips of expansion joint filler shall be of such character as not to be deformed or broken by twisting, bending, or other ordinary handling when exposed to atmospheric conditions.

5. Requirements

5.1 *Test Specimen*—The sample to be tested shall be cut from the sheet, as manufactured, and shall be representative of the sheet stock.

5.2 *Compression*—The stress required to compress the test specimen to 50 % of its thickness before test shall be not less than 100 and not more than 750 psi (689 to 5171 kPa). If the nominal thickness of the specimen is less than $\frac{1}{2}$ in. (13 mm), a maximum stress of 1250 psi (8618 kPa) will be permitted. The sample after compression, shall show a loss of not more than 3 % of its original weight.

5.3 *Extrusion*—Test specimen shall be compressed to 50 % of its thickness before test with three of its edges restrained. The amount of extrusion of the free edge shall not exceed 0.25 in. (6.4 mm).

5.4 *Recovery*—The test specimen shall be compressed to 50 % of its thickness before test. The load shall be released immediately after application. At the end of 10 min after release of the applied load, the specimen shall have recovered to at least 70 % of its thickness before test.

5.4.1 In case of failure to comply with the above requirements, the test specimen shall be given three applications of a load sufficient to compress the material 50 % of its thickness before test. The load shall be released immediately after each