

HH-F-341F
January 17, 1973
SUPERSEDING
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FEDERAL SPECIFICATION

FILLERS, EXPANSION JOINT: BITUMINOUS (ASPHALT AND TAR)
AND NONBITUMINOUS (PREFORMED FOR CONCRETE)

This specification was approved by the Commissioner, Federal Supply Service
General Services Administration, for the use of all Federal agencies.

1. SCOPE AND CLASSIFICATION

1.1 Scope. This specification covers preformed expansion joint fillers, bituminous (asphalt and tar) and nonbituminous, for use in concrete construction.

1.2 Classification. Preformed expansion joint fillers shall be of the following types and classes, as specified (see 6.2):

Type I - Asphalt fiber or asphalt cork, nonextruding and resilient.

II - Sponge rubber, and cork.

Class A - Sponge rubber.

B - Cork.

C - Self-expanding cork.

III - Plain bituminous (encased asphalt or tar), nonresilient.

2. APPLICABLE DOCUMENTS

2.1 The following documents, of the issues in effect on the date of invitation for bids or request for proposal, form a part of this specification to the extent specified herein:

Federal Specifications:

PPP-B-585 - Boxes, Wood, Wirebound.
PPP-B-591 - Boxes, Shipping, Fiberboard, Wood-Cleated.
PPP-B-601 - Boxes, Wood, Cleated-Plywood.
PPP-B-621 - Boxes, Wood, Nailed and Lock-Corner.
PPP-B-636 - Boxes, Shipping, Fiberboard.
PPP-B-1055 - Barrier Material, Waterproofed, Flexible.
PPP-C-650 - Crates, Wood, Open and Covered.
PPP-T-60 - Tare Packaging, Waterproof.

Federal Standard:

Fed. Std. No. 123 - Marking for Domestic Shipment (Civil Agencies).

(Activities outside the Federal Government may obtain copies of Federal Specifications, Standards, and Handbooks as outlined under General Information in the Index of Federal Specifications and Standards and at the prices indicated in the Index. The Index, which includes cumulative monthly supplements as issued, is for sale on a subscription basis by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

(Single copies of this specification and other Federal Specifications required by activities outside the Federal Government for bidding purposes are available without charge from Business Service Centers at the General Services Administration Regional Offices in Boston, New York, Washington, DC, Atlanta, Chicago, Kansas City, MO, Fort Worth, Denver, San Francisco, Los Angeles, and Seattle, WA.

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(Federal Government activities may obtain copies of Federal Specifications, Standards, and Handbooks and the Index of Federal Specifications and Standards from established distribution points in their agencies.)

Military Standards:

- MIL-STD-105 - Sampling Procedures and Tables for Inspection by Attributes.
- MIL-STD-129 - Marking for Shipment and Storage.

(Copies of Military Specifications and Standards required by suppliers in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)

2.2 Other publications. The following documents, form a part of this specification to the extent specified herein. Unless a specific issue is identified, the issue in effect on date of invitation for bids or request for proposal shall apply.

American Society for Testing and Materials (ASTM) Standards:

- D 545 - Testing Preformed Expansion Joint Fillers for Concrete (Nonextruding and Resilient Types).
- D 994 - Specification for Preformed Expansion Joint Filler for Concrete (Bituminous Type).
- D 1751 - Specification for Preformed Expansion Joint Fillers for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types).
- D 1752 - Specification for Preformed Sponge Rubber and Cork Expansion Joint Fillers for Concrete Paving and Structural Construction.

(Application for copies should be addressed to the American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.)

Uniform Classification Committee, Agent:

Uniform Freight Classification.

(Application for copies should be addressed to the Uniform Classification Committee, Room 1106, 222 South Riverside Plaza, Chicago, IL 60606.)

National Motor Freight Traffic Association, Inc., Agent:

National Motor Freight Classification.

(Application for copies should be addressed to the American Trucking Association, Inc., Tariff Order Section, 1616 P Street, N.W., Washington, DC 20036.)

3. REQUIREMENTS

3.1 Type I, asphalt fiber and asphalt cork, nonextruding and resilient. Type filler shall meet the requirements of ASTM D 1751 (see 4.4.2).

3.2 Type II, sponge rubber and cork. Type II, classes A, B, and C fillers shall meet the requirements of ASTM D 1752 (see 4.4.2). Color of class A sponge rubber shall be gray in accordance with ASTM D 1752, or any other color, as specified (see 6.2).

3.3 Type III, plain bituminous, encased asphalt or tar. Type III filler shall meet the requirements of ASTM D 994 (see 4.4.3).

3.4 Dimensions. Dimensions of fillers shall be in accordance with table I, and as specified (see 6.2).

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TABLE I. Dimensions of fillers

Type, class	Thickness		Length		Width
	Inches (mm)		Feet (m)		Inches (cm)
Type I	1/4, 3/8, 1/2, 3/4, 1 (6.3, 9.5, 13, 19, 25)		5, 10, 11, 12, 12-1/2 (1.5, 3.0, 3.3, 3.6, 3.8)		2 to 48 (5.1 to 120)
Type II					
Class A	1/4, 3/8, 1/2, 5/8, 3/4, 1 (6.3, 9.5, 13, 16, 19, 25)		5, 10 (1.5, 3.0)		2 to 48 (5.1 to 120)
Class B	1/4, 3/8, 1/2, 3/4, 1 (6.3, 9.5, 13, 19, 25)		5, 10 (1.5, 3.0)		2 to 36 (5.1 to 92)
Class C	1/4, 3/8, 1/2, 3/4, 1 (6.3, 9.5, 13, 19, 25)		5, 10 (1.5, 3.0)		2 to 36 (5.1 to 92)
Type III	1/4, 3/8, 1/2, 3/4, 1 (6.3, 9.5, 13, 19, 25)		5, 6, 10 1.5, 1.8, 3.0		2 to 36 (5.1 to 92)

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified, the supplier may utilize his own facilities or any other commercial laboratory acceptable to the Government. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to assure that supplies and services conform to prescribed requirements.

4.2 Sampling.

4.2.1 Lot. Unless otherwise specified (see 6.2), a lot shall consist of all of the same type, class, and size of joint filler offered for delivery at the same time.

4.2.2 Sampling for dimensional and visual examination of end item. Sampling shall be in accordance with MIL-STD-105, using inspection level S-3. The sample unit shall be one completely fabricated joint filler.

4.2.3 Sampling for tests. Sampling for tests shall be in accordance with ASTM D 1751 for type I, ASTM D 1752 for type II and ASTM D 994 for type III fillers. Sample units for tests shall be in accordance with ASTM D 545 for types I and II and ASTM D 994 for Type III.

4.3 Examination.

4.3.1 End item. Fillers shall be examined in accordance with the classification of defects listed in table II. The acceptable quality levels (AQLs) shall be 2.5 percent defective for major defects, and 4.0 percent defective for minor defects in accordance with MIL-STD-105.

TABLE II. Classification of defects

Examine	Defects	Major	Minor
Construction and work- manship	Broken joint filler strips.....	X	
	Twist in joint filler strips.....		X
	Permanent bend in joint filler strips...	X	
	Cracked joint filler strips (not through cracks).....		X
	Damage or defects affecting function or serviceability.....	X	
Material Dimensions	Damage or defects not affecting func- tion or serviceability.....		X
	Not type or class specified.....	X	
	Not within specified tolerances or not as specified.....		X

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4.3.2 Examination of preparation for delivery requirements. An examination shall be made to determine that the packing and marking comply with the requirements in section 5. Defects shall be scored in accordance with table III. The sample unit shall be one shipping container fully prepared for delivery. Sampling shall be in accordance with MIL-STD-105. The lot size shall be the number of shipping containers in the end item inspection lot. The inspection level shall be S-2 with an AQL of 4.0 defects per hundred units.

TABLE III. Classification of preparation for delivery defects

Examine	Defects
Markings (exterior and interior)	Omitted; incorrect; illegible; improper size, location, sequence, or method of application.
Materials	Any component missing or damaged, defective, or not as specified.
Workmanship	Inadequate application of components such as incomplete closure, loose strapping, inadequate stapling. Bulging or distortion of container.

4.4 Test methods.

4.4.1 AQL. The AQL for tests shall be 4.0 percent defective for all tests and for all samples in each test.

4.4.2 Types I and II. Test asphalt fiber, asphalt cork, sponge rubber, cork, and self-expanding cork fillers in accordance with ASTM D 545 (see 3.1 and 3.2).

4.4.3 Type III. Test plain bituminous fillers in accordance with ASTM D 994 (see 3.3).

5. PREPARATION FOR DELIVERY

5.1 Packing. Pacing shall be level A, B, or C, as specified (see 6.2).

5.1.1 Level A. The filler of one type and class shall be packed in any of the following boxes or crates at the option of the contractor:

Specification	Type and class
PPP-B-585	Class 2
PPP-B-591	Class II
PPP-B-601	Overseas type
PPP-B-621	Class 2
PPP-B-636	Class, weather-resistant
PPP-C-650	Style A, type II, IV, or V

When specified (see 6.2), the filler material of one type and class shall be packed on hardwood pallets using a hardwood top deck cover. The package shall be banded securely, using standard 5/8 inch (15.9 mm) galvanized steel strapping. The gross weight of the package shall not exceed 4,500 pounds (2040 kg).

The pallet shall be double-faced, using nominal 1-inch (2.5 cm) lumber deck boards and nominal 2 by 4 inch (4.1 by 10 cm) stringers nailed with cement-coated drive screw nails. Spacing between the top deck boards of pallet shall not exceed 1-1/2 inches (3.8 cm).

The top deck cover shall consist of three longitudinal nominal 3/8 by 4 inch (9.5 by 102 mm) pieces of lumber with nominal 3/8 by 4 inch (9.5 by 102 mm) cross pieces nailed to the longitudinal members at banding points. Lumber 3/8 by 4 inches (9.5 by 102 mm) shall be used vertically at the banding points between the banding iron and the stacked joint filler. The vertical members shall be nailed to the top deck and the pallet after the banding iron is drawn taut.

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The steel strapping shall be spaced not to exceed 42 inches (107 cm). Prior to packing, class C material shall be bundled in quantities not exceeding 200 pounds, (91 kg), by wrapping in plastic film folding over the ends and banding the ends with pressure-sensitive tape conforming to PPP-I-60, Type III. The plastic wrapping bundle shall be wrapped in waterproof kraft paper folding over the ends and banding the ends with pressure-sensitive tape conforming to PPP-T-60, Type III. The waterproof kraft paper shall conform to PPP-B-1055, Class I or Class 2.

5.1.2 Level B. The filler material shall be packed as specified for level A except that containers shall be domestic type of class, as applicable.

5.1.3 Level C. Joint fillers shall be packed to insure carrier acceptance and safe delivery to destination in containers complying with National Motor Freight Classification or Uniform Freight Classification.

5.2 Marking.

5.2.1 Civil agencies. In addition to any special marking required by the contract or order, all containers shall be marked in accordance with MIL-STD-129.

6. NOTES

6.1 Intended use. Preformed expansion joint fillers are used between slabs and other units of concrete construction, and where concrete abuts to other materials.

6.1.1 Types I and II, classes A and B. These joint fillers are intended for use where it is anticipated that the filler will adequately fill the joint space at all times, or where the joints will subsequently be finished with a waterproof joint sealant.

6.1.2 Type II, class C. Self-expanding fillers are intended for use where it is desired to have the joint filler fill the joint space when the joint opens more than its constructed width. Joints may be subsequently finished with a waterproof joint sealant.

6.1.3 Type III. These joint fillers are intended for use where the amount of expansion and contraction of the concrete are relatively moderate; where an additional waterproof joint sealant is not intended to be used; or where filler resiliency is not an important factor.

6.2 Ordering data. Purchasers should select the preferred options permitted herein and include the following information in procurement documents:

- (a) Title, number, and date of this specification.
- (b) Type and class (see 1.2).
- (c) Color other than gray for class A sponge rubber (see 3.2).
- (d) Dimensions, thickness, length and width (see 3.4 and table I).
- (e) Size of lot, if different from 4.2.1.
- (f) Selection of applicable level of packing required (see 5.1).
- (g) Palletization (see 5.1.1).
- (h) Marking for shipment (see 5.2).

6.3 Metric equivalents. The metric equivalents to dimensional requirements are for information only and are not intended to be used for determining acceptance or rejection of items otherwise conforming to the requirements of the specification.

6.4 Cross reference of classifications. Cross reference data between this and the superseded specification is as follows:

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Type I - Asphalt fiber or asphalt cork, nonextruding and resilient.
 II - Rubber and cork.

Class A - Sponge rubber, and cork.
 B - Cork.
 C - Self-expanding cork.

III - Plain bituminous (encased asphalt or tar), nonresilient.

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Type I - Bituminous fiber of bituminous cork - nonextruding and resilient.
II - Nonbituminous.

Class A - Sponge rubber.
B - Cork.
C - Self-expanding cork.

III - Plain bituminous (encased asphalt or tar): nonresilient.

Custodians:

Army - ME
Navy - YD
Air Force - 84

Military Coordinating Activity:

Army - ME

Preparing activity:

GSA-FSS

User Interest:

Army - CE

Orders for this publication are to be placed with the General Services Administration, acting as an agent for the Superintendent of Documents. See section 2 of this specification to obtain extra copies and other documents referenced herein. Price 10 cents each.