

SS-C-153C
December 13, 1974

SUPERSEDING
Fed. Spec. SS-C-153B
September 20, 1971

FEDERAL SPECIFICATION

CEMENT, BITUMINOUS, PLASTIC

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 bituminous plastic cement for trowel or knife application.

1.2 Classification. The cement shall be furnished in the following types and classes, as specified (see 6.2):

Type I - Asphalt base.
Class A - Summer grade.
Class B - Winter grade.

Type II - Coal tar base.

2. APPLICABLE DOCUMENTS

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

Federal Specification:

PPP-P-704 - Pails, Metal: (Shipping, Steel, 1 through 12 Gallon).

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 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.

(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.
- MIL-STD-147 - Palletization Unit Loads, on 40" by 48" Pallets.

(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.)

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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) Standard:

D140 - Bituminous Materials, Sampling.

D1310 - Flash Point of Volatile Flammable Materials by Tag, Open-Cup Apparatus, Test for.

D2822 - Asphalt Roof Cement.

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

National Motor Freight Traffic Association, Inc., Agent:

National Motor Freight Classification.

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

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.)

3. REQUIREMENTS

3.1 Material.

3.1.1 General. The cement shall consist of a nonvolatile bituminous binder, a compatible solvent, and an inorganic filler.

3.1.1.1 Binder. The binder used in type I cement shall be primarily asphalt, and binder used in type II cement shall be primarily coal tar, but the manufacturer is allowed to add other organic products to either of these binders in order to produce cements having superior properties of working and endurance.

3.1.1.2 Solvent. The solvent shall have a flash point of not less than 80 degrees F (26.7 degrees C) when tested in accordance with 4.4.1.

3.1.1.3 Filler. The filler shall be a minimum of 50 percent asbestos fiber, with the remainder consisting of other suitable mineral stabilizers. The percentage of ash in the filler shall not be less than 80 percent when tested in accordance with 4.4.4.

3.1.2 Type I, asphalt base.

3.1.2.1 Class A, summer grade. Class A, summer grade, asphalt base cement shall contain not less than 70 percent nonvolatile material when tested in accordance with 4.4.2. The filler shall constitute between 15 and 45 percent of the cement by weight when tested in accordance with 4.4.3.

3.1.2.2 Class B, winter grade. Class B, winter grade, asphalt base cement shall contain not less than 62 percent nonvolatile material when tested in accordance with 4.4.2. The filler shall constitute between 12 and 40 percent by weight when tested in accordance with 4.4.3.

3.1.3 Type II, coal-tar base. Type II, coal-tar base cement shall contain not less than 70 percent nonvolatile material when tested in accordance with 4.4.2. The filler shall constitute between 15 and 45 percent of the cement by weight when tested in accordance with 4.4.3.

3.2 Condition in container. The cement shall be a smooth, homogeneous mixture, not thickened or livered, and having no degree of separation which cannot be easily overcome by hand stirring.

3.3 Characteristics of application. The cement shall spread readily without drawing or pulling when applied to test panels in accordance with 4.4.5.1.

3.4 Effects of temperature.

3.4.1 Behavior at 60 degrees C (140 degrees F). The cement shall show no blistering and not more than 1/4 inch of slipping when tested in accordance with 4.4.5.1.

3.4.2 Behavior at 0 degrees C (32 degrees F). There shall be no cracking of the cement, and no separation of cement and metal, when tested and evaluated in accordance with 4.4.5.2.

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 in the contract or order, the supplier may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by 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 Lot. A lot shall consist of all the cement from the same production batch which is offered for delivery at one time.

4.3 Sampling. Sampling for inspection shall be in accordance with MIL-STD-105, Inspection Level S-1. Sampling methods shall be as described in ASTM D140. Failure of any sample to comply with specification requirement shall constitute rejection of the lot (batch).

4.4 Test methods.

4.4.1 Flash point of solvent. The flash point of the solvent shall be determined in accordance with ASTM D1310 (see 3.1.1.2).

4.4.2 Nonvolatile material. Determine the percentage of nonvolatile material in accordance with 7.2 of ASTM D2822 (see 3.1.2.1, 3.1.2.2, and 3.1.3).

4.4.3 Filler. Determine the percentage of filler (asbestos and other mineral stabilizers) in accordance with 7.3 of ASTM D2822 (see 3.1.2.1, 3.1.2.2, and 3.1.3).

4.4.4 Filler ash. Determine the percentage of filler ash (residue on ignition) in accordance with 7.4 of ASTM D2822 (see 3.1.1.3).

4.4.5 Tests for behavior at high and low temperatures.

4.4.5.1 Tests for behavior at 60 degrees C (140 degrees F). Specimen preparation and tests shall be in accordance with 7.5 of ASTM D2822 (see 3.4.1).

4.4.5.2 Test for behavior at 0 degrees C (32 degrees F), (Pliability.) Using test specimens form 4.4.5.1, pliability shall be tested in accordance with 7.6 of ASTM D2822 (see 3.4.2).

4.5 Inspection of preparation for delivery. An inspection shall be made to determine that the packing and marking requirements comply with section 5.

5. PREPARATION FOR DELIVERY

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

5.1.1 Level A. Five gallons of cement shall be packed in a pail conforming to type II or III of PPP-P-704. The wire bails shall be zinc coated or otherwise protectively coated to resist corrosion. When specified (see 6.2), the pails shall be palletized in accordance with MIL-STD-147.

5.1.2 Level B. Five gallons of cement shall be packed in 5.1.1, except that surfaces of pails shall have a commercial exterior coating.

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5.1.3 Level C. Five gallons of cement shall be packed in containers of the type normally used for the product, provided that this will assure carrier acceptance at lowest rates, and will assure safe arrival at destination in compliance with the Uniform Freight Classification or the National Motor Freight Classification rules.

5.2 Marking.

5.2.1 Civil agencies. In addition to any special markings required by the contract or order, packages and shipping containers shall be marked in accordance with Fed. Std. No. 123 (see 6.2).

5.2.2 Military activities. In addition to any special markings required by the contract or order, packages and shipping containers shall be marked in accordance with MIL-STD-129 (see 6.2).

6. NOTES

6.1 Intended use. The cement covered by this specification is intended for use in the construction and repair of bituminous and metal roofing, flashing, and as an expansion joint material for concrete and masonry construction.

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

- (a) Title, number, and data of this specification.
- (b) Type and class required (see 1.2).
- (c) Level of packing required (see 5.1).
- (d) Marking required (see 5.2).
- (e) Palletizing required (see 5.1.1).

MILITARY CUSTODIAN:

Navy - YD

Preparing activity:

GSA - FSS

User Activities:

Army - ME, CE

Civil Agency Coordinating Activities:

Commerce - NBS

GSA - FSS, PCD

Military Coordinating Activity:

Interior - BPA

Navy - YD

Orders for this publication are to be placed with 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 25 cents each.