

**MIL-P-20293A****31 MAY 1962****SUPERSEDING****MIL-P-20293****21 NOVEMBER 1951**

## MILITARY SPECIFICATION

# PAPER, KRAFT, ASPHALT-IMPREGNATED

*This specification has been approved by the Department of Defense and is mandatory for use by the Departments of the Army, the Navy, and the Air Force.*

### 1. SCOPE

1.1 This specification covers one type of asphalt-impregnated kraft paper for use in the manufacture of containers for packing ammunition.

### 2. APPLICABLE DOCUMENTS

2.1 The following documents, of the issue in effect on date of invitation for bids, form a part of this specification to the extent specified herein.

### SPECIFICATIONS

#### FEDERAL

UU-P-31 — Paper; General Specifications and Methods of Testing.

### STANDARDS

#### MILITARY

MIL-STD-105 — Sampling Procedures and Tables for Inspection By Attributes.

MIL-STD-129 — Marking for Shipment and Storage.

(Copies of specifications and standards required by contractors 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 otherwise indicated, the issue in effect on date of invitation for bids shall apply.

#### UNIFORM FREIGHT CLASSIFICATION RULES

(Application for copies should be addressed to the Uniform Freight Classification Committee, 202 Union Station, Chicago 6, Ill.)

### 3. REQUIREMENTS

3.1 Material. The product shall consist of kraft paper impregnated with asphalt, constructed in such a manner as to meet the requirements of this specification.

3.2 Form and dimensions. The paper shall be furnished in rolls of the width and length as specified in the contract or order (see 6.2).

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The average number of splices per roll shall not exceed one and no one roll shall contain more than two splices. The rolls shall be evenly wound and suitably restrained from unwinding during handling operations.

**3.3 Weight.** The weight of the asphalt-impregnated paper shall be not less than  $70 \pm 1$  pounds for 500 sheets (25 x 40 in.) when determined as specified in 4.5.1.

**3.4 Asphalt content.** The asphalt content of the paper shall be not less than 30 percent by weight when tested as specified in 4.5.2.

**3.5 Bursting strength.** The average bursting strength when determined as specified in 4.5.3 shall be not less than 39 points.

**3.6 Resistance to heat.** The paper shall develop no tackiness and shall exude no oil or asphalt when tested as specified in 4.5.4.

**3.7 Workmanship.** The asphalt-impregnated paper shall be uniformly constructed, free from holes, tears, cuts, blisters, wrinkles, chafed spots, or other defects which might impair the usefulness of the material for the purpose intended. The paper shall not stick together so that the surface is damaged when the material is unwound. Any selvage shall be trimmed from the material.

#### **4. QUALITY ASSURANCE PROVISIONS**

**4.1** The supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified, the supplier may utilize his own or any other inspection facilities and services acceptable to the Government. Inspection records of the examination and tests shall be kept complete and available to the Government as specified in the contract or order. 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 asphalt-impregnated kraft paper (not to exceed 20,000 lb.) which has been manufactured from the same types and proportions of ingredients, by the same process, by one manufacturer and submitted for acceptance at one time.

**4.3 Sampling.** For purposes of sampling, the unit shall be one roll.

**4.3.1 Sampling for end item examination.** Samples for end item examination shall be selected in accordance with inspection level L-5 of MIL-STD-105 and at the acceptable quality levels shown in the classification of defects (see 4.4.1).

**4.3.2 Sampling for inspection of preparation for delivery.** Samples for inspection of packaging, packing, and marking shall be selected in accordance with inspection level L-7 of MIL-STD-105 and at the acceptable quality levels shown in 4.4.2.

**4.3.3 Sampling for tests.** Sample units for testing shall be selected in accordance with inspection level L-4 of MIL-STD-105, acceptance number zero. A sample specimen 2 yards in length full width of the roll shall be taken from each sample unit for test purposes (see 4.5).

#### **4.4 Inspection**

**4.4.1 End item examination.** The samples selected as specified in 4.3.1 shall be examined in accordance with the classification of defects and at the acceptable quality levels shown in tables I and II.

**4.4.2 Inspection of preparation for delivery.** The packaging, packing and marking of the asphalt-impregnated kraft paper shall be examined to determine conformance to the requirements of section 5 of this specification, and as required by specifications referenced therein. The acceptable quality level shall be 4.0 percent defective.

TABLE I. *Classification of defects*

Acceptable quality level 2.5 percent defective	
Examine	Defect
Form .....	Not in rolls.
Construction	Not uniform. Blisters and chafed spots. Any salvage.
Workmanship	Any hole (including pinholes), tear, cut, delamination or embrittlement <sup>1</sup> . Excessive asphalt, causing exudation. Not clean (material shows dirt, grit, oil or fragments of other foreign material <sup>2</sup> ).
Size .....	Width varies from that specified by more than $\frac{1}{8}$ inch. Average length varies from that specified.

<sup>1</sup>These requirements are not applicable to material within 6 inches of the end of the roll.

<sup>2</sup>This requirement is not applicable to the outer convolution of a roll.

TABLE II. *Classification of defects*

Acceptable quality level 4.0 percent defective	
Examine	Defect
Unwinding of rolls ...	Roll not suitably restrained from unwinding. Material is not wound evenly on rolls, causing wrinkles, creases, or telescoping. When unwound, material sticks together to the extent that unrolling causes tearing or injury to surface. More than 2 splices in a roll. Average more than 1 splice in a roll. Splice not evenly and neatly made. Splices separate during unwinding.

#### 4.5 Test procedures.

**4.5.1 Weight.** The basis weight of the asphalt-impregnated kraft paper shall be determined in accordance with method 110 of Specification UU-P-31. Report the result in pounds per 500 sheets (25 by 40 in.).

**4.5.2 Asphalt content.** Weigh about 5 grams of air-dry paper from each sample specimen (see 4.3.3) to an accuracy of 10 milligrams. Fold the strips into numerous crosswise folds, and place them in the siphon cup of an extraction apparatus of the Soxhlet or Underwriter's type. Extract with

chloroform until the asphalt color is removed. Remove the paper, air dry and weigh the paper to an accuracy of 10 milligrams. The difference between this weight and the original weight of the paper sample is the weight of the asphalt content. From this difference, calculate the percentage asphalt as follows:

$$\% \text{ Asphalt} = \frac{B - A}{A} \times 100$$

where:

A = weight of sample before extraction with chloroform

B = weight of sample after extraction of the asphalt

**4.5.3 Bursting strength.** Determine the bursting strength on each sample specimen (see 4.3.3) in accordance with method 112 of Specification UU-P-31. Report the average of the test results in points to three significant figures.

**4.5.4 Resistance to heat.** Heat samples of the paper for 18 hours in an oven at 75° C. (167°F.). Without allowing the samples to cool, determine if they have become tacky or if any exudation of asphalt or oil has taken place. Any tackiness or exudation of asphalt or oil indicates failure of the samples.

#### 5. PREPARATION FOR DELIVERY

**5.1 Packaging.** Packaging shall be level C or as specified in the contract or order.

**5.1.1 Level C.** Rolls of asphalt-impregnated kraft paper shall be packaged in accordance with the supplier's standard practice.

**5.2 Packing.** Packing shall be level C or as specified in the contract or order.

**5.2.1 Level C.** Rolls of asphalt-impregnated kraft paper shall be packed in exterior shipping containers in a manner that will ensure safe transportation at the lowest rate to

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the point of delivery. Containers shall meet the Uniform Freight Classification Rules or other carrier regulations applicable to the mode of transportation in effect at the time of shipment.

**5.3 Marking.** Unless otherwise specified by the procuring activity, individually packaged rolls and exterior containers shall be marked for shipment in accordance with Standard MIL-STD-129 and as follows:

"Paper, Kraft, Asphalt-Impregnated Specification MIL-P-20293A."

Size (width and length).

Weight

Contract or order number.

Name and address of manufacturer.

Month and year of manufacture.

**6. NOTES**

**6.1 Intended use.** The asphalt-impregnated kraft paper covered by this specification is intended for use in the manufacture of fiber ammunition containers conforming to Specification MIL-C-2439 "Containers, Ammunition, Fiber, Spirally Wound" and MIL-C-3955 "Cans, Fiber, Spirally Wound".

**6.2 Ordering data.** Procurement documents should specify the following:

- (a) Title, number and date of this specification.
- (b) Quantity of paper to be furnished.
- (c) Width of paper and length of roll to be furnished.
- (d) Packaging and packing required (if other than level C (see section 5)).
- (e) Any special marking required.
- (f) Inspection responsibility, methods and tests (see section 4).

**Notice.** When Government drawings, specifications, or other data are used for any purpose other than in connection with a definitely related Government procurement operation, the United States Government thereby incurs no responsibility nor obligation whatsoever; and the fact that the Government may have formulated, furnished, or in any way supplied the said drawings, specifications, or other data is not to be regarded by implication or otherwise as in any manner licensing the holder or any other person or corporation, or conveying any rights or permission to manufacture, use, or sell any patented invention that may in any way be related thereto.

**Custodians:**

Army—Ord  
Navy—Wep  
AF—MOA

**Preparing activity:**

Army—Ord