SAE The Engineering Society For Advancing Mobility Land Sea Air and Space®

400 COMMONWEALTH DRIVE, WARRENDALE, PA 15096

AEROSPACE MATERIAL SPECIFICATION

Submitted for recognition as an American National Standard

AMS 3798/13A

Issued 10-1-83
Revised 4-1-89

Superseding AMS 3798/13

WEBBING, LOW MODULUS ARAMID
1-23/32 (44) Wide, 7300 (32,472) Breaking Strength
Twill, Resin Treated

THIS REVISION CONTAINS ONLY EDITORIAL CHANGES.

SAENORM.COM : Click to view the full PDF of ams3798_13a

1. SCOPE:

1.1 Form: This specification covers one width and one strength of low-modulus aramid webbing.

1.2 Application: Primarily for use in construction of parachutes.

1.3 Classification: 1-23/32 inches (44 mm) wide low-modulus aramid webbing having 7300 pounds force (32,472 N) breaking strength.

2. APPLICABLE DOCUMENTS: See AMS 3798.

3. TECHNICAL REQUIREMENTS:

3.1 Basic Specification: The complete requirements for procuring the webbing described herein shall consist of this document and the latest issue of the basic specification, AMS 3798.

3.2 Construction and Properties:

3.2.1 Yarn: Yarn used in weaving the webbing shall be low-modulus aramid with a carbonization (char) temperature not lower than 355°C (671°F).

3.2.1.1 Denier and Filament Count: The yarn shall be 1200 denier ± 15 and shall consist of 600 filaments ± 15.

3.2.1.2 Ply: Final warp yarn shall be not less than 2 ply and filling yarn shall be not less than 2 ply.

SAE Technical Board Rules provide that: "This report is published by SAE to advance the state of technical and engineering sciences. The use of this report is entirely voluntary, and its applicability and suitability for any particular use, including any patent infringement arising therefrom, is the sole responsibility of the user."

AMS documents are protected under United States and international copyright laws. Reproduction of these documents by any means is strictly prohibited without the written consent of the publisher.

Copyright 1989 Society of Automotive Engineers, Inc.
All rights reserved.

Printed in U.S.A.

3.2.1.3 Twist: The final ply of yarn shall have not less than 2.5 turns per inch (25.4 mm) twist. The required denier and number of single yarns shall be twisted together (plied) in one operation.

3.2.2 Webbing: Shall conform to the following requirements:

3.2.2.1 Weave: Shall be as shown in Figure 1.

3.2.2.2 Color: Shall be FED-STD-595, Olive Green 106 solution dyed.

3.2.2.3 Width: Shall be 1.72 inches ± 0.06 (43.7 mm ± 1.5).

3.2.2.4 Thickness: Shall be 0.090 to 0.120 inch (2.29 to 3.05 mm).

3.2.2.5 Weight: Shall not exceed 2.40 ounces/yard (74.4 g/m).

3.2.2.6 Breaking Strength: Shall be not less than 7300 pounds force (32,472 N) unaged and not less than 85% of the unaged strength after aging (See 4.1).

3.2.2.7 Thread Count: Total warp ends (face and back) shall be not less than 305. Filling picks shall be not less than 17 per inch (25.4 mm).

3.2.2.8 Resin Treatment: The webbing shall have an abrasion protective resin treatment. Treatment shall be polyvinyl butyral plasticized with butyl ricinoleate applied by water dispersion, dried, and cured to form a firmly adherent and evenly distributed deposit or coating on the yarns of the webbing. The curing of the resin shall be conducted within the range 115° - 180°C (239° - 356°F).

3.2.2.9 Extractable Matter: After resin treatment, the webbing shall contain not more than 8.5% by weight of matter extractable in methyl ethyl ketone.

3.3 Length and Put-up: Webbing shall be furnished in rolls containing 90 - 110 yards (82 - 102 m). No roll shall contain more than 3 pieces and no piece shall be less than 10 yards (9 m) in length.

4. QUALITY ASSURANCE PROVISIONS: See AMS 3798 and the following:

4.1 Except for breaking strength, the physical and chemical values specified apply to the average of the determinations made on a sample unit for test purposes as specified in the applicable test methods. For breaking strength, the lot is not acceptable if the value of any individual determination is lower than the required minimum. The sample unit shall be as specified in the basic specification.

5. PREPARATION FOR DELIVERY: See AMS 3798.

6. ACKNOWLEDGMENT: See AMS 3798.

7. REJECTIONS: See AMS 3798.

8. NOTES: See AMS 3798.

SAENORM.COM : Click to view the full PDF of ams3798_13a