AEROSPACE MATERIAL SPECIFICATION

AMS3901/13	REV. B

Issued 1996-02
Revised 2008-12
Reaffirmed 2014-07

Superseding AMS3901/13A

Yarn, Organic Fiber (Para-Aramid), High Modulus 2450 (2720 d tex) Denier, 0.6% Finish

RATIONALE

AMS3901/13B has been reaffirmed to comply with the SAE five year review policy.

1. SCOPE

1.1 Form

This specification covers one type of organic fiber in the form of yarn. The product shall be formed as a multiplicity of filaments drawn together and gathered into an approximately parallel arrangement.

1.2 Classification

Organic 2450 denier (2720 d tex) yarn with 390 ksi (2689 MPa) or 21.0 g/d minimum tensile strength and 16.5 Msi (114 GPa) or 795 g/d minimum tensile modulus for use in general purpose composites requiring high tensile strength and high modulus of elasticity in tension.

2. APPLICABLE DOCUMENTS

The following publications form a part of this document to the extent specified herein. The latest issue of SAE publications shall apply. The applicable issue of other publications shall be the issue in effect on the date of the purchase order. In the event of conflict between the text of this document and references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

2.1 SAE Publications

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001. Tel: 877-606-7323 (inside USA and Canada) or 724-776-4970 (outside USA), www.sae.org

AMS3901 Organic Fiber (Para-Aramid), Yarn and Roving, High Modulus

TO PLACE A DOCUMENT ORDER: **Tel: 877-606-7323 (inside USA and Canada)**
Tel: +1 724-776-4970 (outside USA)
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http://www.sae.org/technical/standards/AMS3901/13B

3. TECHNICAL REQUIREMENTS

3.1 Basic Specification

The complete requirements for procuring the organic yarn described herein shall consist of this document and the latest issue of the basic specification.

3.2 Properties

Shall be as shown in Table 1; no individual package, based on the average of three determinations, shall have less than 90% of the lot minimum values specified in 3.2.1 and 3.2.2.

TABLE 1 - PROPERTIES

Paragraph	Requirement	Requirement Dry Twisted Yarn	Requirement Impregnated Strand	Test Method
3.2.1	Tensile Strength, min	21.0 g/d	390 ksi (2689 MPa)	4.5.1 of AMS3901
3.2.2	Modulus of Elasticity, min	795 g/d	16.5 Msi (114 GPa)	4.5.1 of AMS3901
3.2.3	Linear Density	2450 ± 80 denier (2720 ± 90 d tex)	2450 ± 80 denier (2720 ± 90 d tex)	4.5.2 of AMS3901
3.2.4	Fiber Finish, by weight	0.6% ± 0.4	0.6% ± 0.4	4.5.3 of AMS3901
3.2.5	Fiber Density	0.052 pound mass per cubic inch ± 0.001 (1.44 grams/cm^3 ± 0.03)	0.052 pound mass per cubic inch ± 0.001 (1.44 grams/cm^3 ± 0.03)	

3.3 Splicing

There shall be no more than two knots per 5-pound (2.3-kg) package in the continuous yarn.

4. QUALITY ASSURANCE PROVISIONS

Shall be in accordance with AMS3901.

5. PREPARATION FOR DELIVERY

Shall be in accordance with AMS3901.

6. ACKNOWLEDGMENT

Shall be in accordance with AMS3901.

7. REJECTION

Shall be in accordance with AMS3901.