AEROSPACE MATERIAL SPECIFICATION

AMS3901/6	REV. D

Issued 1974-06
Revised 2008-12
Reaffirmed 2014-07

Superseding AMS3901/6C

Roving, Organic Fiber (Para-Aramid), High Modulus 4560 Denier, (5070 d tex), 0.6% Finish

RATIONALE

AMS3901/6D has been reaffirmed to comply with the SAE five year review policy.

1. SCO

1.1 Form

This specification covers one type of organic fiber in the form of roving. The product shall be formed as four ends of 1140 denier (1270 d tex) yarn (AMS3901/3) collected into an approximately parallel arrangement without twist.

1.2 Classification

Organic 4560 denier (5070 d tex) roving with 500 ksi (3447 MPa) or 21.0 g/d minimum tensile strength and 17.5 Msi (121 GPa) or 815 g/d minimum tensile modulus for use in filament winding requiring high tensile strength and high modulus of elasticity in tension.

2. APPLICABL 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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SAE values your input. To provide feedback on this Technical Report, please visit
http://www.sae.org/technical/standards/AMS3901/6D

3. TECHNICA REQUIREMENTS

3.1 Basic Specification

The complete requirements for procuring the organic roving 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 five determinations, shall have less than 90% of the lot minimum values specified in 3.2.1 and 3.2.2.

TABLE 1 - PROPERTIES

Paragraph	Req	Requirement Dry Twisted Roving	Requirement Impregnated Strand	Test Method
3.2.1	Tensile Strength, min	21.0 g/d	500 ksi (3447 MPa)	4.5.1 of AMS3901
3.2.2	Modulus of Elasticity, min	815 g/d	17.5 Msi (121 GPa)	4.5.1 of AMS3901
3.2.3	Linear Density	4560 ± 240 denier (5070 ± 265 d tex)	4560 ± 240 denier (5070 ± 265 d tex)	4.5.2 of AMS3901
3.2.4	Fiber Finish, by weight	0.6% ± 0.6	0.6% ± 0.6	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)	
3.2.6	Catenary	1 inch per 50 feet (25.4 mm/15 m)	1 inch per 50 feet (25.4 mm/15 m)	4.5.4 of AMS3901

3.3 Splicing

The number of spliced ends within a ball of roving shall not exceed two times the roving weight of the ball in pounds (four times the roving weight of the ball in kilograms). There shall be no more than one spliced end in the same perpendicular plane for roving. Distance between splices shall not be less than 200 yards (183 m).

4. QUALITY ASSURANCE PROVISIONS

Shall be in accordance with AMS3901.

5. PREPARATION FOR DELIVERY

Shall be in accordance with AMS3901.

6. ACKNOWLEDGME

Shall be in accordance with AMS3901.

7. REJECTIO

Shall be in accordance with AMS3901.