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INTERNATIONAL
400 Commonwealth Drive, Warrendale, PA 15096-0001

AEROSPACE MATERIAL SPECIFICATION

SAE AMS 3901/2C

Issued JUN 1974
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Superseding AMS 3901/2B

Submitted for recognition as an American National Standard

(R)

Yarn, Organic Fiber (Para-Aramid), High Modulus OY 390 (2689)/23.8 Tensile Strength, 17.5 (121)/950 Tensile Modulus 380 Denier, (420 d tex), 0.6% Finish

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 380 denier (420 d tex) yarn with 390 ksi (2689 MPa) or 23.8 g/d tensile strength and 17.5 Msi (121 GPa) or 950 g/d nominal 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 specification 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.

2.1 SAE Publications:

Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

See AMS 3901.

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.

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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	20.8 g/d	390 ksi (2689 MPa)	4.5.1 of AMS 3901
3.2.2	Modulus of Elasticity, min	850 g/d	17.5 Msi (121 GPa)	4.5.1 of AMS 3901
3.2.3	Linear Density	380 ± 25 denier (420 ± 25 d tex)	380 ± 25 denier (420 ± 25 d tex)	4.5.2 of AMS 3901
3.2.4	Fiber Finish, by weight	0.6% ± 0.6	0.6% ± 0.6	4.5.3 of AMS 3901
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 not more than two knots per 5-pound (2.3-kg) package in the continuous yarn.

4. QUALITY ASSURANCE PROVISIONS:

See AMS 3901.

5. PREPARATION FOR DELIVERY:

See AMS 3901.

6. ACKNOWLEDGMENT:

See AMS 3901.

7. REJECTIONS:

See AMS 3901.