SAE The Engineering Resource For Advancing Mobility
400 COMMONWEALTH DRIVE WARRENDALE PA 15096

AEROSPACE MATERIAL SPECIFICATION

AMS 3892/9

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Revised

TOW, CARBON (GRAPHITE) FIBER
For Structural Composites
500 (3445) Tensile Strength, 32,000,000 (221) Tensile Modulus

1. SCOPE:

1.1 Form: This specification covers one type of carbon (graphite) fiber in the form of tow.

1.2 Classification: Carbon (graphite) tow with 500,000 psi (3445 MPa) tensile strength and 32,000,000 psi (221 GPa) tensile modulus for use in general purpose structural composites requiring high tensile strength and high modulus of elasticity in tension.

2. APPLICABLE DOCUMENTS: See AMS 3892.

3. TECHNICAL REQUIREMENTS:

3.1 Basic Specification: The complete requirements for procuring the carbon (graphite) tow described herein shall consist of this document and the latest issue of the basic specification, AMS 3892.

3.2 Storage Life: The product shall meet the interlaminar shear strength requirements of this specification when tested at any time up to 12 months from date of receipt by purchaser provided it has been stored at room temperature in the original closed container.

3.3 Properties: Shall be as follows: The requirements of 3.3.1, 3.3.2, and 3.3.3 apply to the average of four determinations for each property; no individual value shall be less than 90% of the minimum average values specified. The tests of 3.3.1 and 3.3.2 are lamina tests, normalized to 100% fiber volume. Tensile strain (3.3.3) is a calculated value, tensile strength divided by modulus of elasticity.

3.3.1	Tensile Strength, min	500,000 psi (3,445 MPa)
3.3.2	Modulus of Elasticity, min	32,000,000 psi (221,000 MPa)
3.3.3	Tensile Strain, min	1.4%