



AEROSPACE MATERIAL SPECIFICATION

AMS3914™

REV. A

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Superseding AMS3914

(R) Advanced Composites Prepreg – Nominal 250 °F Cure –
12K Tow Carbon Fiber and Epoxy Resin, Plain Weave Fabric

RATIONALE

Widely distributed and available industry material specifications are required for procurement of composite materials whose allowables data is published in CMH-17, Volume II.

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1. SCOPE

1.1 Form

This specification establishes the requirements for a nominal 250 °F cure epoxy preimpregnated carbon fiber plain weave fabric product. The prepreg is a plain weave fabric with 12K tows, a nominal fiber areal weight of 193 gsm, and nominal resin content of 42%.

1.2 Purpose

- a. The purpose of this specification is to allow procurement of a defined material corresponding to the statistically derived material properties published in CMH-17 Volume II.
- b. This material is intended for use in laminate applications with a service temperature of –65 °F to 180 °F.
- c. The composite may be used for the manufacture of primary and secondary aircraft structure.

2. APPLICABLE DOCUMENTS

The issue of the following documents in effect on the date of the purchase order forms a part of this specification to the extent specified herein. The supplier may work to a subsequent revision of a document unless a specific document issue is specified. When the referenced document has been cancelled and no superseding document has been specified, the last published issue of that document shall apply.

2.1 SAE Publications

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or +1 724-776-4970 (outside USA), www.sae.org.

Composite Materials Handbook (CMH-17)

2.2 ASTM Publications

Available from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959, Tel: 610-832-9585, www.astm.org.

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| ASTM D792 | Density and Specific Gravity (Relative Density) of Plastics by Displacement |
| ASTM D2344 | Short-Beam Strength of Polymer Matrix Composite Materials and their Laminates |
| ASTM D2734 | Void Content of Reinforced Plastics |
| ASTM D3039 | Tensile Properties of Polymeric Matrix Composite Materials |
| ASTM D3171 | Constituent Content of Composite Materials |
| ASTM D3530 | Volatiles Content of Composite Material Prepreg |
| ASTM D3529 | Matrix Solids Content and Matrix Content of Composite Prepreg |
| ASTM D3531 | Resin Flow of Carbon Fiber-Epoxy Prepreg |
| ASTM D3532 | Gel Time of Carbon Fiber-Epoxy Prepreg |
| ASTM D5379 | Shear Properties of Composite Materials by the V-Notched Beam Method |
| ASTM D7028 | Glass Transition Temperature (DMA T _G) of Polymer Matrix Composites by Dynamic Mechanical Analysis (DMA) |