



AEROSPACE MATERIAL SPECIFICATION

AMS3970™/5

Issued 2011-04
Reaffirmed 2016-12

Carbon Fiber Fabric Repair Prepreg, 120 °C (250 °F) Vacuum Curing
Part 5 - Purchasing Specification for Companion Non-Structural
Glass Fiber Fabric Prepreg

RATIONALE

AMS3970/5 has been reaffirmed to comply with the SAE five-year review policy.

FOREWORD

This Purchasing Specification (PS), AMS3970/5, belongs to the Technical Specification system explained in AMS3970.

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1. SCOPE

The PS, AMS3970/5, specifies the batch release and delivery requirements for the companion non-structural glass fiber fabric prepreg.

1.1 Limitation

This specification relates to qualified companion non-structural glass fiber fabric prepreg listed in the associated PRI QPL AMS3970.

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 724-776-4970 (outside USA), www.sae.org.

AMS3970 Carbon Fiber Fabric Repair Prepreg, 120 °C (250 °F) Vacuum Curing Part 0 - Introduction

AMS3970/1 Carbon Fiber Fabric Repair Prepreg, 120 °C (250 °F) Vacuum Curing Part 1 - General Requirements

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.

ASTM D 3529/D 3529M Standard Test Method for Matrix Solids Content and Matrix Content of Composite Prepreg

ASTM D 3530/D 3530M Standard Test Method for Volatile Content of Composite Material Prepreg

ASTM D 3532 Standard Test Method for Gel Time of Carbon Fiber-Epoxy Prepreg

ASTM D 3776 Standard Test Method for Mass per Unit Area (Weight) of Fabric

ASTM D 3990 Terminology Relating to Fabric Defects

ASTM E 1252 Standard Practice for General Techniques for Qualitative Infrared Analysis

2.3 ISO Publications

Available from International Organization for Standardization, 1, rue de Varembe, Case postale 56, CH-1211 Geneva 20, Switzerland, Tel: +41-22-749-01-11, www.iso.org.

ISO 11357-2 Plastics - Differential Scanning Calorimetry (DSC) - Part 2: Determination of Glass Transition Temperature - First Edition

ISO 11357-5 Plastics - Differential Scanning Calorimetry (DSC) - Part 5: Determination of Characteristic Reaction-Curve Temperatures and Times, Enthalpy of Reaction and Degree of Conversion

2.4 EN Publications

Available from CEN-comite, European de Normalisation, Secretariat Central, Rue de Stassart 36, B-1050 Bruxelles, Belgium or www.cenorm.be.

EN 2329	Aerospace Series: Textile Glass Fibre Preimpregnates, Test Method for the Determination of Mass per Unit Area
EN 2330	Aerospace Series: Textile Glass Fibre Preimpregnates, Test Method for the Determination of the Content of Volatile Matter
EN 2331	Aerospace Series: Textile Glass Fibre Preimpregnates, Test Method for the Determination of the Resin and Fibre Content and the Mass of Fibre per Unit Area
EN 6040	Aerospace Series: Analysis of Non-Metallic Materials (Uncured) by High Performance Liquid Chromatography (HPLC)
EN 6041	Aerospace Series: Analysis of Non-Metallic Materials (Uncured) by Differential Scanning Calorimetry (DSC)
EN 6042	Aerospace Series: Analysis of Organic Compounds by Infrared Spectroscopy
EN 6043	Aerospace Series: Fiber Reinforced Plastics, Determination of Gel Time and Viscosity

2.5 SACMA Publications

Available from American Composites Manufacturers Association, 1010 North Glebe Road, Suite 450, Arlington, VA 22201 or www.acmanet.org.

SACMA SRM 20R-94	High Performance Liquid Chromatography of Thermoset Resins, Issued 1994
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2.6 PRI Publications

Available from Performance Review Institute, 161 Thorn Hill Road, Warrendale PA 15086-7527, Tel: 724-772-1616, www.pri-network.org.

PRI QPL AMS3970	Qualified Product List of AMS3970
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3. DEFINITIONS

Refer to AMS3970/1.

4. REQUIREMENTS

The prepreg to be delivered shall meet the general requirements in accordance with AMS3970/1 and the requirements of this PS and Appendix of PRI QPL AMS3970 of the material to be purchased.

4.1 Defects

Definition of defect description terms are per ASTM D 3990.

Defects are defined in AMS3970/1.

A defect area is defined as the length of the defect, if that defect exceeds specified limits, multiplied by the roll width. The cumulative defective area in a roll shall not exceed 10% of the roll area.

All defects within a length of one linear meter are counted as one defective area.