# AEROSPACE MATERIAL SPECIFICATION

**AMS3961™**

Issued 2015-12

## 350 °F Autoclave Cure, Low Flow Toughened Epoxy Prepregs

RATIONALE

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

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# 1. SCOPE

The intent of this specification is for the procurement of the material listed on the QPL and, therefore, no qualification or equivalency threshold values are provided. Users that intend to conduct a new material qualification or equivalency program shall refer to the Quality Assurance section of this base specification, AMS3961.

All material qualification and equivalency data has been archived and is available for review upon request. Contact the CMH-17 Secretariat (www.cmh17.org) for additional information.

## 1.1 Form

This specification and its associated detail specifications establish the requirements for a 350 °F autoclave cure, continuous fiber (“unidirectional tape and fabric prepreg”) impregnated with a modified B-staged epoxy resin.

### 1.1.1 Detail Specification

This base specification contains basic fiber reinforced epoxy prepreg material requirements that apply to every product. The detail specifications contain additional or superseding properties and requirements that apply to a specific product.

## 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.

b. The materials qualified to this specification are designed specifically for vacuum-bag autoclave cure in accordance with 4.5.

c. This specification is developed based on the material properties that are available publicly. The purchaser may specify additional requirements beyond those defined in this specification, especially when the purchaser has generated additional material properties beyond those available publicly or when the application has other requirements. The additional requirements are subject to supplier review and approval.

d. The use of this specification does not guarantee material or structural performance. Material users should be actively involved in evaluating material performance and quality including, but not limited to, performing regular purchaser quality control tests, performing periodic equivalency/additional testing, participating in material change management activities, conducting statistical process control, and conducting regular supplier audits.

e. This material is intended for use in laminate applications with a service temperature range of -65 to 250 °F.

f. This composite material may be used for the manufacture of primary and secondary aircraft structure.

## 1.3 Classification

### 1.3.1 Type

Type shall specify the nominal prepreg resin content. For example:
Type 35 – Nominal resin content 35% by weight
Type 38 – Nominal resin content 38% by weight

### 1.3.2 Class

Class shall specify prepreg product form. For example:
Class 1 – Unidirectional carbon fiber prepreg tape
Class 2 – Woven carbon fiber fabric prepreg

### 1.3.3 Grade

Grade shall specify nominal fiber areal weight in grams per square meter (gsm). For example:
Grade 190 – 190 gsm nominal fiber areal weight
Grade 193 – 193 gsm nominal fiber areal weight