



AEROSPACE MATERIAL SPECIFICATION

AMS6885™/5

Issued 2021-02
Reaffirmed 2026-05

Unidirectional Carbon Fiber Tape Epoxy Repair Prepreg, Vacuum Curing
Part 5 - Material Specification for Unidirectional Carbon Fiber Tape Epoxy Prepreg
for Repair and Film Adhesive for Repair, 120 to 145 °C (250 to 290 °F) Curing

RATIONALE

AMS6885/5 defines the requirements of a unidirectional carbon fiber tape epoxy prepreg for repair and film adhesive for repair to be cured in the range of 120 to 145 °C (250 to 290 °F).

AMS6885/5 has been reaffirmed to comply with the SAE Five-Year Review policy.

A reaffirmed status is given to technical reports that have been reviewed by the technical committee and deemed to be current with no need for immediate revision. No changes have been made to this document as a result of this review.

FOREWORD

AMS6885/5 belongs to the Technical Specification system explained in AMS6885.

TABLE OF CONTENTS

1.	SCOPE	3
1.1	Classification	3
1.1.1	Grade	3
2.	APPLICABLE DOCUMENTS	3
2.1	SAE Publications	3
2.2	PRI Publications	3
2.3	Other Publications	3
2.4	Definitions	4
3.	REQUIREMENTS	4
3.1	General Requirements	4
3.1.1	Material Description	4
3.1.2	Cure Cycle	4
3.1.3	Work Life and Storage Life	5
3.2	Specific Requirements	5
3.2.1	Requirements for Uncured Carbon Fiber Tape Prepreg and Uncured Film Adhesive	6
3.2.2	Requirements for Cured Carbon Fiber Tape Prepreg and Cured Film Adhesive	8
3.2.3	Requirements for Main Laminate Composite Properties	9
3.2.4	Requirements for Fluid Resistance	11
3.2.5	Requirements for Composite Design Related Properties	12
3.2.6	Requirements for Composite Joint Properties	13
3.2.7	Requirements for Composite Sandwich Properties	14
3.2.8	Requirements for Cured Film Adhesive - Bond Line Properties	14
4.	NOTES	15
4.1	Revision Indicator	15

SAE Executive Standards Committee Rules provide that: "This report is published by SAE to advance the state of technical and engineering sciences. The use of this report is entirely voluntary, and its applicability and suitability for any particular use, including any patent infringement arising therefrom, is the sole responsibility of the user."

SAE reviews each technical report at least every five years at which time it may be revised, reaffirmed, stabilized, or cancelled. SAE invites your written comments and suggestions.

Copyright © 2026 SAE International

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, or used for text and data mining, AI training, or similar technologies, without the prior written permission of SAE.

TO PLACE A DOCUMENT ORDER: Tel: 1-877-606-7323 (U.S. and Canada only)
Tel: 1-724-776-4970 (outside U.S. and Canada)
Fax: 724-776-0790
Email: CustomerService@sae.org
http://www.sae.org

SAE WEB ADDRESS:

Full document details: SAE AMS6885_5

For more information on this standard, visit
<https://www.sae.org/standards/content/AMS6885/5/>

Documents

Don't visit Sharing Hub

Figure 1	Normal cleanrooms conditions.....	5
Table 1	Carbon fiber tape prepreg description	4
Table 2	Film adhesive description.....	4
Table 3	Cure cycle	4
Table 4	Carbon fiber tape prepreg and film adhesive work life and storage life.....	5
Table 5	Physical and chemical properties of uncured carbon fiber tape prepreg.....	6
Table 6	Physical and chemical properties of uncured film adhesive	7
Table 7	Physical properties of cured carbon fiber tape prepreg	8
Table 8	Physical properties of cured film adhesive.....	8
Table 9	Main laminate composite properties (carbon fiber tape prepreg - Grade 134).....	9
Table 10	Main laminate composite properties (carbon fiber tape prepreg - Grade 194).....	10
Table 11	Fluid resistance (carbon fiber tape prepreg and composite joint).....	11
Table 12	Composite design related properties (carbon fiber tape prepreg - Grade 134 and Grade 194)	12
Table 13	Composite joint properties	13
Table 14	Composite sandwich properties	14
Table 15	Cured film adhesive - bondline properties	14

1. SCOPE

AMS6885/5 is the Material Specification (MS) which defines the requirements of a unidirectional carbon fiber tape epoxy repair prepreg capable of curing under vacuum for repair of carbon fiber reinforced epoxy structures. It also defines the requirements of an epoxy film adhesive to be applied in a co-bonding process with the prepreg for solid laminate and sandwich bonding.

1.1 Classification

1.1.1 Grade

This MS is applicable to the following grades of unidirectional carbon fiber tape epoxy repair prepreg:

Grade 134: Nominal fiber mass per unit area: 134 g/m² (3.95 oz/yd²)

Grade 194: Nominal fiber mass per unit area: 194 g/m² (5.72 oz/yd²)

And to the following grade of film adhesive:

Grade 300: Nominal mass per unit area: 300 g/m² (8.85 oz/yd²)

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.

AMS6885	Unidirectional Carbon Fiber Tape Epoxy Repair Prepreg, Vacuum Curing, Part 0 - Introduction
AMS6885/1	Unidirectional Carbon Fiber Tape Epoxy Repair Prepreg, Vacuum Curing, Part 1 - General Requirements
AMS6885/2	Unidirectional Carbon Fiber Tape Epoxy Repair Prepreg, Vacuum Curing, Part 2 - Qualification Program for Fiber, Carbon Fiber Tape Prepreg, and Film Adhesive
AMS6885/3	Unidirectional Carbon Fiber Tape Epoxy Repair Prepreg, Vacuum Curing, Part 3 - Purchasing Specification for Unidirectional Carbon Fiber Tape Epoxy Repair Prepreg
AMS6885/4	Unidirectional Carbon Fiber Tape Epoxy Repair Prepreg, Vacuum Curing, Part 4 - Purchasing Specification for Film Adhesive

2.2 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 AMS6885 Performance Review Institute - Qualified Products List of AMS6885

Individual Product Sheets (IPS) of Qualified Products, Appendix to PRI QPL AMS6885

2.3 Other Publications

Refer to Section 2 of AMS6885/1 for reference to all other documents listed within this part specification.

2.4 Definitions

Refer to AMS6885/1.

3. REQUIREMENTS

3.1 General Requirements

3.1.1 Material Description

Table 1 - Carbon fiber tape prepreg description

No.	Material Description	Requirements	
1.1	Material Type	Carbon Fiber Reinforced Epoxy Prepreg Unidirectional Tape	
1.2	Fiber	Intermediate Modulus Carbon Fiber	
1.3	Resin	Epoxy Resin	
1.4	Material Grade	Grade 134	Grade 194
1.5	Nominal Fiber Mass per Unit Area (g/m ²)	134	194
1.6	Technical Specification	AMS6885/1 AMS6885/2	

Table 2 - Film adhesive description

No.	Material Description	Requirements
2.1	Material Type	Film Adhesive
2.2	Formulation	Adhesive: Epoxy Based Carrier: Organic Polymer
2.3	Material Grade	Grade 300
2.4	Nominal Mass per Unit Area (g/m ²)	300
2.5	Carrier Type	Mat
2.6	Technical Specification	AMS6885/1 AMS6885/2

3.1.2 Cure Cycle

Table 3 - Cure cycle

No.	Cure Parameters	Units	Requirements ⁽¹⁾⁽²⁾
3.1	Heating Rate	°C/min	1 to 3
3.2	Cure Temperature	°C	120 to 145
3.3	Cure Time	min	⁽³⁾
3.4	Cure Pressure	bar	Under Vacuum >0.7
3.5	Cooling Rate	°C/min	5 maximum

⁽¹⁾ The cure cycle shall be suitable for carbon fiber tape prepreg and film adhesive co-cure.

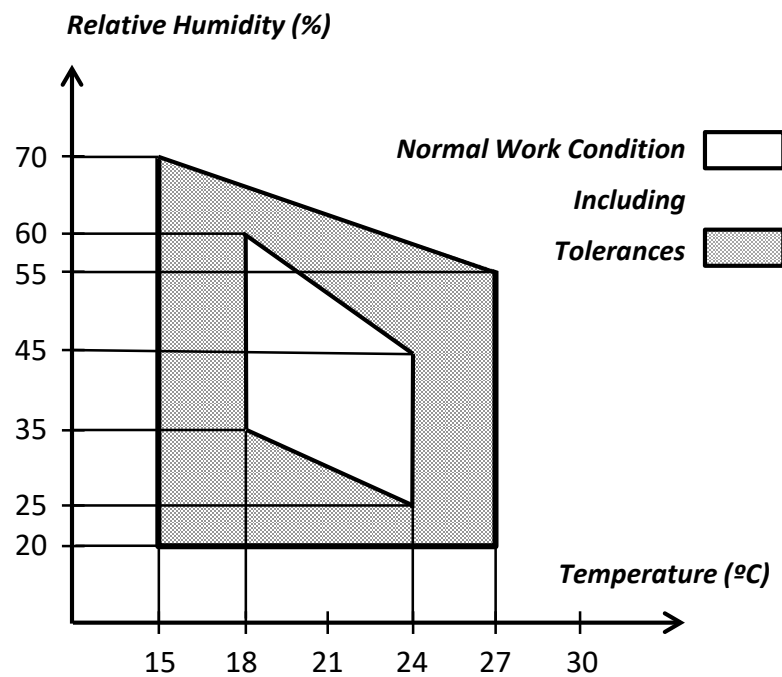
⁽²⁾ Specific parameter values to be defined during qualification and recorded in the relevant IPS.

⁽³⁾ Target value <240 min.

3.1.3 Work Life and Storage Life

Table 4 - Carbon fiber tape prepreg and film adhesive work life and storage life

No.	Property	Units	Requirements
4.1	Work Life In Clean Area Conditions (see Figure 1) In Repair Area Conditions (maximum 30 °C/75% RH)	Days	≥10
4.2	Storage Life at - 18 °C or Below from Date of Shipment	Months	≥12

**Figure 1 - Normal cleanrooms conditions**

3.2 Specific Requirements

In accordance with [Tables 5](#) to [15](#). For qualification, all tests shall be performed. For release, refer to AMS6885/3 and AMS6885/4.