



AEROSPACE MATERIAL SPECIFICATION

AMS3613™

REV. E

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Superseding AMS3613D

Film, Copper Clad Polyester

RATIONALE

This document has been determined to contain basic and stable technology which is not dynamic in nature.

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1. SCOPE

1.1 Form

This specification covers a polyester resin in the form of a film clad on one or both sides with copper foil.

1.2 Application

The product has been used typically as a base material for fabrication of flexible printed wiring for electronic circuit applications operating in the range -65 to +105 °C (-85 to 221 °F), but usage is not limited to such applications.

1.3 Classification

Product covered by this specification is classified as follows:

Type 1 - Copper clad on one face

Type 2 - Copper clad on both faces

1.3.1 The type supplied shall be the type ordered.

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.

AMS3612 Polyester Film, Electrical Grade, General Purpose

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 B 451	Copper Foil, Strip, and Sheet for Printed Circuits and Carrier Tapes
ASTM D 149	Dielectric Breakdown Voltage and Dielectric Strength of Electrical Insulating Materials at Commercial Power Frequencies
ASTM D 150	A-C Loss Characteristics and Permittivity (Dielectric Constant) of Solid Electrical Insulating Materials
ASTM D 257	D-C Resistance or Conductance of Insulating Materials
ASTM D 618	Conditioning Plastics and Electrical Insulating Materials for Testing
ASTM D 1825	Etching and Cleaning Copper-Clad Electrical Insulating Materials and Thermosetting Laminates for Electrical Testing
ASTM D 1876	Peel Resistance of Adhesives (T-Peel Test)

3. TECHNICAL REQUIREMENTS

3.1 Material

Shall consist of a polyester film to which copper foil is bonded with a suitable adhesive.

3.1.1 Polyester Film

Shall conform to AMS3612.

3.1.2 Copper Foil

Shall be electrolytically deposited conforming to ASTM B 451.

3.2 Properties

Product shall conform to the following requirements; tests shall be performed on the product supplied and in accordance with specified ASTM methods, insofar as practicable. Specimens shall be conditioned in accordance with ASTM D 618, Procedure A, prior to testing. Specimens for determination of dielectric strength (3.2.1), dielectric constant (3.2.2), dissipation factor (3.2.3) and surface resistance (3.2.4) shall have the copper removed in accordance with ASTM D 1825 prior to conditioning. Where requirements vary with thickness, use the value for the next lower thickness for thicknesses not specified.