



AEROSPACE MATERIAL SPECIFICATION

AMS-DTL-22499™**REV. B**

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Superseding AMS-DTL-22499A

Shim Stock, Laminated

RATIONALE

AMS-DTL-22499B stabilizes this document because it contains mature technology that is not expected to change and thus no further revisions are anticipated.

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NOTICE

The original issue of this document was taken directly from U.S. Military Specification MIL-DTL-22499D, and contained only minor editorial and format changes required to bring it into conformance with the publishing requirements of SAE technical standards. The initial release of this document was intended to replace MIL-DTL-22499D. Any part numbers established by the original specification remain unchanged.

The original Military Specification was adopted as an SAE standard under the provisions of the SAE Technical Standards Board (TSB) Rules and Regulations (TSB 001) pertaining to accelerated adoption of government specifications and standards. TSB rules provide for (a) the publication of portions of unrevised government specifications and standards without consensus voting at the SAE Committee level, and (b) the use of the existing government specification or standard format.

Under Department of Defense policies and procedures, any qualifications requirements and associated qualified products lists are mandatory to DOD contracts. Any requirement relating to qualified products lists (QPL's) has not been adopted by SAE and is not part of this technical report.

1. SCOPE

1.1 Scope

This specification covers the requirements for surface bonded laminated shim stock.

1.2 Classification

Shim stock shall be of the following compositions, types, and classes, as specified in the contract or purchase order (See 6.2):

Compositions:

Composition 1 - Aluminum alloy.

Composition 2 - Brass.

Composition 3 - Corrosion resisting steel.

Composition 4 - Carbon steel.
Composition 5 - Titanium alloy.
Composition 6 - Polyimide plastic.

Types:

Type I All laminations.
Type II One-half solid stock.

Classes:

Class 1 .002 inch laminations.
Class 2 .003 inch laminations.

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.

AMS4900	Titanium Sheet, Strip, and Plate, Commercially Pure, Annealed, 55 ksi (379 MPa) Yield Strength
AMS4901	Titanium Sheet, Strip, and Plate, Commercially Pure, Annealed, 70.0 ksi (485 MPa)
AMS4902	Titanium Sheet, Strip, and Plate, Commercially-Pure, Annealed 40.0 ksi (276 MPa) Yield Strength
AMS4911	Titanium Alloy, Sheet, Strip, and Plate, 6Al - 4V, Annealed
AMS4940	Titanium Sheet, Strip, and Plate, Commercially Pure, Annealed, 25.0 ksi (172 MPa) Yield Strength
AMS5513	Steel, Corrosion Resistant, Sheet, Strip and Plate
AMS5516	Steel, Corrosion Resistant, Sheet, Strip and Plate
AMS5903	Steel Sheet, Strip, and Plate, Corrosion Resistant
AMS5904	Steel Sheet and Strip, Corrosion Resistant
AMS5905	Steel Sheet and Strip, Corrosion Resistant
AMS5906	Steel Sheet and Strip, Corrosion Resistant
AMS5910	Steel Sheet, Strip, and Plate, Corrosion Resistant
AMS5911	Steel Sheet and Strip, Corrosion Resistant
AMS5912	Steel Sheet and Strip, Corrosion Resistant
AMS5913	Steel Sheet and Strip, Corrosion Resistant

AMS QQ-A-250/5 Aluminum Alloy Alclad 2024, Plate and Sheet

AMS QQ-A-250/8 Aluminum Alloy, 5052, Plate and Sheet

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 36 Brass Plate, Sheet, Strip and Rolled Bar

ASTM B 121 Leaded Brass Plate, Sheet, Strip and Rolled Bar

ASTM B 209 Aluminum and Aluminum-Alloy Sheet and Plate

ASTM B 601 Temper Designations for Copper and Copper Alloys - Wrought and Cast

ASTM D 903 Peel or Stripping Strength of Adhesive Bonds

ASTM D 5213 Polymeric Resin Film for Electrical Insulation and Dielectric Applications

2.3 ANSI Publications

Available from American National Standards Institute, 25 West 43rd Street, New York, NY 10036-8002, Tel: 212-642-4900, www.ansi.org.

ANSI/ASQC Z1.4 Sampling Procedures and Tables for Inspection by Attributes.

2.4 U.S. Government Publications

Available from DLA Document Services, Building 4/D, 700 Robbins Avenue, Philadelphia, PA 19111-5094, Tel: (215) 697-6396, <http://quicksearch.dla.mil/>.

QQ-S-698 Steel, Sheet and Strip, Low Carbon

MIL-I-24768/13 Insulation, Plastic, Laminated, Thermosetting, Cotton-Fabric-Base. Phenolic-Resin (FBE)

MIL-I-24768/15 Insulation, Plastic, Laminated, Thermosetting, Cotton-Fabric-Base. Phenolic-Resin (FBI)

3. REQUIREMENTS

3.1 First article

When specified in the contract or purchase order, preproduction samples of shim stock of the composition, type, class, nominal size and lateral dimensions specified (See 1.2 and 3.2) shall be subjected to first article inspection (See 4.3 and 6.3).

3.1.1 Specification sheets

The individual item requirements shall be as specified herein and in accordance with the applicable specification sheet. In the event of any conflict between the requirements of this specification and the specification sheets, the latter shall govern.