



# AEROSPACE MATERIAL SPECIFICATION

AMS2506™

REV. E

Issued 1971-05  
Revised 2018-06

Superseding AMS2506D

Coating of Fasteners  
Aluminum Filled, Ceramic Bonded Coating

## RATIONALE

AMS2506E results from a Five-Year Review and update of this specification with changes to Ordering Information, Electrical Resistivity 3.4.5, Periodic Tests 4.2.2 and Specimens 4.3.3.

## NOTICE

ORDERING INFORMATION: The following information shall be provided to the processor by the purchaser.

1. Purchase order shall specify not less than the following:

- AMS2506E
- Basis metal to be coated
- Precoating stress relief, if desired (see 3.2.1)
- Quantity of pieces to be coated

2. Parts manufacturing operations such as heat treating, forming, joining and media finishing can affect the condition of the substrate for coating, or, if performed after coating, could adversely affect the coated part. The sequencing of these types of operations should be specified by the cognizant engineering organization or purchaser and is not controlled by this specification.

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Technical Report, please visit  
<http://standards.sae.org/AMS2506E>**

## 1. SCOPE

### 1.1 Purpose

This specification covers the requirements for application to fasteners of a corrosion and heat resistant aluminum coating material having a thermosetting inorganic binder and the properties of the finished coating.

### 1.2 Application

This coating has been used typically to provide a coating on fasteners which is anodic to the base metal and to provide corrosion and oxidation resistance up to 1000 °F (538 °C), but usage is not limited to such applications.

### 1.3 Safety - Hazardous Materials

While the materials, methods, applications, and processes described or referenced in this specification may involve the use of hazardous materials, this specification does not address the hazards which may be involved in such use. It is the sole responsibility of the user to ensure familiarity with the safe and proper use of any hazardous materials and to take necessary precautionary measures to ensure the health and safety of all personnel involved.

## 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](http://www.sae.org).

AMS3126 Aluminum Coating Material, Corrosion and Heat Resistant, Thermosetting, Inorganic Binder

### 2.2 AIA Publications

Available from Aerospace Industries Association, 1000 Wilson Boulevard, Suite 1700, Arlington, VA 22209-3928, Tel: 703-358-1000, [www.aia-aerospace.org](http://www.aia-aerospace.org).

NASM 1312-1 Fastener Test Methods, Method 1, Salt Spray

NASM 1312-12 Fastener Test Methods, Method 12, Thickness of Metallic Coatings

## 3. TECHNICAL REQUIREMENTS

### 3.1 Coating Material

Shall conform to AMS3126.

### 3.2 Preparation

3.2.1 When specified, parts shall be stress relieved prior to coating if they have been subjected to operations which may cause detrimental residual stresses. Temperatures to which the parts are heated and time at temperature shall be such that maximum stress relief is obtained without affecting properties of the parts.

3.2.2 Any residual compressive stress-inducing operation, such as shot peening, fillet rolling, and thread rolling, shall follow stress relieving.