



AEROSPACE MATERIAL SPECIFICATION	AMS-M-3171™	REV. A
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Superseding AMS-M-3171		
Magnesium Alloy, Processes for Pretreatment and Prevention of Corrosion on		

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1. SCOPE:

1.1 Scope:

This specification covers general requirements for the apparatus, material, and procedures to be used in the processing of magnesium base alloys for the purpose of increasing their corrosion resistance and by producing surfaces suitable for organic paint finish systems.

1.2 Classification:

1.2.1 Types - The magnesium corrosion preventive treatments shall be of the following types:

Type I - Chrome Pickle Treatment

Type III - Dichromate Treatment

Type IV - Galvanic Anodizing Treatment

Type VI - Chrome Acid Brush-on Treatment

Type VII - Fluoride Anodizing Process plus Corrosion Preventive Treatment

Type VIII - Chromate Treatment

2. APPLICABLE DOCUMENTS:

The following publications, of the issues in effect on date of invitation for bids or request for proposal, form a part of this specification to the extent specified herein.

2.1 U.S. Government Publications:

Available from DODSSP, Subscription Services Desk, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.

MIL-C-46079 Coating, Epoxy, Baking Type for Magnesium Casting

MIL-STD-105 Sampling Procedures and Tables for Inspection by Attributes

3. REQUIREMENTS:

3.1 General requirements:

3.1.1 Materials: All materials used in the cleaning or treating of magnesium base alloys shall be of good quality and suitable for the purpose intended. All chemicals used in cleaning and treating shall be free from metallic impurities such as salts of heavy metals (lead, nickel, zinc, arsenic, antimony, etc.).

3.1.2 Workmanship: The treatments covered by this specification shall be controlled and operated to give a uniform surface conforming to the requirements specified herein. The surface shall be free from breaks, discontinuities, scratches, and other damage. The size and number of contact marks shall be held at a minimum.