



AEROSPACE MATERIAL SPECIFICATION

AMS-QQ-A-250/28

REV. C

Issued	1997-08
Revised	1998-09
Noncurrent	2007-04
Reaf Nonc	2012-09
Stabilized	2014-02

Superseding AMS-QQ-A-250/28B

Aluminum Alloy, 7011 Alclad 7178 Plate and Sheet
(Composition similar to UNS A87178)

RATIONALE

AMS-QQ-A-250/28C has been designated stabilized because alloy 7178 is not recommended for new designs.

STABILIZATION NOTICE

AMS-QQ-A-250/28C has been declared "STABILIZED" by AMS Committee D and AMS does not recommend its use for new design due to corrosion concerns. The products included in this document may no longer be commercially available. Previously this document was "Non-Current". This document will no longer be updated and may no longer represent standard industry practice. The last technical update of this document occurred in September 1998. Users of this document should refer any certification issues (e.g. exceptions listed on the certification report) to the cognizant engineering organization for their disposition. CAUTION: In many cases the purchaser is not the cognizant engineering organization (i.e. purchaser may be a sub tier supplier).

SAE Technical Standards Board 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 © 2014 SAE International

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of SAE.

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

SAE values your input. To provide feedback on this Technical Report, please visit <http://www.sae.org/technical/standards/AMSQA250/28C>

SAE WEB ADDRESS:

NOTICE

This document has been taken directly from Federal Specification QQ-A-250/28A and contains only minor editorial and format changes required to bring it into conformance with the publishing requirements of SAE technical standards.

The original Federal 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, (b) the use of the existing government specification or standard format, and (c) the exclusion of any qualified product list (QPL) sections.

The complete requirements for procuring 7178 aluminum alloy, 7011 alclad, plate and sheet described herein shall consist of this document and the latest issue of AMS-QQ-A-250.

1. SCOPE AND CLASSIFICATION:

1.1 Scope:

This specification covers the specific requirements for 7178 aluminum alloy, 7011 alclad, plate and sheet; the general requirements are covered in AMS-QQ-A-250. The plate and sheet covered by this specification shall be an integral composite product consisting of a heat-treatable 7178 aluminum alloy core with thin layers of a 7011 aluminum alloy anodic to the core and of approximately equal thickness, bonded to both surfaces.

1.2 Classification:

1.2.1 Tempers: The plate and sheet are classified in one of the following tempers as specified (See 6.2): O, T6, T62, T651, T76, T7651, or F temper (See 6.3). Definitions of these tempers are specified in AMS-QQ-A-250 and as follows:

- O - Annealed
- T6 - Solution-heat-treated and artificially aged.
- T62 - Solution-heat-treated from the O or F temper to demonstrate the response to heat-treatment, and artificially aged.
- T651 - Solution-heat-treated, stress relieved by stretching to produce a nominal permanent set of 2 percent but not less than 1-1/2 nor more than 3 percent, and artificially aged. Plate shall receive no further straightening after stretching.
- T76 - Solution-heat-treated and artificially aged sufficient to produce improved resistance to exfoliation.
- T7651 - Solution-heat-treated, stress relieved by stretching to produce a nominal permanent set of 2 percent but not less than 1-1/2 nor more than 3 percent, and artificially aged sufficient to produce improved resistance to exfoliation and stress corrosion cracking. Plate shall receive no further straightening after stretching.
- F - As fabricated.

2. APPLICABLE DOCUMENTS:

See AMS-QQ-A-250.

3. REQUIREMENTS:

3.1 Chemical Composition:

3.1.1 The chemical composition of the core ingots or slabs and of the cladding plates used for the manufacture of the clad plates and sheets shall conform to the requirements shown in Table I for core and cladding, respectively.