

AEROSPACE
MATERIAL
SPECIFICATION

AMS 4197

Issued 11-1-70
Revised 4-1-85

ALUMINUM ALLOY SHEET AND PLATE, ALCLAD

5.6Zn - 2.5Mg - 1.6Cu - 0.26Cr (7011 Alclad 7075; -T6 Sheet, -T651 Plate)

This specification has been declared "NONCURRENT" by the Aerospace Materials Division, SAE, as of 4-6-84. It is recommended that this specification not be specified for new designs.

This cover sheet should be attached to the original issue of the subject specification.

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AEROSPACE MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
TWO PENNSYLVANIA PLAZA, NEW YORK, N.Y. 10001

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1. **ACKNOWLEDGMENT:** A vendor shall mention this specification number in all quotations and when acknowledging purchase orders.
2. **APPLICATION:** Primarily for structural use, including machined parts subject to excessive warpage during machining, where fatigue strength and tensile properties higher than those provided by AMS 4049 are required. Certain design and processing procedures may cause this material to be susceptible to stress corrosion cracking; ARP 823 recommends practices to minimize such conditions.

3. **COMPOSITION:**

Core (7075)			Cladding (7011)		
	min	max		min	max
Zinc	5.1	- 6.1	Zinc	4.0	- 5.5
Magnesium	2.1	- 2.9	Magnesium	1.0	- 1.6
Copper	1.2	- 2.0	Manganese	0.10	- 0.30
Chromium	0.18	- 0.35	Chromium	0.05	- 0.20
Iron	--	0.50	Iron	--	0.20
Silicon	--	0.40	Silicon	--	0.15
Manganese	--	0.30	Copper	--	0.05
Titanium	--	0.20	Titanium	--	0.05
Other Impurities, each	--	0.05	Other Impurities, each	--	0.05
Other Impurities, total	--	0.15	Other Impurities, total	--	0.15
Aluminum	remainder		Aluminum	remainder	

4. **CONDITION:**

- 4.1 **Sheet:** Solution and precipitation heat treated.
- 4.2 **Plate:** Solution heat treated, stress relieved by stretching, and precipitation heat treated.
 - 4.2.1 Plate shall be stretched in the solution heat treated condition to produce a nominal permanent set of 2% but not less than 1-1/2% nor more than 3%.
 - 4.2.2 Plate shall receive no further straightening operations after stretching.

5. **TECHNICAL REQUIREMENTS:** The product shall conform to the following requirements; tensile properties shall be determined in accordance with the latest issue of AMS 2355.

- 5.1 **Cladding Thickness:** After rolling, the average cladding thickness shall be as shown. Routine measurements are not required.

Total Thickness of Composite Product Inches	Cladding Thickness Per Side % of Total Thickness	
	min	max
0.015 to 0.062, incl	3.2	--
Over 0.062 to 0.187, incl	2.0	--
Over 0.187 to 0.500, excl	1.2	--
0.500 to 4.000, incl	1.2	- 3.0



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