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400 COMMONWEALTH DRIVE, WARREN, MI 48090

**AEROSPACE
MATERIAL
SPECIFICATION**

AMS 4042F

Issued 11-1-41

Revised 10-1-81

ALUMINUM ALLOY SHEET AND PLATE, ALCLAD
4.5Cu - 1.5Mg - 0.60Mn (Alclad 2024-T36)
Width 48 in. and Under

This specification was declared "NONCURRENT" by the Aerospace Materials Division, SAE, as of 3-25-74. It is recommended that this specification not be specified for new designs.

This cover sheet should be attached to the "F" revision of the subject specification.

This specification has been declared "CANCELLED" by the Aerospace Materials Division, SAE, as of 10-1-81. By this action, subject specification number and title will be deleted from the active specification index of Aerospace Material Specifications.



Documents

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AEROSPACE MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
400 COMMONWEALTH DRIVE, WARRENDALE, PA 15096

AMS 4042F

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ALUMINUM ALLOY SHEET AND PLATE, ALCLAD
4.5Cu - 1.5Mg - 0.60Mn (Alclad 2024-T36)
Width 48 In. and Under

1. **ACKNOWLEDGMENT:** A vendor shall mention this specification number and its revision letter in all quotation and when acknowledging purchase orders.
2. **FORM:** Sheet and plate produced in widths 48 in. and under.
3. **APPLICATION:** Primarily for structural parts of good strength which are required to exhibit maximum corrosion resistance. This material, when re-solution heat treated by the user, may not have the tensile properties shown. Certain design and processing procedures may cause this material to be susceptible to stress corrosion cracking; ARP 823 recommends practices to minimize such conditions.
4. **COMPOSITION:**

	Core (2024)		Cladding (1230)	
	min	max	min	max
Ø Copper	3.8	- 4.9	Iron + Silicon	-- 0.7
Ø Magnesium	1.2	- 1.8	Copper	-- 0.10
Manganese	0.30	- 0.9	Zinc	-- 0.10
Iron	--	0.50	Manganese	-- 0.05
Silicon	--	0.50	Other Impurities, each	-- 0.05
Zinc	--	0.25	Aluminum, by difference	99.30 --
Chromium	--	0.10		
Other Impurities, each	--	0.05		
Other Impurities, total	--	0.15		
Aluminum	remainder			

- Ø 5. **CONDITION:** Solution heat treated and cold reduced approximately 6% in thickness.
- Ø 6. **TECHNICAL REQUIREMENTS:** The product shall conform to the following requirements; tensile properties shall be determined in accordance with the latest issue of AMS 2355.
- 6.1 **Cladding Thickness:** After rolling, the average cladding thickness shall be as shown. Routine measurements are not required.

	Total Thickness of Composite Product Inch	Cladding Thickness Per Side % of Total Thickness	
		min	max
Ø 0.020 to 0.062, incl		4.0	--
Ø Over 0.062 to 0.187, incl		2.0	--
Ø Over 0.187 to 0.500, excl		1.2	--
Ø 0.500		1.2	3.0