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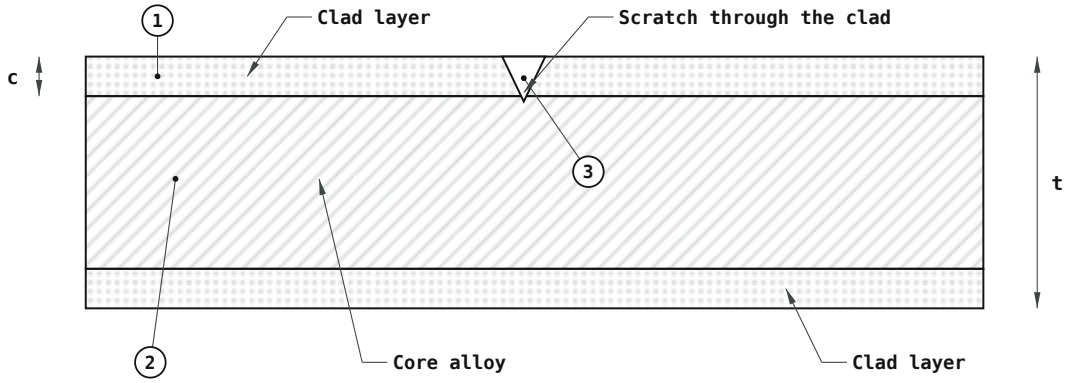
Alclad 2024 Aluminum

2024 with a thin layer of pure or corrosion-resistant aluminum on each face.

REFERENCE DRAWING — NOT APPROVED DATA · THE SRM ALWAYS GOVERNS

SECTION A–A

THROUGH ALCLAD SHEET, CLAD NOT TO SCALE



WHAT TO DO

Protect the layer: scratches through it reach the core.

Bare and Alclad are not interchangeable.

Repair clad with clad for most corrosion resistance.

PARTS LIST

#	LAYER
1	Clad: near-pure aluminum, soft
2	Core: 2024, 7075 or similar
3	Scratch: corrosion can start

NOTES

1. Dimensions in inches. Do not scale: the SRM sets the values.
2. For reference. The applicable manual always governs.
3. Based on AC 43.13-1B, FAA-H-8083-31B, MIL-HDBK-5J.

REVISIONS

REV	DESCRIPTION	DATE
A	First issue	2026-10-30

The Aviation Point. Structural repair reference

TITLE: Alclad sheet in section			
DRAWING NO.: TAP-DWG-048	REV: A	SCALE: NTS	SHEET: 1 OF 1
APPLIES TO: Alclad sheet and plate			

DO NOT SCALE DRAWING

A scratch that goes through the clad reaches the core alloy (FAA-H-8083-31B, p. 4-89). Layer thickness not to scale.

Key facts

Property	Value	Source
Ftu, L, A basis, T3 sheet	60 ksi to 0.062 in · 62 ksi 0.063–0.128 in (bare: 64 ksi)	MIL-HDBK-5J Tables 3.2.3.0(e1), (b1)
Sheet tensile stress behind the AN-3 bolt count in a splice	70,000 psi in Table 4-9 · 55,000 psi in Table 4-10	AC 43.13-1B Tables 4-9, 4-10, engineering note d
Density	0.100 lb/in³ (2.78 g/cm³)	MIL-HDBK-5J
Cladding, plate from 0.250 in	2½ % nominal	MIL-HDBK-5J Table 3.2.3.0(e1)
Bending	Slightly smaller radii than bare	AC 43.13-1B Table 4-6, note 1

Composition limits, weight percent

Element	Limit
Si	0.50
Fe	0.50
Cu	3.8–4.9
Mn	0.30–0.9
Mg	1.2–1.8
Cr	0.10
Zn	0.25
Ti	0.15
Al	Remainder

Design allowables, Alclad 2024-T3 flat sheet

Property, ksi	0.010–0.062 A	0.010–0.062 B	0.063–0.128 A	0.063–0.128 B
Ftu, L	60	61	62	63

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Property, ksi	0.010–0.062 A	0.010–0.062 B	0.063–0.128 A	0.063–0.128 B
Ftu, LT	59	60	61	62
Fty, L	44	45	45	47
Fty, LT	39	40	40	42
Fcy, L	36	37	37	39
Fcy, LT	42	43	43	45
Fsu	37	38	38	39
Fbru, e/D = 1.5	97	99	101	102
Fbru, e/D = 2.0	121	123	125	127
Fbry, e/D = 1.5	68	70	70	73
Fbry, e/D = 2.0	82	84	84	88

Bend radii (AC 43.13-1B Table 4-6)

Alloy and temper	0.016"	0.032"	0.064"	0.128"	0.182"	0.258"
2024-O	0	0 – 1t	0 – 1t	0 – 1t	0 – 1t	0 – 1t
2024-T3	1½t – 3t	2t – 4t	3t – 5t	4t – 6t	4t – 6t	5t – 7t
2024-T6	2t – 4t	3t – 5t	3t – 5t	4t – 6t	5t – 7t	6t – 10t

Specifications and product forms

Specification	Form
AMS-QQ-A-250/5	Clad sheet and plate

Key points

- **Not a source of design allowables.** Values are for reference. MMPDS and the SRM govern a repair.
- **Not a substitution approval.** A different alloy or temper needs approved data.
- **Not bare.** Values on this page do not apply to bare 2024.

SOURCES · FAA AC 43.13-1B CHG 1, Chapters 4 and 7 · FAA-H-8083-31B, AMT Handbook — Airframe, Volume 1, Chapter 4 · MIL-HDBK-5J, Chapter 3 · Aluminum Association, International Alloy Designations, rev. Aug 2018 · MMPDS

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