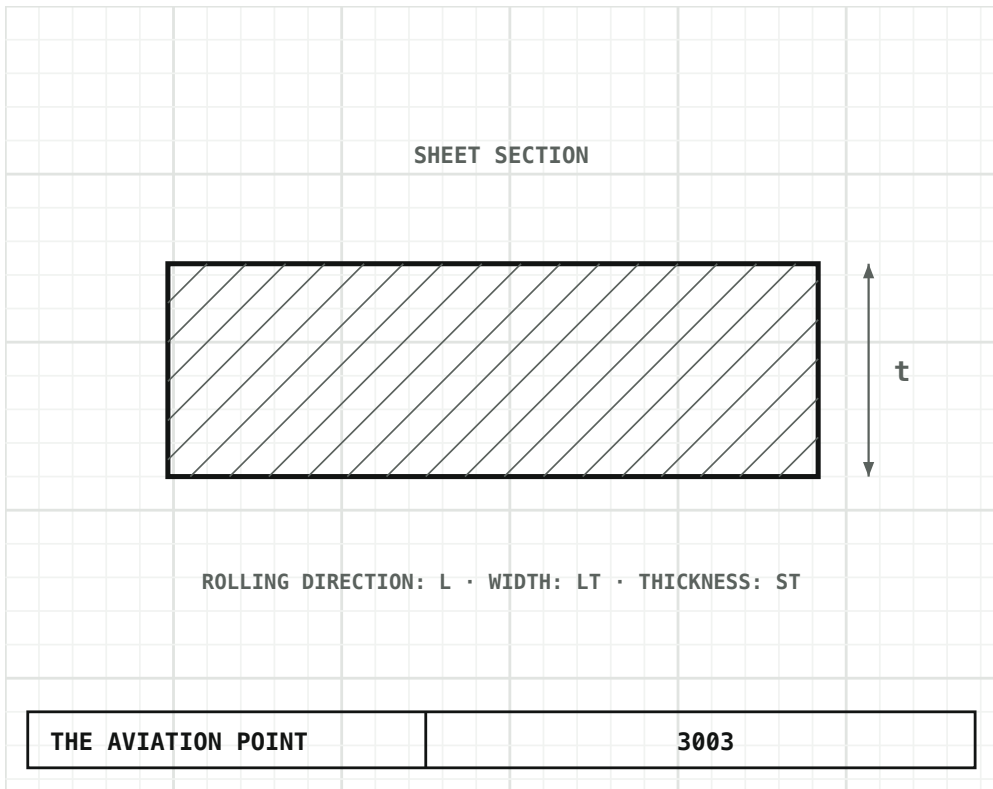
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The Aviation Point

3003 — wrought aluminum alloy

Soft and easy to work, and used like 1100 where strength is not the point: tanks, cowlings, tubing.



Schematic

Designation

Item	Value
Designation	3003
Class	Aluminum
Type	wrought aluminum alloy

Composition

Element	Limit
Si	0.6
Fe	0.7
Cu	0.05–0.20
Mn	1.0–1.5
Zn	0.10
Al	Remainder

A single number is a maximum. Other elements: 0.05 each, 0.15 total, except where the Teal Sheets say otherwise. Source: Aluminum Association Teal Sheets (Aug 2018).

Properties

Property	Value	Source
Density	0.099 lb/in³ (2.73 g/cm³)	Teal Sheets
Brinell hardness, O / H16	28 / 47	AC 43.13-1B Table 4-5
Tempers	H, strain-hardened	AC 43.13-1B Table 4-4
Fuel tank repair	May be repaired by welding	AC 43.13-1B par. 8-32
Rivets for it	1100	AC 43.13-1B par. 7-2c

3003 is not in MIL-HDBK-5J, and no strength value is given here: use the mill certificate. The AMT Handbook says it contains a small percentage of magnesium; the composition limits show manganese as the main addition.

Forms and thicknesses in stock

Distributor sheet	Listed	Thickness, in
3003H-14 Soft Aluminum Sheet	0.020"–0.063" · soft	.020, .025, .032, .040, .050, .063

As distributors list them, not a statement of what a specification allows.

Notes

- **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.
- **No strength values here.** The public sources used for this site do not print them.

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

SCAN · OPEN THIS DATA SHEET
theaviationpoint.com/parts/materials/3003/

Reference data. The aircraft manufacturer's documentation (SRM / IPC) takes precedence.

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