

Alcoa 2024-T351

Wrought Aluminum Alloy

Alcoa North American Rolled Products

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Technical Data

Product Description

Alloy 2024 was introduced by Alcoa in 1931 as an alclad sheet in the T3 temper. It was the first Al-Cu-Mg alloy to have a yield strength approaching 50,000-psi and generally replaced 2017-T4 (Duralumin) as the predominant 2XXX series aircraft alloy. With its relatively good fatigue resistance, especially in thick plate forms, alloy 2024 continues to be specified for many aerospace structural applications. 2024 variant alloys, such as higher purity 2124 and 2324, with improvements in strength and other specific characteristics, have also found application in critical aircraft structures. An improved sheet alloy for fuselage applications was introduced in 1991. Alclad C188 offers improved fracture toughness and fatigue crack growth while maintaining the strength characteristics of 2024.

Alloy 2024 is available in bare and alclad sheet and plate product forms in the annealed state and several tempers of T3, T4, and T8 types.

General

Material Status	• Commercial: Active
Literature ¹	• Technical Datasheet (English)
Availability	• Asia Pacific • North America

Metals General

Applicable Specifications	• MIL-HDBK-5 • QQ-A-250/5
Forms Available	• Bar • Extrusions • Forgings • Plate • Rod • Sheet • Wire
Metal Type	• Aluminum - Wrought - Al-Cu Alloy

Metals Type Analysis

	Nominal Value Unit
Type Analysis	
Aluminum (Balance)	90.8 to 93.1 %
Chromium	< 0.100 %
Copper	3.80 to 4.90 %
Iron	< 0.500 %
Magnesium	1.20 to 1.80 %
Manganese	0.300 to 0.900 %
Other Elements (Each)	< 0.0500 %
Other Elements (Total)	< 0.150 %
Silicon	< 0.500 %
Titanium	< 0.150 %
Zinc	< 0.250 %

Metals Mechanical

	Nominal Value Unit
Tensile Strength (Ultimate)	393 to 441 MPa
Tensile Strength (Yield), 0.2%	282 to 289 MPa
Tensile Elongation (Break)	4.00 to 12.0 %

Notes

¹ These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.

² Typical properties: these are not to be construed as specifications.



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Where to Buy

Supplier

Alcoa North American Rolled Products

Bettendorf, IA USA

Telephone: 800-523-9596

Web: http://www.alcoa.com/mill_products/north_america/en/home.asp

Distributor

Please contact the supplier to find a distributor for Alcoa 2024-T351

