

# Airware<sup>®</sup> 2198-T8 FUSELAGE SHEET

## DESCRIPTION

Constellium patented Airware<sup>®</sup> 2198-T8 is a low density aluminium-based alloy, offering high damage tolerance, high static properties, excellent fatigue and corrosion resistance. Owing to improved corrosion resistance, this alloy is suitable for application as bare material. Leveraging aluminium's infinite recyclability without property losses, Airware<sup>®</sup> 2198 can be repeatedly recycled.

## APPLICATIONS

Airware<sup>®</sup> 2198 is available in thin gauges. Due to its high damage tolerance combined with high static properties, it is used for fuselage sheets and other inner structures. Thanks to lower density and increased stiffness, considerable weight reductions can be achieved on such structures, if compared to incumbent alloys. In addition, Airware<sup>®</sup> 2198 offers excellent corrosion performance, in both exfoliation and stress corrosion, that leads to reduced maintenance costs.

## MECHANICAL PROPERTIES

Thickness mm (in)	DIR		1.6 ≤ th ≤ 3.2 mm (0.063 - 0.125 in)	3.2 ≤ th ≤ 6.3 mm (0.125 - 0.249 in)
Tensile strength MPa (ksi)	LT	min	462 (67)	476 (69)
Yield strength MPa (ksi)	LT	min	407 (59)	427 (62)
E (tension) GPa (Msi)	L	Typical	76.5 (11.1)	
Stress Corrosion Cracking MPa (ksi) ASTM G47	LT	max	350 (51)	
Density g/cm <sup>3</sup> (lb/in <sup>3</sup> )		Typical	2.7 (0.098)	

## CHEMICAL COMPOSITION LIMITS (WT %)

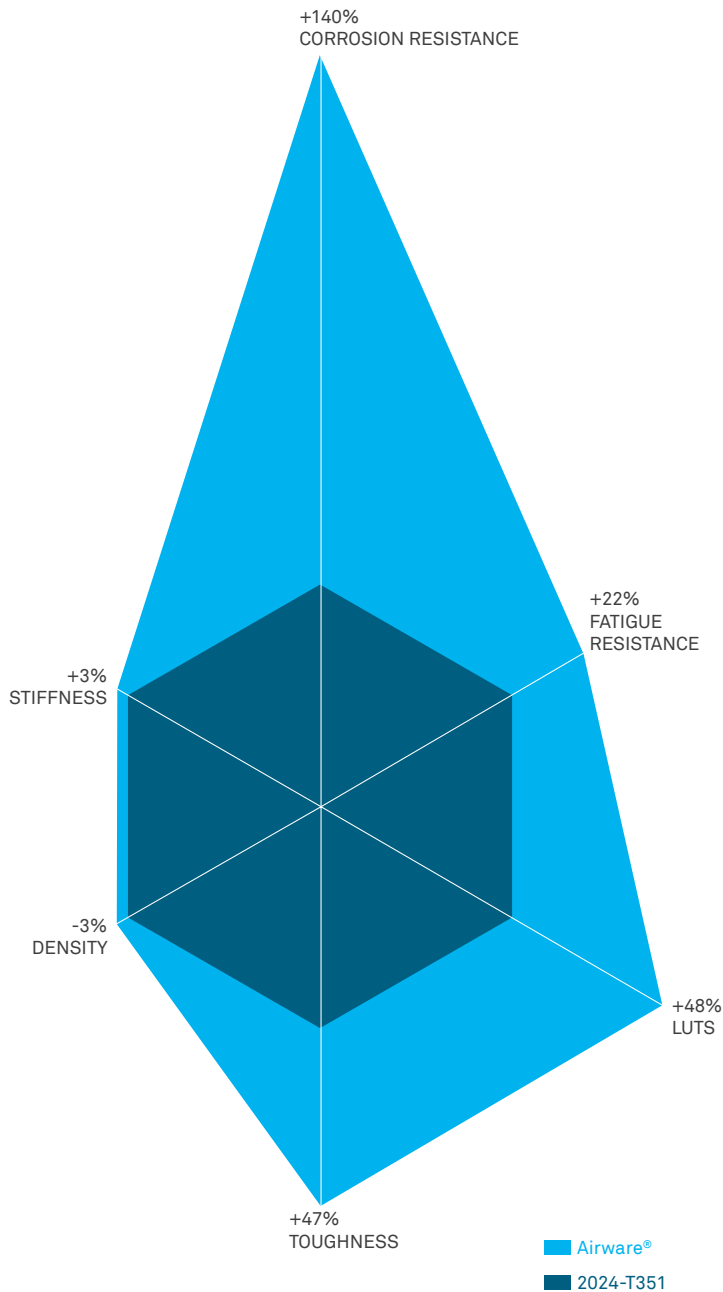
Si	0.08 max
Fe	0.10 max
Cu	2.9 - 3.5
Mn	0.50 max
Mg	0.25 - 0.80
Zn	0.35 max
Ti	0.10 max
Ag	0.10 - 0.50
Li	0.8 - 1.1
Zr	0.04 - 0.18

(According to The Aluminium Association)

## TEMPER

The T8 temper is achieved using a conventional one step aging treatment preceded by the appropriate amount of cold work, via stretching or forming. For forming operations, in particular stretchforming, Airware<sup>®</sup> 2198 can be delivered in the formable temper T3S or T3S1. The final aging practice is available.

## MATERIAL PERFORMANCE



## EASE OF MANUFACTURING

Airware® 2198 can be welded using conventional processes (e.g. Laser Beam Welding) as well as Friction Stir Welding technologies.

Constellium patented recycling process permits 100% recycling of off-cuts and machining chips resulting from the manufacturing process.

## AVAILABILITY

Airware® 2198 is available in the thickness range from 1.6 to 6.3 mm (0.063 to 0.249 in).

## PROCUREMENT SPECIFICATIONS

Airware® 2198 is covered by AMS 4412A and MMPDS. AMS covers 0.063-0.249 in.

Material Safety Data Sheet, A and B-values and a full data package are available on request.

## INFORMATION

For additional information, please contact us via email : [salesat@constellium.com](mailto:salesat@constellium.com).

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