

# Aluminium Alloy 3003 - H18

## DESCRIPTION

Aluminium Alloy 3003 is a medium strength alloy with a very good resistance to atmospheric corrosion, very good Weldability and good cold formability. It has better mechanical properties, especially at elevated temperatures in comparison to 1000 series alloys. It is most suitable for the wide range of architectural applications.

## APPLICATIONS

AA-3003 is typically used in:

- General sheet metal works requiring greater strength
- Architectural signage and canopy panels
- Insulation panels
- Profiled building sheets and panels
- Metal facades
- Industrial applications

## CHEMICAL COMPOSITION

Element	Composition %
Manganese(Mn)	1.10-1.50
Iron (Fe)	0.00 - 0.70
Copper(Cu)	0.05 - 0.20
Magnesium(Mg)	0.0 - 0.05
Silicon(Si)	0.0-0.60
Zinc(Zn)	0.0-0.10
Others(Total)	0.0-0.15
Others(Each)	0.0-0.05
Aluminium(Al)	Balance

## WELDABILITY

Weldability - Gas: Very Good  
Weldability - Arc: Very Good  
Brazeability: Excellent  
Weldability - Resistance: Good

## MECHANICAL PROPERTIES

Property	Value
Proof Stress	50 Min MPa
Tensile Strength	140-180 MPa
Elongation at 50 mm	5 Min %
Hardness Brinell	28 HB

## GENERIC PHYSICAL PROPERTIES

Property	Value
Density	2.73 g/cm <sup>3</sup>
Melting Point	655 °C
Thermal Expansion	23.1 x 10 <sup>-6</sup> /K
Modulus of Elasticity	69.5 GPa
Thermal Conductivity	180 W/m.K
Electrical Resistivity	0.034 x 10 <sup>-6</sup> Ω .m

## WELDABILITY

Machinability: Very Good  
Workability - Cold: Very Good