

3105 H28 Aluminum Sheet

Properties

General

Property	Temperature	Value
Density	23.0 °C	2.72 g/cm³

Mechanical

Property	Temperature	Value	Comment
Elastic modulus	23.0 °C	69 GPa	
Elongation A50	23.0 °C	2 - 4 %	
Plane-Strain Fracture Toughnes	23.0 °C	22 - 35 MPa·√m	Typical for Wrought 3000 Series Aluminium
Poisson's ratio	23.0 °C	0.33 [-]	Typical for Wrought 3000 Series Aluminium
Shear modulus	23.0 °C	25 - 26 GPa	Typical for Wrought 3000 Series Aluminium
Tensile strength	23.0 °C	190 MPa	
Yield strength Rp0.2	23.0 °C	165 MPa	

Thermal

Property	Temperature	Value	Comment
Coefficient of thermal expansion	20.0 °C	2.36E-5 1/K	
	100.0 °C	2.36E-5 1/K	
Melting point		635 - 655 °C	
Specific heat capacity	23.0 °C	893 - 920 J/(kg·K)	Typical for Wrought 3000 Series Aluminium
Thermal conductivity	23.0 °C	172 W/(m·K)	

Electrical

Property	Temperature	Value
Electrical conductivity	23.0 °C	2.60E+7 S/m
Electrical resistivity	23.0 °C	3.85E-8 Ω·m

Chemical properties

Property	Value
Chromium	0.2 %
Copper	0.3 %
Iron	0.7 %
Magnesium	0.2 - 0.8 %
Manganese	0.3 - 0.8 %
Other	each 0.05, total 0.15, Rest Al
Silicon	0.6 %

Titanium [0.1 %](#)

Zinc [0.4 %](#)

Technological properties

Property

Brazing general: possible with commercial processes and methods

Corrosion properties Stress corrosion cracking: no damage during operation and laboratory tests, general: very good, without protection in industrial or seawater atmosphere

General machinability General: not suitable (O, H12), poor (H14, H25, H16, H18)

Workability general (condition): good (O), acceptable (H12, H14, H25), poor(H16, H18)
