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5052 H28 Aluminum Sheet

Properties

General

Property	Temperature	Value
Density	23.0 °C	2.68 g/cm³

Mechanical

Property	Temperature	Value	Comment
Elastic modulus	23.0 °C	70 GPa	
Elongation A50	23.0 °C	2 - 4 %	
Plane-Strain Fracture Toughnes	23.0 °C	22 - 35 MPa·√m	Typical for Wrought 5000 Series Aluminium
Poisson's ratio	23.0 °C	0.33 [-]	Typical for Wrought 5000 Series Aluminium
Shear modulus	23.0 °C	26 - 26.5 GPa	Typical for Wrought 5000 Series Aluminium
Tensile strength	23.0 °C	270 MPa	
Yield strength Rp0.2	23.0 °C	220 MPa	

Thermal

Property	Temperature	Value	Comment
Coefficient of thermal expansion	20.0 °C	2.38E-5 1/K	
	100.0 °C	2.38E-5 1/K	
Max service temperature		150 °C	Typical for Wrought 5000 Series Aluminium
Melting point		605 - 650 °C	
Specific heat capacity	23.0 °C	879 - 963 J/(kg·K)	Typical for Wrought 5000 Series Aluminium
Thermal conductivity	23.0 °C	138 W/(m·K)	

Electrical

Property	Temperature	Value
Electrical conductivity	23.0 °C	2.00E+7 S/m
Electrical resistivity	23.0 °C	5E-8 Ω·m

Chemical properties

Property	Value
Chromium	0.15 - 0.35 %
Copper	0.1 %
Iron	0.4 %
Magnesium	2.2 - 2.8 %
Manganese	0.1 %
Other	each 0.05, total 0.15, Rest Al

Silicon	0.25 %
Zinc	0.1 %

Technological properties

Property	
Brazing	general: limited brazing
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: poor (O, H32), sufficient (H34, H36, H38)
Workability	general (condition): good (O), acceptable (H32, H34), poor(H36, H38)