

5005 H112 Aluminum Sheet

Properties

General

Property	Temperature	Value
Density	23.0 °C	2.7 g/cm³

Mechanical

Property	Temperature	Value	Comment
Elastic modulus	23.0 °C	69 GPa	
Elongation A100	23.0 °C	10 - 16 %	
Elongation A50	23.0 °C	8 %	
Plane-Strain Fracture Toughness	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	100 - 115 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		630 - 655 °C	
Specific heat capacity	23.0 °C	879 - 963 J/(kg·K)	Typical for Wrought 5000 Series Aluminium
Thermal conductivity	23.0 °C	201 W/(m·K)	

Electrical

Property	Temperature	Value
Electrical conductivity	23.0 °C	3.00E+7 S/m
Electrical resistivity	23.0 °C	3.33E-8 Ω·m

Chemical properties

Property	Value
Chromium	0.1 %
Copper	0.2 %
Iron	0.7 %
Magnesium	0.5 - 1.1 %
Manganese	0.2 %
Other	each 0.05, total 0.15, Rest Al

Silicon [0.3 %](#)

Zinc [0.25 %](#)

Technological properties

Property

Brazing general: Lötbar mit speziellen Techniken oder bei bestimmten Anwendungen

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, H32), poor (H14, H34, H16, H18, H36, H38)

Workability general (condition): good (O, H12, H32), acceptable (H14, H34), poor(H16, H18, H36, H38)
