

5052 H111 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	70 GPa	
Elongation	23.0 °C	19 %	
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	190 MPa	
Yield strength	23.0 °C	77 MPa	

Thermal

Property	Temperature	Value	Comment
	23.0 °C	2.4E-5 1/K	

Coefficient of thermal expansion

Max service temperature	150 °C	Typical for Wrought 5000 Series Aluminium
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Melting point	610 °C
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Specific heat capacity	23.0 °C	900 J/(kg·K)
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Thermal conductivity	23.0 °C	140 W/(m·K)
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Electrical

Property	Temperature	Value	Comment
Electrical conductivity	23.0 °C	1.80E+7 - 3.10E+7 S/m	Typical for Wrought 5000 Series Aluminium
Electrical resistivity	23.0 °C	3.3E-8 - 5E-8 Ω·m	Typical for Wrought 5000 Series Aluminium

Chemical properties

Property	Value
Aluminium	95.8 - 97.7 %
Chromium	0.15 - 0.35 %
Copper	0 - 0.1 %
Iron	0 - 0.4 %
Magnesium	2.2 - 2.8 %
Manganese	0 - 0.1 %
Other	0 - 0.15 %
Silicon	0 - 0.25 %

Zinc

[0 - 0.1 %](#)

Technological properties

Property

Workability

Good workability.
