



8011 H18 Aluminum Strip

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Properties

General

Property	Temperature	Value
Density	20.0 °C	2.71 g/cm³
	23.0 °C	2.71 g/cm³

Mechanical

Property	Temperature	Value	Comment
Elastic modulus	23.0 °C	70 GPa	
Elongation A100	20.0 °C	1 %	
Elongation A50	20.0 °C	1 - 2 %	

	23.0 °C	1 - 3 %	
Elongation A50, transverse	20.0 °C	1 - 2 %	
Hardness, Brinell	20.0 °C	50 [-]	
	23.0 °C	50 [-]	
Plane-Strain Fracture Toughnes	23.0 °C	22 - 35 MPa·√m	Typical for Wrought 8000 Series Aluminium
Poisson's ratio	23.0 °C	0.33 [-]	Typical for Wrought 8000 Series Aluminium
Tensile strength	20.0 °C	155 - 220 MPa	
	23.0 °C	160 - 220 MPa	
Tensile strength, transverse	20.0 °C	165 MPa	
Yield strength Rp0.2	20.0 °C	145 MPa	
	23.0 °C	145 MPa	
Yield strength Rp0.2, transverse	20.0 °C	145 MPa	

Thermal

Property	Temperature	Value	Comment
Coefficient of thermal expansion	20.0 °C	2.35E-5 1/K	
	100.0 °C	2.35E-5 1/K	
Melting point		640 - 655 °C	
Specific heat capacity	23.0 °C	920 J/(kg·K)	Typical for Wrought 8000 Series Aluminium

Thermal conductivity	20.0 °C	210 - 220 W/(m·K)
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	23.0 °C	210 - 220 W/(m·K)
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Electrical

Property	Temperature	Value
Electrical conductivity	20.0 °C	3.40E+7 - 3.50E+7 S/m
	23.0 °C	3.40E+7 - 3.50E+7 S/m
Electrical resistivity	23.0 °C	2.86E-8 - 2.94E-8 Ω·m

Chemical properties

Property	Value
Chromium	0.1 %
Copper	0.1 %
Iron	0.5 - 1 %
Magnesium	0.1 %
Manganese	0.1 %
Other	each 0.05, total 0.15, Rest Al
Silicon	0.4 - 0.8 %
Titanium	0.05 %
Zinc	0.1 %

Technological properties

Property

Anodizing decorative: acceptable, Protective: very good

Brazing hard brazing (with flux/ without flux): very good / very good, friction soldering: very good, soft brazing with flux: very good

Corrosion properties Seawater: sufficient, weathering: acceptable

Workability Bending / Spinning (cold): good / good, Impact extrusion (cold): good, Deep drawing / upsetting (Condition) good (H14) / good (H14)
