

3003 H26 Aluminum Sheet

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Properties

General

Property	Temperature	Value
Density	20.0 °C	2.73 g/cm³
	23.0 °C	2.73 g/cm³

Mechanical

Property	Temperature	Value	Comment
Bending Fatigue Strength	23.0 °C	70 MPa	
Bending angle 180°	23.0 °C	2 °/t	
Bending angle 90°	23.0 °C	1 - 2 °/t	
Elastic modulus	-270.0 °C	70 GPa	

	20.0 °C	60 - 70 GPa	
	23.0 °C	69 - 69.5 GPa	
	50.0 °C	69 GPa	
	100.0 °C	68 GPa	
	150.0 °C	66 GPa	
	200.0 °C	63 GPa	
	250.0 °C	57 GPa	
	300.0 °C	50 GPa	
Elongation A100	20.0 °C	2 - 5 %	
Elongation A50	20.0 °C	2 - 5 %	
	23.0 °C	2 - 4 %	
Elongation A50, transverse	20.0 °C	2 - 3 %	
Hardness, Brinell	20.0 °C	53 [-]	
	23.0 °C	53 [-]	
Plane-Strain Fracture Toughnes	23.0 °C	22 - 35 MPa·√m	Typical for Wrought 3000 Series Aluminium
Poisson's ratio	20.0 °C	0.33 [-]	
Shear modulus	20.0 °C	24 - 26.5 GPa	
	23.0 °C	26.1 GPa	
Tensile strength	20.0 °C	150 - 210 MPa	
	23.0 °C	150 - 210 MPa	
Tensile strength, transverse	20.0 °C	170 - 210 MPa	

Yield strength Rp0.2	20.0 °C	140 MPa
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	23.0 °C	140 MPa
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Yield strength Rp0.2, transverse	20.0 °C	140 MPa
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Thermal

Property	Temperature	Value
Coefficient of thermal expansion	-50.0 °C	2.15E-5 1/K
	20.0 °C	2.15E-5 - 2.52E-5 1/K
	100.0 °C	2.32E-5 1/K
	200.0 °C	2.41E-5 1/K
	300.0 °C	2.52E-5 1/K
Melting point		640 - 655 °C
Specific heat capacity	20.0 °C	892 - 893 J/(kg·K)
	23.0 °C	893 J/(kg·K)
Thermal conductivity	20.0 °C	160 - 200 W/(m·K)
	23.0 °C	159 - 200 W/(m·K)

Electrical

Property	Temperature	Value
Electrical conductivity	20.0 °C	2.20E+7 - 2.90E+7 S/m

	23.0 °C	2.30E+7 - 2.90E+7 S/m
Electrical resistivity	20.0 °C	3.4E-8 - 4.5E-8 Ω·m
	23.0 °C	3.45E-8 - 4.35E-8 Ω·m

Chemical properties

Property	Value
Copper	0.05 - 0.2 %
Iron	0.7 %
Manganese	1 - 1.5 %
Other	each 0.05, total 0.15, Rest Al
Silicon	0.6 %
Zinc	0.1 %

Technological properties

Property	
Anodizing	decorative: sufficient, 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: good, weathering: very good
Workability	Bending / Spinning (cold): very good / very good, Impact extrusion (cold): acceptable, Deep drawing / upsetting (Condition) very good (O) / very good (H12)