

1060 H18 Aluminum Sheet

Properties

General

| Property | Temperature | Value |
|----------|-------------|---------------------------------------|
| Density | 23.0 °C | 2.71 g/cm³ |

Mechanical

| Property | Temperature | Value | Comment |
|---------------------------------|-------------|--------------------------------|---|
| Bending Fatigue Strength | 23.0 °C | 45 MPa | |
| Elastic modulus | 23.0 °C | 69 GPa | |
| Elongation A50 | 23.0 °C | 1 - 6 % | |
| Hardness, Brinell | 23.0 °C | 35 [-] | |
| Plane-Strain Fracture Toughness | 23.0 °C | 22 - 35 MPa·√m | Typical for Wrought 1000 Series Aluminium |
| Poisson's ratio | 23.0 °C | 0.33 [-] | Typical for Wrought 1000 Series Aluminium |
| Shear modulus | 23.0 °C | 25.9 GPa | Typical for Wrought 1000 Series Aluminium |
| Tensile strength | 23.0 °C | 110 - 130 MPa | |
| Yield strength Rp0.2 | 23.0 °C | 85 - 125 MPa | |

Thermal

| Property | Temperature | Value | Comment |
|----------------------------------|-------------|------------------------------------|---|
| Coefficient of thermal expansion | 20.0 °C | 2.36E-5 1/K | |
| | 100.0 °C | 2.36E-5 1/K | |
| Melting point | | 645 - 655 °C | |
| Specific heat capacity | 23.0 °C | 900 - 963 J/(kg·K) | Typical for Wrought 1000 Series Aluminium |
| Thermal conductivity | 23.0 °C | 230 - 234 W/(m·K) | |

Electrical

| Property | Temperature | Value |
|-------------------------|-------------|---------------------------------------|
| Electrical conductivity | 23.0 °C | 3.50E+7 - 3.60E+7 S/m |
| Electrical resistivity | 23.0 °C | 2.78E-8 - 2.86E-8 Ω·m |

Chemical properties

| Property | Value |
|-----------|------------------------|
| Aluminium | 99.6 % |
| Copper | 0.05 % |
| Iron | 0.35 % |
| Magnesium | 0.03 % |
| Manganese | 0.03 % |
| Other | each 0.03 |

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| Silicon | 0.25 % |
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| Titanium | 0.03 % |
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| Vanadium | 0.05 % |
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|-------------|------------------------|
| Zinc | 0.05 % |
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Technological properties

Property

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| Brazing | general: possible with commercial processes and methods |
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| Corrosion properties | Stress corrosion cracking: no damage during operation and laboratory tests, general: very good, without protection in industrial or seawater atmosphere |
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| General machinability | General: not suitable (O, H12), poor (H14, H16, H18) |
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| Workability | general (condition): good (O, H12, H14), acceptable (H16, H18) |
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