

8011 O Aluminum Strip

Dimension

| Property | Value |
|-----------|-------------------------------|
| Thickness | 0.08 - 0.2 mm |

Mechanical

| Property | Temperature | Value | Comment |
|---------------------------------|-------------|--------------------------------|---|
| Elastic modulus | 23.0 °C | 68.6 - 70 GPa | |
| Elongation A100 | 20.0 °C | 1 - 20 % | |
| Elongation A50 | 20.0 °C | 1 - 30 % | according to EN 485-2 |
| | 23.0 °C | 1 - 30 % | according to EN 485-2 |
| Elongation A50, transverse | 20.0 °C | 19 - 30 % | |
| Hardness, Brinell | 20.0 °C | 25 [-] | |
| | 23.0 °C | 25 [-] | |
| Plane-Strain Fracture Toughness | 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 |
| Shear modulus | 23.0 °C | 25.73 GPa | |
| Tensile strength | 20.0 °C | 50 - 130 MPa | according to EN 485-2 |
| | 23.0 °C | 50 - 130 MPa | according to EN 485-2 |
| Tensile strength, transverse | 20.0 °C | 80 - 130 MPa | |

| | | | |
|--|---------|-----------------------------|-----------------------|
| Yield strength | 23.0 °C | 30 - 70 MPa | according to EN 485-2 |
| Yield strength Rp0.2 | 20.0 °C | 30 - 70 MPa | |
| | 23.0 °C | 30 - 70 MPa | |
| Yield strength Rp0.2, transverse | 20.0 °C | 30 MPa | |

Thermal

| Property | Temperature | Value | Comment |
|----------------------------------|-------------|--------------------------------------|---|
| Coefficient of thermal expansion | 20.0 °C | 2.35E-5 1/K | 20-100°C |
| | 100.0 °C | 2.35E-5 - 2.4E-5 1/K | 20-100°C |
| 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) | |
| | 23.0 °C | 201 - 220 W/(m·K) | |

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 - 3.5E-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 |
| Application areas | Facades: Single sheet, Sheets for composites/ sandwich Panels, Sheets for mechanized panels; Roofing: Foil for bituminous coating; Doors: Sheets for composites/ sandwich Panels, Sheets for mechanized panels; Interiors and ceilings: Sheets for mechanized panels; Furniture, Plinths, Blinds: Intermediate transformation/interior use; Heat exchangers: Fins, General applications; Tubes: Flexible tube, Pipes; Insulation; Closures: Long cups, Short cups, Easy open; Cosmetic: Cosmetic pieces; Pharmacy: Pharma and para-pharma; Semi-rigid and corrugated: Pet food, Smooth wall; Foil stock: Foil app |
| 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 |
| Welding | Excellent |

Workability

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