

Constellium DOKIMA® Rolled Plate Aluminum

Category : Metal , Nonferrous Metal , Aluminum Alloy , 6000 Series Aluminum Alloy

Material Notes:

DOKIMA® rolled plates have moderate strength properties, a very low level of impurities, an excellent corrosion resistance, a very good dimensional stability and high thermal and electrical conductivity. DOKIMA® is recommended for sensitive applications in nuclear, pharmaceutical, food, semi-conductor and telecommunication industries. Information provided by manufacturer

Order this product through the following link:

http://www.lookpolymers.com/polymer_Constellium-DOKIMA-Rolled-Plate-Aluminum.php

| Physical Properties | Metric | English | Comments |
|---------------------|-----------|---------------------------|----------|
| Density | 2.69 g/cc | 0.0972 lb/in ³ | |

| Mechanical Properties | Metric | English | Comments |
|-----------------------|---------------------------|-----------------------------|------------------|
| Hardness, Brinell | 100 | 100 | |
| | @Thickness 8.00 - 25.0 mm | @Thickness 0.315 - 0.984 in | |
| | 100 | 100 | |
| | @Thickness 25.0 - 60.0 mm | @Thickness 0.984 - 2.36 in | |
| Tensile Strength | 100 | 100 | |
| | @Thickness 60.0 - 100 mm | @Thickness 2.36 - 3.94 in | |
| | 100 | 100 | |
| | @Thickness 100 - 150 mm | @Thickness 3.94 - 5.91 in | |
| Tensile Strength | >= 260 MPa | >= 37700 psi | Temper T651 |
| | @Thickness 8.00 - 25.0 mm | @Thickness 0.315 - 0.984 in | |
| | >= 260 MPa | >= 37700 psi | Temper T651 |
| | @Thickness 25.0 - 60.0 mm | @Thickness 0.984 - 2.36 in | |
| Tensile Strength | >= 260 MPa | >= 37700 psi | Temper T651 |
| | @Thickness 60.0 - 150 mm | @Thickness 2.36 - 5.91 in | |
| | 300 MPa | 43500 psi | Typical Strength |
| | @Thickness 8.00 - 25.0 mm | @Thickness 0.315 - 0.984 in | |

| Mechanical Properties | 300 MPa Metric | 43500 psi English | Comments Typical Strength |
|---|--|---|------------------------------|
| | @Thickness 25.0 - 60.0 mm | @Thickness 0.984 - 2.36 in | |
| | 300 MPa | 43500 psi | Typical Strength |
| | @Thickness 60.0 - 100 mm | @Thickness 2.36 - 3.94 in | |
| | 300 MPa | 43500 psi | Typical Strength |
| | @Thickness 100 - 150 mm | @Thickness 3.94 - 5.91 in | |
| Tensile Strength, Yield | >= 220 MPa | >= 31900 psi | Temper T651 |
| | @Strain 0.200 %, Thickness 8.00 - 25.0 mm | @Strain 0.200 %, Thickness 0.315 - 0.984 in | |
| | >= 220 MPa | >= 31900 psi | Temper T651 |
| @Strain 0.200 %, Thickness 25.0 - 60.0 mm | @Strain 0.200 %, Thickness 0.984 - 2.36 in | | |
| | >= 220 MPa | >= 31900 psi | Temper T651 |
| | @Strain 0.200 %, Thickness 60.0 - 150 mm | @Strain 0.200 %, Thickness 2.36 - 5.91 in | |
| | 260 MPa | 37700 psi | Typical Strength |
| | @Strain 0.200 %, Thickness 8.00 - 25.0 mm | @Strain 0.200 %, Thickness 0.315 - 0.984 in | |
| | 260 MPa | 37700 psi | Typical Strength |
| | @Strain 0.200 %, Thickness 25.0 - 60.0 mm | @Strain 0.200 %, Thickness 0.984 - 2.36 in | |
| | 260 MPa | 37700 psi | Typical Strength |
| | @Strain 0.200 %, Thickness 60.0 - 100 mm | @Strain 0.200 %, Thickness 2.36 - 3.94 in | |
| | 260 MPa | 37700 psi | Typical Strength |
| | @Strain 0.200 %, Thickness 100 - 150 mm | @Strain 0.200 %, Thickness 3.94 - 5.91 in | |
| Elongation at Break | >= 5.0 % | >= 5.0 % | Temper T651 |
| | @Thickness 60.0 - 150 mm | @Thickness 2.36 - 5.91 in | |
| | >= 6.0 % | >= 6.0 % | |

| Mechanical Properties | Metric | English | Comments |
|-----------------------|---------------------------|-----------------------------|--------------------|
| | @Thickness 25.0 - 60.0 mm | @Thickness 0.984 - 2.36 in | Temper T651 |
| | >= 7.0 % | >= 7.0 % | |
| | @Thickness 8.00 - 25.0 mm | @Thickness 0.315 - 0.984 in | Temper T651 |
| | 8.0 % | 8.0 % | |
| | @Thickness 100 - 150 mm | @Thickness 3.94 - 5.91 in | Typical Elongation |
| | 9.0 % | 9.0 % | |
| | @Thickness 60.0 - 100 mm | @Thickness 2.36 - 3.94 in | Typical Elongation |
| | 10 % | 10 % | |
| | @Thickness 8.00 - 25.0 mm | @Thickness 0.315 - 0.984 in | Typical Elongation |
| | 10 % | 10 % | |
| | @Thickness 25.0 - 60.0 mm | @Thickness 0.984 - 2.36 in | Typical Elongation |
| Modulus of Elasticity | 68.3 GPa | 9910 ksi | |

| Thermal Properties | Metric | English | Comments |
|----------------------|--|---|-------------|
| CTE, linear | 23.4 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$ | 13.0 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$ | |
| | @Temperature 20.0 - 100 $^\circ\text{C}$ | @Temperature 68.0 - 212 $^\circ\text{F}$ | |
| Thermal Conductivity | 200 W/m-K | 1390 BTU-in/hr-ft ² - $^\circ\text{F}$ | Temper T651 |

| Component Elements Properties | Metric | English | Comments |
|-------------------------------|-----------------|-----------------|------------|
| Aluminum, Al | 97.65 - 99.35 % | 97.65 - 99.35 % | as balance |
| Chromium, Cr | <= 0.10 % | <= 0.10 % | |
| Copper, Cu | <= 0.10 % | <= 0.10 % | |
| Iron, Fe | <= 0.35 % | <= 0.35 % | |
| Magnesium, Mg | 0.45 - 0.90 % | 0.45 - 0.90 % | |
| Manganese, Mn | <= 0.10 % | <= 0.10 % | |
| Silicon, Si | 0.20 - 0.60 % | 0.20 - 0.60 % | |
| Titanium, Ti | <= 0.10 % | <= 0.10 % | |

| Zinc, Zn Component Elements Properties | <= 0.10 % Metric | <= 0.10 % English | Comments |
|--|-------------------------------|--------------------------------|-----------------|
| Electrical Properties | Metric | English | Comments |
| Electrical Resistivity | 0.00000340 ohm-cm | 0.00000340 ohm-cm | Temper T651 |

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