

## Constellium Planoxal® 60 Aluminum plate

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

### Material Notes:

The advantage of Planoxal®-60 plates over other standard EN AW-6082 alloy products is their low level of internal stress. They are also suitable for technical anodizing. Planoxal®-60 is mainly used for medium stressed machine elements which are subject to heavy machining, particularly for parts that require anodizing. Applications include packaging, printing and handling machines. Information provided by manufacturer

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Constellium-Planoxal-60-Aluminum-plate.php](http://www.lookpolymers.com/polymer_Constellium-Planoxal-60-Aluminum-plate.php)

Physical Properties	Metric	English	Comments
Density	2.70 g/cc	0.0975 lb/in <sup>3</sup>	

Mechanical Properties	Metric	English	Comments
Hardness, Brinell	105	105	
	@Thickness 4.99 - 20.0 mm	@Thickness 0.196 - 0.787 in	
	105	105	
	@Thickness 20.0 - 80.0 mm	@Thickness 0.787 - 3.15 in	
Tensile Strength	>= 295 MPa	>= 42800 psi	Temper T651; Standard EN 485-2
	@Thickness 12.5 - 60.0 mm	@Thickness 0.492 - 2.36 in	
	>= 295 MPa	>= 42800 psi	Temper T651; Standard EN 485-2
	@Thickness 60.0 - 80.0 mm	@Thickness 2.36 - 3.15 in	
	>= 300 MPa	>= 43500 psi	Temper T651; Standard EN 485-2
	@Thickness 6.00 - 12.0 mm	@Thickness 0.236 - 0.472 in	
	>= 310 MPa	>= 45000 psi	Temper T651; Standard EN 485-2
	@Thickness 4.99 - 6.00 mm	@Thickness 0.196 - 0.236 in	
	350 MPa	50800 psi	Typical Strength
	@Thickness 4.99 - 20.0 mm	@Thickness 0.196 - 0.787 in	
	350 MPa	50800 psi	Typical Strength
	@Thickness 20.0 - 80.0 mm	@Thickness 0.787 - 3.15 in	

Mechanical Properties	Metric >= 240 MPa	English >= 34800 psi	Comments
Tensile Strength, Yield	@Strain 0.200 %, Thickness 12.5 - 60.0 mm	@Strain 0.200 %, Thickness 0.492 - 2.36 in	Temper T651; Standard EN 485-2
	>= 240 MPa	>= 34800 psi	
	@Strain 0.200 %, Thickness 60.0 - 80.0 mm	@Strain 0.200 %, Thickness 2.36 - 3.15 in	Temper T651; Standard EN 485-2
	>= 255 MPa	>= 37000 psi	
	@Strain 0.200 %, Thickness 6.00 - 12.0 mm	@Strain 0.200 %, Thickness 0.236 - 0.472 in	Temper T651; Standard EN 485-2
	>= 260 MPa	>= 37700 psi	
	@Strain 0.200 %, Thickness 4.99 - 6.00 mm	@Strain 0.200 %, Thickness 0.196 - 0.236 in	Temper T651; Standard EN 485-2
	305 MPa	44200 psi	
	@Strain 0.200 %, Thickness 4.99 - 20.0 mm	@Strain 0.200 %, Thickness 0.196 - 0.787 in	Typical Strength
	310 MPa	45000 psi	
	@Strain 0.200 %, Thickness 20.0 - 80.0 mm	@Strain 0.200 %, Thickness 0.787 - 3.15 in	Typical Strength
Elongation at Break	>= 7.0 %	>= 7.0 %	
	@Thickness 60.0 - 80.0 mm	@Thickness 2.36 - 3.15 in	Temper T651; Standard EN 485-2
	>= 8.0 %	>= 8.0 %	
	@Thickness 12.5 - 60.0 mm	@Thickness 0.492 - 2.36 in	Temper T651; Standard EN 485-2
	>= 9.0 %	>= 9.0 %	
	@Thickness 6.00 - 12.0 mm	@Thickness 0.236 - 0.472 in	Temper T651; Standard EN 485-2
	>= 10 %	>= 10 %	
	@Thickness 4.99 - 6.00 mm	@Thickness 0.196 - 0.236 in	Temper T651; Standard EN 485-2
	11 %	11 %	
	@Thickness 4.99 - 20.0 mm	@Thickness 0.196 - 0.787 in	Typical Elongation
	11 %	11 %	

Mechanical Properties	Metric @ Thickness 20.0 - 80.0 mm	English @ Thickness 0.787 - 3.15 in	Typical Elongation Comments
Modulus of Elasticity	69.0 GPa	10000 ksi	

Thermal Properties	Metric	English	Comments
CTE, linear	23.4 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$ @Temperature 20.0 - 100 $^{\circ}\text{C}$	13.0 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$ @Temperature 68.0 - 212 $^{\circ}\text{F}$	
Thermal Conductivity	150 - 170 W/m-K	1040 - 1180 BTU-in/hr- ft <sup>2</sup> - $^{\circ}\text{F}$	temper T651

Component Elements Properties	Metric	English	Comments
Aluminum, Al	95.3 - 98.3 %	95.3 - 98.3 %	as balance
Chromium, Cr	<= 0.25 %	<= 0.25 %	
Copper, Cu	<= 0.10 %	<= 0.10 %	
Iron, Fe	<= 0.50 %	<= 0.50 %	
Magnesium, Mg	0.60 - 1.2 %	0.60 - 1.2 %	
Manganese, Mn	0.40 - 1.0 %	0.40 - 1.0 %	
Silicon, Si	0.70 - 1.3 %	0.70 - 1.3 %	
Titanium, Ti	<= 0.15 %	<= 0.15 %	
Zinc, Zn	<= 0.20 %	<= 0.20 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.00000360 - 0.00000420 ohm-cm	0.00000360 - 0.00000420 ohm-cm	temper T651

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