

Constellium PLAN 5754 Aluminum Rolled Plate

Category : Metal , Nonferrous Metal , Aluminum Alloy , 5000 Series Aluminum Alloy

Material Notes:

Rolled plates in 5754 PLAN are optimized for minimum residual stress and improved dimensional tolerances. 5754 PLAN is mainly used for low stressed mechanical components, manufactured by intensive machining. Typical applications include parts for packaging machines. Information provided by manufacturer

Order this product through the following link:

http://www.lookpolymers.com/polymer_Constellium-PLAN-5754-Aluminum-Rolled-Plate.php

Physical Properties	Metric	English	Comments
Density	2.67 g/cc	0.0965 lb/in ³	

Mechanical Properties	Metric	English	Comments
Hardness, Brinell	76	76	
	@Thickness 20.0 - 150 mm	@Thickness 0.787 - 5.91 in	
	77	77	
	@Thickness 4.00 - 20.0 mm	@Thickness 0.157 - 0.787 in	
Tensile Strength	190 - 240 MPa	27600 - 34800 psi	Temper H111; Standard EN 485-2
	@Thickness 4.00 - 12.5 mm	@Thickness 0.157 - 0.492 in	
	>= 255 MPa	>= 37000 psi	Temper H111; Standard EN 485-2
	@Thickness 12.5 - 100 mm	@Thickness 0.492 - 3.94 in	
	295 MPa	42800 psi	Typical Strength
	@Thickness 4.00 - 20.0 mm	@Thickness 0.157 - 0.787 in	
	295 MPa	42800 psi	Typical Strength
	@Thickness 20.0 - 150 mm	@Thickness 0.787 - 5.91 in	
Tensile Strength, Yield	>= 80.0 MPa	>= 11600 psi	Temper H111; Standard EN 485-2
	@Strain 0.200 %, Thickness 4.00 - 12.5 mm	@Strain 0.200 %, Thickness 0.157 - 0.492 in	
	>= 105 MPa	>= 15200 psi	Temper H111; Standard EN 485-2
	@Strain 0.200 %, Thickness 12.5 - 100	@Strain 0.200 %, Thickness 0.492 - 3.94	

Mechanical Properties	^{mm} Metric	ⁱⁿ English	Comments
	140 MPa	20300 psi	Typical Strength
	@Strain 0.200 %, Thickness 20.0 - 150 mm	@Strain 0.200 %, Thickness 0.787 - 5.91 in	
	150 MPa	21800 psi	Typical Strength
	@Strain 0.200 %, Thickness 4.00 - 20.0 mm	@Strain 0.200 %, Thickness 0.157 - 0.787 in	
Elongation at Break	>= 12 %	>= 12 %	Temper H111; Standard EN 485-2
	@Thickness 12.5 - 100 mm	@Thickness 0.492 - 3.94 in	
	>= 18 %	>= 18 %	Temper H111; Standard EN 485-2
	@Thickness 4.00 - 12.5 mm	@Thickness 0.157 - 0.492 in	
	22 %	22 %	Typical Elongation; Standard EN 485-2
	@Thickness 20.0 - 150 mm	@Thickness 0.787 - 5.91 in	
	23 %	23 %	Typical Elongation; Standard EN 485-2
	@Thickness 4.00 - 20.0 mm	@Thickness 0.157 - 0.787 in	
Modulus of Elasticity	70.0 GPa	10200 ksi	

Thermal Properties	Metric	English	Comments
CTE, linear	23.8 µm/m-°C	13.2 µin/in-°F	
	@Temperature 20.0 - 100 °C	@Temperature 68.0 - 212 °F	
Thermal Conductivity	130 - 140 W/m-K	902 - 972 BTU-in/hr-ft²-°F	

Component Elements Properties	Metric	English	Comments
Aluminum, Al	94.35 - 97.4 %	94.35 - 97.4 %	as balance
Chromium, Cr	<= 0.30 %	<= 0.30 %	
Copper, Cu	<= 0.10 %	<= 0.10 %	
Iron, Fe	<= 0.40 %	<= 0.40 %	
Magnesium, Mg	2.6 - 3.6 %	2.6 - 3.6 %	
Manganese, Mn	<= 0.50 %	<= 0.50 %	

Component Elements Properties	Metric	English	Comments
Zinc, Zn	<= 0.20 %	<= 0.20 %	
Zr+Ti	<= 0.15 %	<= 0.15 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.00000400 - 0.00000520 ohm-cm	0.00000400 - 0.00000520 ohm-cm	

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