

Constellium Alumold® 500 Forged Aluminum

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

Material Notes:

Forged thick blocks in Alumold® 500 have been developed to provide high and consistent strength across the thickness, good dimensional stability and excellent machinability, in order to respond to the high requirements of the applications in plastics transformation. Typical applications include compression or injection moulds for plastics. Information provided by manufacturer

Order this product through the following link:

http://www.lookpolymers.com/polymer_Constellium-Alumold-500-Forged-Aluminum.php

Physical Properties	Metric	English	Comments
Density	2.82 g/cc	0.102 lb/in ³	

Mechanical Properties	Metric	English	Comments
Hardness, Brinell	150	150	long-transverse direction
	@Thickness 450 - 700 mm	@Thickness 17.7 - 27.6 in	
	160	160	
	@Thickness 400 - 450 mm	@Thickness 15.7 - 17.7 in	long-transverse direction
	165	165	long-transverse direction
	@Thickness 300 - 400 mm	@Thickness 11.8 - 15.7 in	
	>= 410 MPa	>= 59500 psi	
Tensile Strength	@Thickness 450 - 700 mm	@Thickness 17.7 - 27.6 in	long-transverse direction
	>= 430 MPa	>= 62400 psi	long-transverse direction
	@Thickness 400 - 450 mm	@Thickness 15.7 - 17.7 in	
	>= 450 MPa	>= 65300 psi	
	@Thickness 300 - 400 mm	@Thickness 11.8 - 15.7 in	long-transverse direction
	450 MPa	65300 psi	long-transverse direction
	@Thickness 400 - 450 mm	@Thickness 15.7 - 17.7 in	
	480 MPa	69600 psi	
	@Thickness 450 - 700 mm	@Thickness 17.7 - 27.6 in	long-transverse direction

Mechanical Properties	520 MPa Metric	75400 psi English	Comments long-transverse direction
	@Thickness 300 - 400 mm	@Thickness 11.8 - 15.7 in	
Tensile Strength, Yield	>= 340 MPa	>= 49300 psi	
	@Strain 0.200 %, Thickness 450 - 700 mm	@Strain 0.200 %, Thickness 17.7 - 27.6 in	long-transverse direction
	>= 350 MPa	>= 50800 psi	
	@Strain 0.200 %, Thickness 400 - 450 mm	@Strain 0.200 %, Thickness 15.7 - 17.7 in	long-transverse direction
	>= 370 MPa	>= 53700 psi	
	@Strain 0.200 %, Thickness 300 - 400 mm	@Strain 0.200 %, Thickness 11.8 - 15.7 in	long-transverse direction
	420 MPa	60900 psi	
	@Strain 0.200 %, Thickness 450 - 700 mm	@Strain 0.200 %, Thickness 17.7 - 27.6 in	long-transverse direction
	460 MPa	66700 psi	
	@Strain 0.200 %, Thickness 300 - 400 mm	@Strain 0.200 %, Thickness 11.8 - 15.7 in	long-transverse direction
	460 MPa	66700 psi	
	@Strain 0.200 %, Thickness 400 - 450 mm	@Strain 0.200 %, Thickness 15.7 - 17.7 in	long-transverse direction
Elongation at Break	>= 3.0 %	>= 3.0 %	
	@Thickness 300 - 400 mm	@Thickness 11.8 - 15.7 in	long-transverse direction
	>= 3.0 %	>= 3.0 %	
	@Thickness 400 - 450 mm	@Thickness 15.7 - 17.7 in	long-transverse direction
	>= 3.0 %	>= 3.0 %	
	@Thickness 450 - 700 mm	@Thickness 17.7 - 27.6 in	long-transverse direction
	7.0 %	7.0 %	
	@Thickness 400 - 450 mm	@Thickness 15.7 - 17.7 in	long-transverse direction
	7.0 %	7.0 %	
			long-transverse direction

Mechanical Properties	Metric @Thickness 450 - 700 mm	English @Thickness 17.7 - 27.6 in	Comments
	8.0 %	8.0 %	long-transverse direction
	@Thickness 300 - 400 mm	@Thickness 11.8 - 15.7 in	
Modulus of Elasticity	72.0 GPa	10400 ksi	tensile
	73.0 GPa	10600 ksi	compression
Poissons Ratio	0.33	0.33	

Thermal Properties	Metric	English	Comments
CTE, linear	23.7 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	13.2 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	
	@Temperature 20.0 - 100 $^\circ\text{C}$	@Temperature 68.0 - 212 $^\circ\text{F}$	
Specific Heat Capacity	0.857 J/g- $^\circ\text{C}$	0.205 BTU/lb- $^\circ\text{F}$	
Thermal Conductivity	153 W/m-K	1060 BTU-in/hr-ft 2 - $^\circ\text{F}$	

Descriptive Properties	Value	Comments
Thermal Diffusivity	63 mm 2 /s	

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China