

Aleris 55HX® Aluminum (5005-H14)

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

Material Notes:

Used in interior and exterior architectural applications such as façades and claddings, ceilings and walls, and roofs. Attributes include: anodizing free of streaks; color uniformity between product batches; excellent flatness; very good deformation and bending properties; after anodizing, weather, corrosion and UV-resistant; scratch-resistant.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Aleris-55HX-Aluminum-5005-H14.php

Physical Properties	Metric	English	Comments
Density	2.70 g/cc	0.0975 lb/in ³	AA 5005

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	145 - 185 MPa	21000 - 26800 psi	
	@Thickness 0.200 - 1.50 mm	@Thickness 0.00787 - 0.0591 in	
	145 - 185 MPa	21000 - 26800 psi	
	@Thickness 1.50 - 3.00 mm	@Thickness 0.0591 - 0.118 in	
	145 - 185 MPa	21000 - 26800 psi	
	@Thickness 3.00 - 5.00 mm	@Thickness 0.118 - 0.197 in	
Tensile Strength, Yield	>= 120 MPa	>= 17400 psi	
	@Strain 0.200 %, Thickness 0.200 - 1.50 mm	@Strain 0.200 %, Thickness 0.00787 - 0.0591 in	
	>= 120 MPa	>= 17400 psi	
	@Strain 0.200 %, Thickness 1.50 - 3.00 mm	@Strain 0.200 %, Thickness 0.0591 - 0.118 in	
	>= 120 MPa	>= 17400 psi	
	@Strain 0.200 %, Thickness 3.00 - 5.00 mm	@Strain 0.200 %, Thickness 0.118 - 0.197 in	
Elongation at Break	>= 2.0 %	>= 2.0 %	
	@Thickness 0.200 - 1.50 mm	@Thickness 0.00787 - 0.0591 in	
	>= 3.0 %	>= 3.0 %	

Mechanical Properties	@Thickness 1.50 - 3.00 Metric	@Thickness 0.0591 - 0.118 in English	Comments
	>= 4.0 %	>= 4.0 %	
	@Thickness 3.00 - 5.00 mm	@Thickness 0.118 - 0.197 in	
Modulus of Elasticity	68.9 GPa	10000 ksi	AA 5005
Poissons Ratio	0.33	0.33	AA 5005
Shear Modulus	25.9 GPa	3760 ksi	AA 5005

Thermal Properties	Metric	English	Comments
CTE, linear	23.8 $\mu\text{m}/\text{m}\cdot\text{°C}$	13.2 $\mu\text{in}/\text{in}\cdot\text{°F}$	AA 5005
	@Temperature 20.0 - 100 °C	@Temperature 68.0 - 212 °F	
Specific Heat Capacity	0.900 J/g- °C	0.215 BTU/lb- °F	
Thermal Conductivity	200 W/m-K	1390 BTU-in/hr-ft ² - °F	AA 5005
Melting Point	632 - 654 °C	1170 - 1210 °F	AA 5005
Solidus	632 °C	1170 °F	AA 5005
Liquidus	654 °C	1210 °F	AA 5005

Component Elements Properties	Metric	English	Comments
Aluminum, Al	97 - 99.5 %	97 - 99.5 %	As balance
Chromium, Cr	<= 0.10 %	<= 0.10 %	
Copper, Cu	<= 0.20 %	<= 0.20 %	
Iron, Fe	<= 0.70 %	<= 0.70 %	
Magnesium, Mg	0.50 - 1.1 %	0.50 - 1.1 %	
Manganese, Mn	<= 0.20 %	<= 0.20 %	
Other, each	<= 0.050 %	<= 0.050 %	
Other, total	<= 0.15 %	<= 0.15 %	
Silicon, Si	<= 0.30 %	<= 0.30 %	
Zinc, Zn	<= 0.25 %	<= 0.25 %	

Electrical Properties	Metric	English	Comments
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Electrical Properties Electrical Resistivity	0.00000332 ohm-cm Metric	0.00000332 ohm-cm English	Comments AA 0003
	@Temperature 20.0 °C	@Temperature 68.0 °F	

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