

Osprey Metals CE11 Al-Si Controlled Expansion Alloy

Category : Metal , Nonferrous Metal , Aluminum Alloy

Material Notes:

Al-50%Si controlled expansion alloy manufactured and patented by Osprey Metals Ltd. Information provided to MatWeb by Osprey Metals.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Osprey-Metals-CE11-Al-Si-Controlled-Expansion-Alloy.php

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	138 MPa	20000 psi	
Tensile Strength, Yield	125 MPa	18100 psi	
Modulus of Elasticity	109 GPa	15800 ksi	
Flexural Strength	172 MPa	24900 psi	Three Point Bend

Thermal Properties	Metric	English	Comments
CTE, linear	9.20 $\mu\text{m}/\text{m}\cdot\text{C}$	5.11 $\mu\text{in}/\text{in}\cdot\text{F}$	
	@Temperature -173 - 27.0 $^{\circ}\text{C}$	@Temperature -279 - 80.6 $^{\circ}\text{F}$	
	10.3 $\mu\text{m}/\text{m}\cdot\text{C}$	5.72 $\mu\text{in}/\text{in}\cdot\text{F}$	
	@Temperature 25.0 - 100 $^{\circ}\text{C}$	@Temperature 77.0 - 212 $^{\circ}\text{F}$	
	12.7 $\mu\text{m}/\text{m}\cdot\text{C}$	7.06 $\mu\text{in}/\text{in}\cdot\text{F}$	
@Temperature 25.0 - 200 $^{\circ}\text{C}$	@Temperature 77.0 - 392 $^{\circ}\text{F}$		
13.1 $\mu\text{m}/\text{m}\cdot\text{C}$	7.28 $\mu\text{in}/\text{in}\cdot\text{F}$		
@Temperature 25.0 - 300 $^{\circ}\text{C}$	@Temperature 77.0 - 572 $^{\circ}\text{F}$		
14.4 $\mu\text{m}/\text{m}\cdot\text{C}$	8.00 $\mu\text{in}/\text{in}\cdot\text{F}$		
@Temperature 25.0 - 500 $^{\circ}\text{C}$	@Temperature 77.0 - 932 $^{\circ}\text{F}$		
Specific Heat Capacity	0.794 J/g- $^{\circ}\text{C}$	0.190 BTU/lb- $^{\circ}\text{F}$	
Thermal Conductivity	122 W/m-K	847 BTU-in/hr-ft 2 - $^{\circ}\text{F}$	
	@Temperature 200 $^{\circ}\text{C}$	@Temperature 392 $^{\circ}\text{F}$	
	149 W/m-K	1030 BTU-in/hr-ft 2 - $^{\circ}\text{F}$	
	@Temperature 25.0 $^{\circ}\text{C}$	@Temperature 77.0 $^{\circ}\text{F}$	

Component Elements Properties	Metric	English	Comments
Aluminum, Al	50 %	50 %	
Silicon, Si	50 %	50 %	

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