CuSn0.09

4.2. CuSn0.09



Alloy Designation	
EN	-
DIN CEN/TS	-
UNS	-

Chemical Composition (Balance) Weight percentage		
Cu	≥ 99.90	%

0.055 - 0.135

Characteristics

CuSn0.09 is an in-house developed alloy and is specifically used for radiator fin applications. The alloy has excellent thermal properties. Hot and cold formability is very good (which makes it ideal for engine cooling applications where heat transfer is critical).

The tin addition improves mechanical properties even more than our alloy CuSn0.04 and, as such, contributes to a sturdy final product.

Mechanical Properties (EN 1652)				
Temper	Tensile Strength	Yield Strength Minimum Rp _{0.2}	Elongation Minimum A _{50mm}	Hardness HV *
	Rm	170.2	mmue	
	MPa	MPa	%	HV
R220	220 275	80	15	53 65
R255	255 315	190	4	80 100
R260	260 330	210	3	85 110
R280	280 360	240	1	95 120
R330	330 410	300		105 130
R355	355 435	330		115 140
R390	390 475	370		125 150

^{*} only for information

Sn

Physical Properties Typical values in annealed temper at 20 °C				
Density		8.93	g/cm³	
Thermal expansion coefficient	20 300 °C	17.7	10 ⁻⁶ /K	
Specific heat capacity		0.385	J/(g·K)	
Thermal conductivity		355	W/(m·K)	
Electrical conductivity	MS/m	52	MS/m	
Electrical conductivity	IACS	90	%	
Modulus of elasticity	GPa	125	GPa	

Fabrication Properties *	
Cold Forming Properties	Excellent
Hot formability	Good (decreasing with higher hardnesses)
Soft Soldering, Brazing	Excellent
Welding	Good

^{*} For more details call our technical service

Due to continuous improvements within our production process, the details given in our brochure cannot be guaranteed. We reserve the right to update or change our products without prior notice. We recommend that you seek confirmation of our product details / specifications before committing to specific alloys.