

3.14 CuSn3Zn9 / CuSn2Zn10 - C42500 - CW454K

Application Range											
Good compromise between alloy properties, lower metal cost and better scrap value assessment conditions.											
Physical Properties							Chemical Position (reference value) %				
Density *	g/cm ³		8.75		CuSn3Zn9 - CW 454K		CuSn3Zn10 - C42500				
Thermal conductivity *	W/(m·k)		120		Cu		Rest		Cu 87 -90		
Electr. conductivity ***	MS/m		14		Sn		1.5 - 3.5		Sn 1.5 - 3.0		
Electr. conductivity ***	IACS (%)		24		Zn		7.5 - 10		Zn Rest		
Thermal expansion c. **	10 ⁻⁶ K		18.4								
Modulus of elasticity *	Gpa		126								
Condition	Temper class	Tensile strength	Yield strength	Elongation		Hardness (reference value) HV	Electri. Conductivity MS/m	Bendability 90° ^{1) 2) 3)}			
		T.S. min. - max. MPa	Rp 0.2 min. Mpa	A50 min. %	R/t ^{1) 2) 3)} 90°			R/t ^{1) 2) 3)} 180°			
			() only information				GW Strip thickness ≤0.5mm	BW Strip thickness ≤0.5mm	GW Strip thickness ≤0.5mm	BW Strip thickness ≤0.5mm	
Cold rolled	R320	320 - 380	max. 230	25		80 - 100	14	0	0	0	0
Cold rolled	R380	380 - 430	(200)	16	20 ³⁾	110 - 140	14	0	0	0.5	1
Cold rolled	R430	430 - 520	(330)	6	10 ³⁾	140 - 170	14	0	0	1	1.5
Cold rolled	R510	510 - 600	(430)	3	8 ³⁾	160 - 190	14	0	1	2	2.5
Cold rolled	R580	580 - 690	(520)	-	-	180 - 210	14	1	2	2.5	4
Cold rolled	R660	min. 660	(610)	-	-	min. 200	14	-	-	-	-

*Reference values at room temperature

**Between 20 and 300 °C

*** Values for the lowest temper class

¹⁾ $r = x \cdot t$ (strips up to $t = 0.50$ mm)

²⁾ Sample width = 10 mm / bending at smaller bending widths on request (Evaluation according to page 5.4.2. of Hand-Out)

³⁾ Valid only as thermal stress relieved qualities

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