

Zinc Alloys

	ZA2	ZA3	ZA5	ZA8	ACuZinc
CEN Specification					
Alloy Symbol	ZnAl4Cu3-F	ZN Al4-P	ZnAl4Cu1-F	ZNAI8Cu1-F	
Alloy Number	ZP0430	ZP0400	ZP0410	ZP0810	
CEN Short	ZP2	ZP3	ZP5	ZP8	
Designation Colour	White/Gree	White/Yellow	White/Black	White/Blue	
Chemical Composition					
Aluminium	3.7 – 4.3	3.7 – 4.3	3.7 – 4.3	8.0 – 8.8	2.8 – 3.3
Copper	2.7 – 3.3	0.1 Max	0.7 – 1.2	0.8 – 1.3	5.0 – 6.0
Magnesium	0.025 – 0.0	0.025 – 0.0	0.025 – 0.0	0.015 – 0.0	0.025 – 0.0
Iron	0.05 Max	0.05 Max	0.05 Max	0.06 Max	0.075 Max
Silicon	0.03 Max	0.03 Max	0.03 Max	0.045 Max	
Nickel	0.02 Max	0.02 Max	0.02 Max	0.02 Max	
Lead	0.005 Max	0.005 Max	0.005 Max	0.006 Max	0.005 Max
Cadmium	0.005 Max	0.005 Max	0.005 Max	0.006 Max	0.004 Max
Tin	0.002 Max	0.002 Max	0.002 Max	0.003 Max	0.003 Max
Zinc	Remainder	Remainder	Remainder	Remainder	Remainder
Physical Properties					
Melting Range Deg	379 – 388	381 – 387	380 – 386	375 – 404	402 – 502
Density g/cm ³	6.7	6.7	6.7	6.3	6.85
Coef Thermal expansion	27.4	27.4	27.4	23.3	24
Thermal Conductivity W/m C	105	113	109	115	106
Electrical Conductivity	25	27	26	27.7	26.9
Mechanical Properties					
Tensile Strength	359	283	328	374	407
Yield Strength (0.2)	270	221	228	290	338
Impact Strength	47	58	65	42	-
Elongation %	7	10	7	8	6
Shear Strength MPa	315	214	262	276	280
Brinell Hardness (500Kg)	Up To 100	Up To 82	Up To 91	Up To 103	Up To 118
Fatigue 5x10 ⁸ cycles MPa	58	48	56	103	
Young's Modulus MPa	>85,500	>85,500	>85,500	>85,500	

Poisson's Ratio	0.27	0.27	0.27	0.29 – 0.30	
Shear Modulus MF	34,000	34,000	34,000	34,000	

