



Zinc Die Casting Alloys (ZAMAK)

Chemical composition (EN 1774) Guaranteed Analysis (in %)	ZAMAK 2 ZL2/ZL0430/ZnAl4Cu3	ZAMAK 3 ZL3/ZL0400/ZnAl4	ZAMAK 5 ZL5/ZL0410/ZnAl4Cu1	ZAMAK 8 ZL8/ZL0810/ZnAl8Cu1
Al	3.8 - 4.2	3.8 - 4.2	3.8 - 4.2	8.2 - 8.8
Cu	2.7 - 3.3	0.03	0.7 - 1.1	0.9 - 1.3
Mg	0.035 - 0.06	0.035 - 0.06	0.035 - 0.06	0.02 - 0.03
Pb	0.003	0.003	0.003	0.005
Fe	0.02	0.02	0.02	0.035
Cd	0.003	0.003	0.003	0.005
Sn	0.001	0.001	0.001	0.002
Si	0.02	0.02	0.02	0.035
Ni	0.001	0.001	0.001	0.001
Typical Analysis (in %) (reference 2015)	ZAMAK 2 ZL2/ZL0430/ZnAl4Cu3	ZAMAK 3 ZL3/ZL0400/ZnAl4	ZAMAK 5 ZL5/ZL0410/ZnAl4Cu1	ZAMAK 8 ZL8/ZL0810/ZnAl8Cu1
Al	4.05	4.03	4.05	8.52
Cu	2.9	0.0002	0.83	1.06
Mg	0.043	0.045	0.044	0.023
Pb	0.0022	0.0018	0.0019	0.0021
Fe	0.0026	0.002	0.0023	0.004
Cd	< 0.0002	< 0.0002	< 0.0002	< 0.0003
Sn	< 0.001	< 0.001	< 0.001	< 0.001
Si	< 0.02	< 0.02	< 0.02	< 0.015
Ni	< 0.001	< 0.001	< 0.001	< 0.001
Physical Data	ZAMAK 2 ZL2/ZL0430/ZnAl4Cu3	ZAMAK 3 ZL3/ZL0400/ZnAl4	ZAMAK 5 ZL5/ZL0410/ZnAl4Cu1	ZAMAK 8 ZL8/ZL0810/ZnAl8Cu1
Density (Kg/dm ³ at 20 C)	6.8	6.6	6.7	6.3
Soildification Range (C)	379 - 390	381 - 387	380 - 386	375 - 404
Shrinkage in %	4 - 5	4 - 5	4 - 5	8
Lin.Thermal Expansion (coef/C)	27.8 X 10 ⁻⁶	27.4 X 10 ⁻⁶	27.4 X 10 ⁻⁶	23.2 X 10 ⁻⁶
Electrical conductivity (% IACS)	25	27	26	27.7
Standard	ZAMAK 2	ZAMAK 3	ZAMAK 5	ZAMAK 8
EN1774	ZL2/ZL0430/ZnAl4Cu3	ZL3/ZL0400/ZnAl4	ZL5/ZL0410/ZnAl4Cu1	ZL8/ZL0810/ZnAl8Cu1
ISO 301				
AS 1881		Zn Al 4	Zn Al 4 Cu1	
JIS H 2201		Zn Al 4	Zn Al 4 Cu1	
ASTM B 240	Alloy 2 / Z 35540	Alloy 3/Z33521	Alloy 5 / Z35530	ZA-8 / Z 35635