



C.I.T. CORPORATION LIMITED

Zinc alloy no.3 composition analysis



Chemical Composition (%) Alloy no.3	PDI	Nyrstar (Ezda)	Dowa	KZ	LAHI
Aluminium (Al)	3.8-4.2	3.9-4.2	3.9-4.3	3.9-4.2	3.5-4.3
Magnesium (Mg)	0.035-0.06	0.04-0.05	0.03-0.06	0.04-0.05	0.02-0.05
Copper (Cu)	≤0.03	≤0.03	≤0.03	≤0.0012	≤0.25
Lead (Pb)	≤0.003	≤0.003	≤0.003	≤0.003	≤0.003
Cadmium (Cd)	≤0.003	≤0.002	≤0.002	≤0.001	≤0.004
Iron (Fe)	≤0.02	≤0.02	≤0.035	≤0.005	≤0.005
Tin (Sn)	≤0.001	≤0.001	≤0.001	≤0.001	≤0.001
Nickel (Ni)	≤0.001	≤0.001	≤0.001	≤0.001	≤0.005
Silicon (Si)	≤0.02	≤0.02	≤0.02	≤0.02	
Indium (In)		≤0.0005			
Thallium (Tl)		≤0.001			
Manganese (Mn)					≤0.005
Zinc (Zn)	Bal.	Bal.	Bal.	Bal.	Bal.



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Comparing : Zinc Die Casting Alloy Specification : PDI and Dowa

Composition	Alloy no.2			Alloy no.3			Alloy no.5		
	JIS H2201	Dowa	PDI	JIS H2201	Dowa	PDI	JIS H2201	Dowa	PDI
	ADAC-3	AZC-3	DA-2	ZDC-2	AZC-2	DA-3	ZDC-1	AZC-1	DA-5
Al	3.9-4.3	3.9-4.3	3.9-4.2	3.9-4.3	3.9-4.3	3.9-4.2	3.9-4.3	3.9-4.3	3.9-4.2
Mg	0.03-0.06	0.03-0.06	0.035-0.06	0.03-0.06	0.03-0.06	0.035-0.06	0.03-0.06	0.03-0.06	0.035-0.06
Cu	2.5-3.5	2.85-3.35	2.7-3.3	0.03max	0.030max	0.03max	0.75-1.25	0.75-1.25	0.75-1.1
Pb	0.003max	0.003max	0.003max	0.003max	0.003max	0.003max	0.003max	0.003max	0.003max
Cd	0.002max	0.001max	0.002max	0.002max	0.002max	0.002max	0.002max	0.002max	0.002max
Fe	0.002max	0.020max	0.020max	0.075max	0.035max	0.020max	0.075max	0.035max	0.020max
Sn	0.001max	0.001max	0.001max	0.001max	0.001max	0.001max	0.001max	0.001max	0.001max
Ni			0.001max			0.001max			0.001max
Si			0.02max			0.02max			0.02max
Zn	Bal.	Bal.	Bal.	Bal.	Bal.	Bal.	Bal.	Bal.	Bal.
Comforms to EN1774	ZL2			ZL3			ZL5		
Comforms to ASTM B240	Zamaks2			Zamaks3			Zamaks5		



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Chemical Composition of Zinc Alloy : EN Standard

ส่วนผสมทางเคมีของสังกะสีเบอร์ต่างๆ ตาม EN Ingot Standard Specification 1774

Alloy Number	Al	Cu	Mg	Pb	Cd	Sn	Fe	Ni	Si
# 2	3.8-4.2	2.7-3.3	0.035-0.06	0.003	0.003	0.001	0.020	0.001	0.02
# 3	3.8-4.2	0.03	0.035-0.06	0.003	0.003	0.001	0.020	0.001	0.02
# 5	3.8-4.2	0.7-1.1	0.035-0.06	0.003	0.003	0.001	0.020	0.001	0.02
# 7*	3.9-4.3	0.1	0.01-0.02	0.002	0.002	0.001	0.075	0.005-0.020	-
# 8	8.2-8.8	0.9-1.3	0.02-0.03	0.005	0.005	0.002	0.035	0.001	0.0035
# 12	10.8-11.5	0.5-1.2	0.02-0.03	0.005	0.005	0.002	0.05	-	0.05
# 27	25.5-28.0	2.0-2.5	0.012-0.02	0.005	0.005	0.002	0.07	-	0.07

* ตาม ASTM Standard

Recommendation temperature for die casting process

	ZL2	ZL3	ZL5	ZL8
Holding temperature middle control	415	415	420	435
Holding temperature range	410-425	410-425	410-425	420-440
Die temperature range	150-220	150-220	150-220	150-215