



HANA ADDITIVE™
METAL POWDERS
& AM SERVICE

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Magnesium Alloy Powder

Product	Grade	Shape	Composition (%)	AD (g/cm ³)
WE43	MPWE43-AM	Spherical	Mg 93.6 Y 4 Nd 2.25 Zr 0.15	0.8 ~ 1.5
AZ31B	MPAZ31B-AM	Spherical	Mg 96 Al 3 Zn 1 Mn 0.2	0.8 ~ 1.5
AZ91D	MPAZ91-AM	Spherical	Mg 91 Al 8 Zn 0.6 Mn 0.2	0.8 ~ 1.5

Aluminum Alloy Powder

Product	Grade	Shape	Composition (%)	AD (g/cm ³)
A112SI	A12SI-AM	Spherical	Si 12 Fe < 0.55 Mn < 0.45 Al Bal.	0.9 ~ 1.3
A111Si1Mg	A112IM-AM	Spherical	Si 11 Fe < 0.55 Mg 0.8-1.1 Al Bal.	0.9 ~ 1.3
A110SiMg	A10SIM-AM	Spherical	Si 10 Mg 0.2 - 0.45 Al Bal.	0.9 ~ 1.3
A383 (ADC12)	A383-AM	Spherical	Si 9.5-11.5 Fe 1.3 Cu 2-3 Mg 0.5 Zn 3.0 Sn 0.15 Mn 0.1 Ni 0.3 Al Bal.	0.9 ~ 1.3
A356	A356-AM	Spherical	Si 6.5-7.5 Mg 0.25-0.45 Cu < 0.2 Fe < 0.2 Mn < 0.1 Ti < 0.2 Zn < 0.1 Al Bal.	0.9 ~ 1.3

Stainless Steel Powder

Product	Grade	Shape	Composition (%)	AD (g/cm ³)
304L	S304L-AM	Spherical	Cr 19 Ni 10 Si 1.5 Fe Bal.	4 ~ 6
316L	S316L-AM	Spherical	Cr 18 Ni 14 Mo 2.5 Fe Bal.	4 ~ 6
410	S410-AM	Spherical	Cr 12 C < 0.15 Fe Bal.	4 ~ 6
420	S420-AM	Spherical	Cr 13 C 0.2 Fe Bal.	4 ~ 6
17-4PH	S630-AM	Spherical	Cr 15-17.5 Ni 3-5 Cu 3-5 Nb 0.15-0.45 Fe Bal.	4 ~ 6
M2	SM2-AM	Spherical	Cr 4 Si 0.3 Mo 5 V 2 Si 0.33 Mn 0.28 C 0.8 W 6 Fe Bal.	4 ~ 6
M4	SM4-AM	Spherical	Cr 4 Si 0.3 Mo 5 V 4 Si 0.33 Mn 0.28 C 1.3 W 5.8 Fe Bal.	4 ~ 6
18 Ni 300 (Maraging)	S18NI300-AM	Spherical	Ni 18 Mo 4.8 Cr 0.3 Co 9 Ti 0.7 Al 0.1 Si 0.1 Mn 0.1 C 0.03 Fe Bal.	4 ~ 6

Nickel Alloys Powder

Product	Grade	Shape	Composition (%)	AD (g/cm ³)
In625	NIP625-AM	Spherical	Cr 20-23 Mo 8-10 Nb 3.15-4.15 Ni Bal.	3.5 ~ 5.5
In718	NIP718-AM	Spherical	Cr 17-21 Mo 3 Nb 4.75-5.50 Ni 50-56	4 ~ 5.5
Hastelloy X	NIHX-AM	Spherical	Cr 4 Si 0.3 Mo 5 V 4 Mn 0.3 C 1.3 W 5.8	4 ~ 6

CoCr Alloy Powder

Product	Grade	Shape	Composition (%)	AD (g/cm ³)
Co28Cr6Mo (F75)	COCRP-AM-1	Spherical	Cr 27-30 Mo 5-7 Ni <0.5 Fe <0.75 C <0.35 Si <1 Mn <1 W <0.2 Co Bal.	4 ~ 5
Co25Cr5W5Mo	COCRP-AM-2	Spherical	Cr 24-26 Mo 4-6 W <4-6 Co Bal.	4 ~ 5
Co28Cr9W1.5Si	COCRP-AM-3	Spherical	Cr 27-29 W 8-10 Si 1.2-1.8 Co Bal.	4 ~ 5

Titanium Alloy Powder

Product	Grade	Shape	Composition (%)	AD (g/cm ³)
Ti6Al4V (grade 5)	TIP5-AM	Spherical	Al 5.5-6.5 V 3.5-4.5 Fe <0.4 Ti Bal.	2.2 ~ 3
Ti6Al4V ELI (grade 23)	TIP23-AM	Spherical	Al 5.5-6.5 V 3.5-4.5 Fe <0.25 O <0.13 Ti Bal.	2.2 ~ 3
Ti grade 2	TIP2-AM	Spherical	C <0.08 O <0.25 N <0.03 Fe <0.3 Ti Bal.	2.2 ~ 3
Ti grade 4	TIP4-AM	Spherical	C <0.08 O <0.4 N <0.05 Fe <0.5 Ti Bal.	2.2 ~ 3

Copper Powder

Product	Grade	Shape	Composition (%)	AD (g/cm ³)
Cu	CUPS-AM	Spherical	Cu 99.5 Min	2.8 ~ 3.8
Cu90Sn10	CSN10-AM	Spherical	Cu 89-91 Sn 9-11	2.5 ~ 4.5
Cu80Zn20	CZN20-AM	Spherical	Cu 79-81 Zn 19-21	2.5 ~ 4.5

Zirconium Alloy Powder

Product	Grade	Shape	Composition (%)	AD (g/cm ³)
Zircalloy-2	ZR2P-AM	Spherical	Sn 1.2-1.7 Fe 0.18-0.24 Cr 0.07-0.13 Zr Bal.	3 ~ 4.5
Zircalloy-4	ZR4P-AM	Spherical	Sn 1.2-1.7 Fe 0.07-0.20 Cr 0.05-0.15 Ni 0.03-0.08 Zr Bal.	3 ~ 4.5

Particle Size Distribution

Grade	Size		
	D10	D50	D90
0 - 20	4 - 8	11 - 15	18 - 22
15 - 45	13 - 20	28 - 35	43 - 48
0 - 53	10 - 15	23 - 35	50 - 56
20 - 63	23 - 28	38 - 45	60 - 65
45 - 107	45 - 53	68 - 75	100 - 105
45 - 150	48 - 55	80 - 100	120 - 148



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**Hana Additive is new brand of HANA AMT in South Korea.
We have a new customizing technology according to your individual requirements,
and one-line-up additive manufacturing service.**

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