

PAC Product	Alloy	Similar Powders	Chemical Composition	Chemical Specification					
<i>Stainless Steel Powders</i>				UNS	ASTM	ISO	AMS	DIN	
AMP 17-4AR	17-4ph	Stainless Steel 17-4PH	Cr 15.0-17.0	Ni 3.0-5.0	17400	A705	15156-3	5604	1.4542
		CL 92PH	Cu 3.0-5.0	Mn 1.0 max		S564	5643		
			Si 1.0 max	Mo 1.0 max		A693			
			Nb+Ta 0.15-0.45	C 0.10 max					
			Fe Bal						
AMP 15-5AR	15-5ph	Stainless Steel 15-5PH	Cr 14.0-15.5	Ni 3.5-5.5	S15500	A705		5659	1.454
			Cu 2.5-4.5	Mn 1.0 max		S564	5862		
			Si 1.0 max	Mo 1.0 max		A693			
			Nb 0.15-0.45	C 0.07 max					
			Fe Bal						
AMP 316L	SS 316L	StainlessSteel 316L	C 0.03 max	Si 0.75 max	S31673	F745	5832-1		1.4401
		CL20ES	Mn 2.0 max	P 0.025 max		F138		1.4404	
			S 0.01 max	Cr 17.5-18.0					
			Ni 12.5-13	Mo 2.25-2.50					
			Cu 0.50 max	Fe Bal					

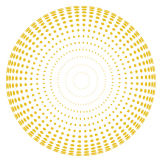
**Disclaimer:**The technical information is provided for information only and not for design purposes. Powder Alloy Corporation makes no warranty of any kind with respect to the subject matter accuracy.

PAC Product	Alloy	Similar Powders	Chemical Composition	Chemical Specification					
<i>Tool Steel Powders</i>				UNS	ASTM	ISO	AMS	DIN	
AMP M300E	18Ni300	CL50WS	C 0.03 max	Mn 0.15	K93120			6514	1.2709
		Tool Steel 1.2709	Si 0.10 max	Ni 17.0-19.0					
			Mo 4.50-5.20	Co 8.50-10.0					
			Ti 0.80-1.20	P 0.010 max					
			S 0.010	Fe Bal					

**Disclaimer:**The technical information is provided for information only and not for design purposes. Powder Alloy Corporation makes no warranty of any kind with respect to the subject matter accuracy.

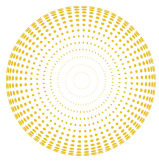
PAC Product	Alloy	Similar Powders	Chemical Composition	Chemical Specification					
<i>Titanium Alloy Powders</i>				UNS	ASTM	ISO	AMS	DIN	
AMP 6Al4Vsp5	Ti6-4	Titanium Ti64	Al 5.5-6.5	V 3.5-4.5	R56400	F1472	5832-3	5954	3.7164
		CL40Ti	N 0.03 max	C 0.08 max		B348 gr 5	4911	4928	
			H2 0.0125 max	Fe 0.25 max					
			O 0.20 max	Res Each 0.1					
			Res Total 0.4	Ti Bal					
AMP 6Al4Vsp23	Ti6-4 ELI	Titanium Ti64ELI	Al 5.5-6.5	V 3.5-4.5	R56401	F136	5832-3	4956	3.7164
		CL41Ti-ELI	N 0.03 max	C 0.08 max		B348 gr 23			
			H2 0.0125 max	Fe 0.25 max		F3001			
			O 0.13 max	Res Each 0.1					
			Res Total 0.4	Ti Bal					

**Disclaimer:**The technical information is provided for information only and not for design purposes. Powder Alloy Corporation makes no warranty of any kind with respect to the subject matter accuracy.



PAC Product	Alloy	Similar Powders	Chemical Composition		Chemical Specification				
Nickel & Cobalt Based Powders					UNS	ASTM	ISO	AMS	DIN
AMP 750	CoCrMo	CoCr28Mo6 CL111	C 0.16 max	Mn 1.0 max	R31538	F1537 F799 F75	5832-4 5832-12		
			Si 1.0 max	Cr 27.0-30.0					
			Ni 0.50 max	Mo 5.0-7.0					
			Fe 0.75 max	S 0.010 max					
			P 0.020 max	Al 0.10 max					
Ti 0.10 max	W 0.20 max								
B 0.010 max	Co Bal								
AMP 605	Haynes® 25® L605		Cr 20.5-23	Fe 17-20	N06002	B 435 B 572		5536	2.4665
			Mo 8-10	Mn 1 max				5754	
			Co .5-2.5	Si 1 max				5798	
			W 0.2-1	Ti 0.15 max					
			C 0.10 max	Ni Bal					
© Haynes International									
AMP 8188	Haynes® 188®		Cr 20.0-24.0	C 0.05-0.015	R3018			5608	2.4683
			Ni 20.0-24.0	Fe 3.0 max				5801	
			Co Bal	Mn 1.25 max				5772	
			W 13.0-16.0	Si 0.2-0.5					
			La 0.02-0.12	P 0.02 max					
B 0.015 max	S 0.015 max								
© Haynes International									
AMP 8814	Haynes® 214®		Cr 15-17	Al 4.1-5.0	N07214				
			Fe 2.0-2.8	Mn 0.50 max					
			B 0.004 max	Mo 0.50 max					
			C 0.05 max	S 0.015					
			Nb 0.15	Si 0.20					
Co 2.0 max	Ti 0.50								
W 0.50	Ni Bal								
© Haynes International									
AMP 8830	Haynes® 230®		C 0.05-0.15	Fe 3.00 max	N06230	B435		5878	2.4733
			Mn 0.30-1.00	Al 0.20-0.50				5891	
			Si 0.25-0.75	W 13-15					
			P 0.03 max	Co 5.00 max					
			S 0.015 max	Mo 1.0-3.0					
Cr 20-24	Ni Bal								
La 0.005-0.05									
© Haynes International									
Haynes® 282®	Haynes® 282®	Propriety	Propriety		Propriety		Propriety		
© Haynes International									
AMP 8863	Nimonic® C263		C 0.04-0.08	Co 19.0-21.0	N107263			5872	2.465
			Cr 19.0-21.0	Mo 5.6-6.1					
			Ti 1.9-2.4	Al 0.6 max					
			Mn 0.60 max	Si 0.040 max					
			Cu 0.20 max	Fe 0.7 max					
Ni Bal									
© Special Metals									

**Disclaimer:** The technical information is provided for information only and not for design purposes. Powder Alloy Corporation makes no warranty of any kind with respect to the subject matter accuracy.

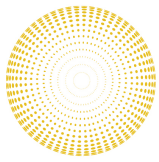


PAC Product	Alloy	Similar Powders	Chemical Composition		Chemical Specification				
<b>Nickel &amp; Cobalt Based Alloy Powder - Continued</b>					<b>UNS</b>	<b>ASTM</b>	<b>ISO</b>	<b>AMS</b>	<b>DIN</b>
AMP X	Hastelloy® X®		Cr 20.5-23 Mo 8-10 Co .5-2.5 W 0.2-1 Al 0.5 max Ti 0.15 max B 0.01 max C 0.10 max	Fe 17-20 Mn 1 max Si 1 max P 0.04 max S 0.03 max Cu 0.5 max Ni Bal	N06002	B 435 B 572		5536 5754 5798	2.4665
© Haynes International									
AMP 718	Inconel® 718	CL100NB	Cr 17-21 Mo 2.8-3.3 Ti 0.65-1.15 Al 0.2-0.8 Co 1 max C 0.08 max Ni 50-55 Cb+Ta 4.75-5.50	Mn 0.35 max Si 0.35 max P 0.015 max S 0.015 max B 0.006 max Cu 0.3 max Fe Bal	7718	B537 B670		5832 5596	2.4668
© Special Metals									
AMP 625	Inconel® 625	CL101NB	Cr 20-23 Mo 8-10 Co 1 max Cb+Ta 3.15-4.15 Al 0.4 max S 0.15 max Ni Bal	Ti 0.4 max C 0.1 max Fe 0.5 max Mn 0.5 max Si 0.5 max P 0.015 max	6625	446 Gr1 443 Gr1		5599 5666	2.4856
© Special Metals									

**Disclaimer:**The technical information is provided for information only and not for design purposes. Powder Alloy Corporation makes no warranty of any kind with respect to the subject matter accuracy.

PAC Product	Alloy	Similar Powders	Chemical Composition		Chemical Specification				
<b>Copper Alloy Powders</b>					<b>UNS</b>	<b>ASTM</b>	<b>ISO</b>	<b>AMS</b>	<b>DIN</b>
AMP GR84	GRCop 84		Cr 6.0-7.0 Nb 5.2-6.2	Fe 50ppm Cu Bal					
AMP GR42	GR Cop 42		Cr 3.10-3.40 Nb 2.7-3.0	Fe 50ppm Cu Bal					
AMP Cu150	C18150		Cr 0.50-1.50 Cu Bal	Zr 0.02-0.20	C18150				

**Disclaimer:**The technical information is provided for information only and not for design purposes. Powder Alloy Corporation makes no warranty of any kind with respect to the subject matter accuracy.



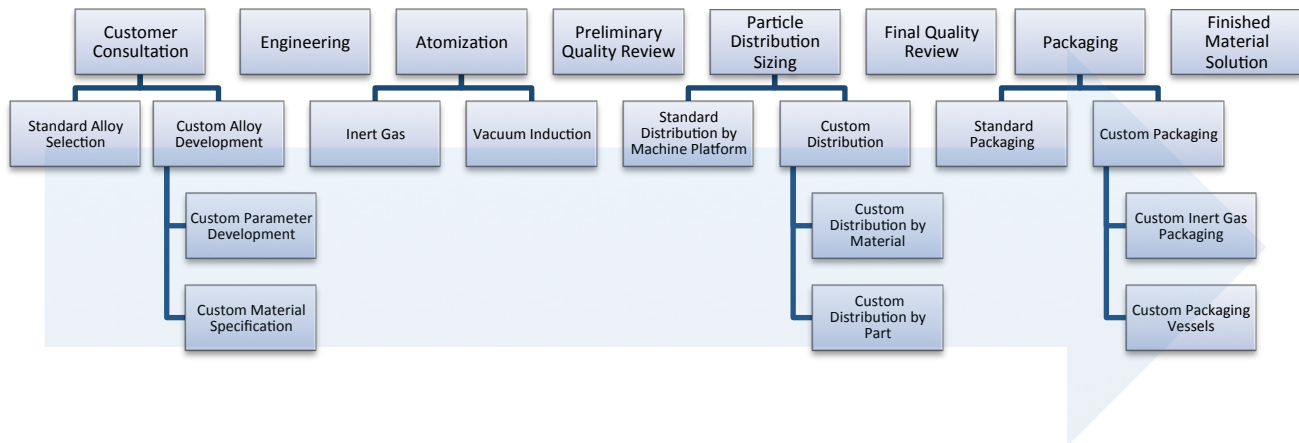
# PAC

Powder Alloy Corporation

## ADDITIVE MANUFACTURING POWDERS SPECIFICATION GUIDE

PAC Product	Alloy	Similar Powders	Chemical Composition		Chemical Specification				
<b>Aluminum Alloy Powders</b>					<b>UNS</b>	<b>ASTM</b>	<b>ISO</b>	<b>AMS</b>	<b>DIN</b>
AMP 716	AlSi10Mg	Al Alloy AlSi10Mg CL31Al	Si 9.0-11.0 Fe 0.55 max Cu 0.05 max Mn 0.45 max Mg 0.2-0.45 Ni 0.05 max	Zn 0.10 max Pb 0.05 max Sn 0.05 max Ti 0.15 max Al Bal	A13600	A03600			3.2381
AMP 901M	AlSi12	Al Alloy AlSi12 CL30AL	Al Oxide 0.8 max Cu 0.30 Fe 0.80 Mg 0.15	Mn 0.15 Si 11-13 Zn 0.20 Al Bal	A49047				3.2852

Disclaimer: The technical information is provided for information only and not for design purposes. Powder Alloy Corporation makes no warranty of any kind with respect to the subject matter accuracy.



Powder Alloy Corporation  
101 Northeast Drive  
Loveland, OH 45140  
United States of America

Phone: 513-984-4016  
Fax: 513-984-4017  
www.powderalloy.com  
sales@powderalloy.com

