

LPW Technology - Standard Alloys For Additive Manufacture Processing



STANDARD TITANIUM ALLOYS (wt%)														
LPW Ref	Alloy	Ti	Al	C	Fe	H	Mo	N	O	Si	Sn	V	Zr	Other
LPW TiCP Gd 1	TiCP Gd1	Bal		<0.08	<0.20	<0.015		<0.03	<0.18					Other/Total Other = 0.1/0.4
LPW TiCP Gd 2	TiCP Gd2	Bal		<0.08	<0.30	<0.015		<0.03	<0.25					Other/Total Other = 0.1/0.4
LPW Ti64 Gd5	Ti 64 Gd5	Bal	5.5-6.75	<0.08	<0.40	<0.015		<0.05	<0.20			3.5-4.5		Other/Total Other = 0.1/0.4
LPW Ti64 Gd23	Ti 64 Gd 23	Bal	5.5-6.5	<0.08	<0.25	<0.0125		<0.03	<0.13			3.5-4.5		Other/Total Other = 0.1/0.4
LPW Ti6242	Ti 6242	Bal	6	<0.10	<0.40	<0.015	2	<0.05	<0.20		2		4	
LPW Ti6246	Ti 6246	Bal	6	<0.10	<0.40	<0.015	6	<0.05	<0.20		2		4	
LPW 685	Ti 685	Bal	6	<0.08	<0.05	<0.01	0.5	<0.030	<0.20	0.3			5.25	
LPW 679	Ti 679	Bal	2.25		<0.20	<0.0125	0.1		<0.20	0.3	11		5	
LPW 829	Ti 829	Bal	5.5	<0.08	<0.20	<0.005	0.25	<0.05	<0.18	0.3	3.5		3	Nb=1
LPW Ti230	IMI 230	Bal	22		0.1		0.3	3		0.4	14			Cu=2, Nb=0.5

STANDARD STEEL ALLOYS (wt%)														
LPW Ref	Alloy	C	Cr	Ni	Mo	Ti	Fe	Mn	Si	N	Cu	V	Al	Other
LPW 304	AISI 304, 1.4301	<0.08	18.0-20.0	8.0-10.5			Bal	<2.00	<0.75	<0.10				
LPW 304L	AISI 304L, 1.4306	<0.03	18.0-20.0	8.0-12.0			Bal	<2.00	<0.75	<0.10				
LPW 309	AISI 309, 1.4828	<0.20	22.0-24.0	12.0-15.0	<0.75		Bal	<2.00	<0.45		<0.75			
LPW 316	AISI 316, 1.4401	<0.08	16.0-18.0	10.0-14.0	2.00-3.00		Bal	<2.00	<0.75	<0.10	<0.75			
LPW 316L	AISI 316L, 1.4404	<0.03	16.0-18.0	10.0-14.0	2.00-3.00		Bal	<2.00	<0.75	<0.10	<0.75			
LPW 410	AISI 410, 1.4006	<0.15	11.5-13.5	<0.75	<0.75		Bal	<1.00	<1.00					
LPW 420	AISI 420, 1.4021	>0.15	12.0-14.0	<0.75	<0.75		Bal	<1.00	<1.00		<0.75			
LPW 138PH	AMS 5629, 13-8PH, 1.4534	<0.05	12.3-13.2	7.50-8.50	2.00-2.50		Bal	<0.10	<0.10				0.90-1.35	
LPW 155PH	AMS 5659, 15-5PH, 1.4545	<0.07	14.0-15.0	3.5-5.50	<0.50		Bal	<1.00	<1.00		2.50-4.50			Ta<0.05, Nb(Cb) 5xC-0.45
LPW 174PH	AMS 5643, 17-4 PH, 1.4542	<0.07	15.0-17.5	3.00-5.00	<0.50		Bal	<1.00	<1.00		3.00-5.00			Nb(Cb) 5xC-0.45
LPW M152	Jethete M-152	<0.15	11.0-13.0	2.0-3.0	1.5-2.0		Bal	<1.00	<0.75	<0.35		0.20-0.50		
LPW H13	AISI H13, 1.2344	0.37-0.45	5.00-5.50		1.2-1.75		Bal	0.20-0.50	0.80-1.20			0.80-1.20		
LPW P20	AISI P20, 1.2311	0.35-0.45	1.80-2.10		0.15-0.25		Bal	1.30-1.60	0.20-0.40					
LPW M300-1	18Ni300, 1.2709	<0.03	<0.5	17.0-19.0	4.5-5.2	0.6-0.8	Bal	<0.2	<0.2				0.05-0.15	Co 8.5-9.5

"Complete Laser Powder Processing Solutions"

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STANDARD NICKEL ALLOYS (wt%)																		
LPW Ref	Alloy	Ni	Cr	Co	Mo	C	Ti	Al	Fe	Mn	Nb (Cb)	Si	W	Ta	B	Hf	Re	Zr
LPW 002	Mar-M-002	Bal	10	10			1.5	5	1				10	2.5		1.5		
LPW 200	Mar-M-200	Bal	7.5	5	2	0.15	1	5					4	12		2		
LPW 247	Mar-M-247	Bal	8	9	0.5	0.15	0.7	5.6					10	3.2	0.015	1.4		0.01
LPW 77	Rene 77	Bal	15	15	4.2	0.07	3.3	4.3							0.015			0.04
LPW 80	Rene 80	Bal	14	9.5	4	0.18	5	3					4		0.015			0.04
LPW 142	Rene 142	Bal	6.8	12	2	0.12	0.02	6			0.1	0.06	5	6.3	0.01	1.5	2.8	0.03
LPW SX4	CMSX-4	Bal	6.5	9	0.6		1	5.6					6	6.5		0.1	3	
LPW 186	CM186	Bal	6	9	0.5	0.07	0.07	5.7					8	3	0.015	1.4	3	
LPW 111	GTD111	Bal	14	9.5	1.6	0.1	4.9	3					3.8	2.8	0.012			0.02
LPW 100	In 100	Bal	11.9-12.9	18.0-19.0	2.8-3.6	0.05-0.10	4.1-4.5	4.8-5.2	<0.30	<0.05	<0.05	<0.1	<0.05	<0.05				
LPW 625	In 625	Bal	20.0-23.0	<1.0	8.0-10.0	<0.10	<0.4	<0.4	<5.0	<0.50	3.15-4.15	<0.50		3.15-4.15				
LPW 713	In 713	Bal	12		4.5	0.05	0.6	5.9		0.25	2	0.5			0.1		0.1	
LPW 718	In 718	Bal	19		3	0.04	0.9	0.5	18.5	0.2		0.3			0.005			
LPW 738	In 738	Bal	16	8.5	1.75	0.17	3.4	3.4			0.9		2.6	3.75	0.01			0.1
LPW 901	In 901	Bal	13.5		6.1	0.05	2.5	0.25	34	0.45		0.4			0.015			
LPW X	Hastelloy X	Bal	20.5-23.0	0.5-2.5	8-10	0.05-0.15			17-20	<1.0		<1.0	0.2-1.0					
LPW 263	Hastelloy C-263	Bal	19-21	19-21	5.6-6.1	0.04-0.08	1.9-2.4	0.3-0.6	<0.7	<0.6		<0.40			0.005			<0.02
LPW 276	Hastelloy C-276	Bal	14.5-16.5	<2.5	15-17	<0.01			4-7	<1		<0.08	3-4.5					
LPW SP	Waspaloy	Bal	19	13.5	4	0.07	3	1.2	2									
LPW 230	Haynes 230	Bal	22		2	0.1		0.3	3	0.5		0.4	14					

OTHER STANDARD ALLOYS (wt%)																		
LPW Ref	Alloy	Al	Si	Cu	Mg	Fe	Zn	Mn	C	W	Co	Fe	Ta	Cr				
LPW AISi12	Al-Si12, AWS 4047	Bal	11-13	<0.30	<0.1	<0.8	<0.20	<0.15										
LPW AISi10Mg	Al-Si10-Mg, AWS 4445	Bal	9-11	<0.30	0.25-0.45	<0.8	<0.20	<0.15										
LPW WC	Spherical WC					<0.1			3.9-4.3	Balance								
LPW 4127HV	LPW 4127HV								>5.15	Balance	11-13	<1.5						
LPW 1500F2	LPW 1500F2								5-5.5	Balance	9.5-10.5			4.5-5.5				
Ta	Ta (99.95%)												99.95					

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STANDARD COBALT ALLOYS (wt%)																		
LPW Ref	Alloy	Ni	Cr	Co	Mo	C	Ti	Al	Fe	Mn	Cb	Si	W	Ta	B	Hf	Re	Other
LPW 509	Mar-M-509	10	23.5	Bal		0.6	0.2						7	3.5			0.5	
LPW 918	Mar-M-918	20	20	Bal		0.05								7.5			0.1	
LPW 414	FSX-414	10.5	29	Bal		0.25			2	1		1	7					
LPW 25	L605	10	20	Bal	1	0.15			3				15					
LPW 31	X40	10	25	Bal		0.5			1.5	0.6		0.5						
LPW 64	CM64 / 694	5	28	Bal		0.9							20					
LPW 800	T800		17.5	Bal	28.5							3.4						
LPW 72	Merle 72 / 795	15	20	Bal		0.35	0.2	4.4					9	3		1		
LPW CoCr-LC	Co-Cr-Mo, ASTM F-75	<0.10	26-30	60-65	5-7	<0.16			<0.75	<1.00		<1.00						P<0.020, N<0.25
LPW CoCr	Co-Cr-Mo, ASTM F-75	<0.10	26-30	60-65	5-7	<0.35			<0.75	<1.00		<1.00						P<0.020, N<0.25
LPW Co6	Stellite 6	<3.0	26.5-30.5	Bal	<1.0	0.9-1.25		<0.10	<3.0	0.5		1.2-2.0	3.5-5.5		<0.020			

Note

LPW Technology aims to supply powders for laser processing applications that satisfies all technical requirements at the most cost effective price.

Powder can be formed using a range of different atomisation processes.

All products are manufactured according to ISO 9001:2000 and supplied to EN 9120:2005.

The above is a list of commonly requested alloys. Please contact us directly if your requirements are not listed. Custom heats are available on request.

All materials are supplied with a certificate of conformance.

Sizing

Powder sizes are customised according to application, machine, nozzle, etc.

Packaging

Powder is packaged in 2.5 - 5 kg tamper proof sealed containers. Custom packaging available on request.

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