

PTA, Hardfacing, and Laser Overfacing Powders

Micro-Melt	UNS No.	Nominal Chemical Composition (typical values in wt.%)									Typical Deposited	Application
		C	Cr	Ni	Mo	Fe	Co	Si	Mn	Others	Hardness (HRC)	
Stainless Steel												
309L	GP-S30983	<0.1	24.0	13.0	<1.0	Bal	----	<0.5	<1.8	----	----	Corrosion, Intermediate Layer
316L	GP-S31683	<0.1	17.0	11.0	2.0	Bal	----	0.6	1.5	Cu:<1.0	----	Corrosion, Intermediate Layer
316L Si	GP-S31688	<0.1	19.0	12.0	2.5	Bal	----	0.8	1.75	Cu:<1.0	----	High Silicon For Flat Weld Beads
410	GP-S41080	<0.2	12.5	≤0.6	----	Bal	----	≤0.1	≤0.1	----	38-42	Corrosion,Wear
410L	GP-S41008	<0.1	12.5	≤0.5	----	Bal	----	0.6	≤0.1	----	30-36	Corrosion,Wear
420	GP-S42080	<0.5	12.5	1.75	----	Bal	----	----	----	----	48-50	Corrosion,Wear
431	----	<0.2	16	1.75	----	Bal	----	----	----	----	----	Corrosion,Wear
17/4	GP-S17400	<0.1	16.0	4.0	----	Bal	----	≤0.5	≤0.5	Cu:4.0,Nb:0.3	----	Build-up
Cobalt Based												
1	GP-R30001	2.8	31.5	1.5	0.5	1.5	Bal	1.0	0.5	W:13.5	50-52	Hot Wear, Corrosion
6	GP-R30006	1.1	28.5	1.5	0.5	1.5	Bal	1.0	0.5	W:5.0	40-42	Hot Wear, Corrosion
12	GP-R30012	1.6	30.5	1.5	0.5	1.5	Bal	1.0	0.5	W:9.0	45-47	Hot Wear, Corrosion
21	GP-R30021	0.25	27.5	<2.5	5.5	<2.0	Bal	----	----	----	28-40	Hot Wear, Corrosion
CCM PLUS	----	0.25	27.5	<1.0	5.5	<1.5	Bal	1.0	----	----	35-43	Hot Wear, Corrosion
CCW	----	<0.2	28.0	10.0	5.5	<2.0	Bal	<1.0	<1.0	W:4.5,Ta:0.8,Co:Bal	25-45	Critical Corrosion and Wear
F	GP-R30002	1.7	28.0	23.0	----	2.0	Bal	1.0	<0.1	W:12.5	38-40	Hot Wear, Corrosion
T-400	GP-R30400	----	8.5	----	28.5	----	Bal	2.6	----	----	----	High Temp Wear,Metal to Metal Wear
T-800	----	----	17.5	----	28.5	----	Bal	3.4	----	----	----	High Temp Wear,Metal to Metal Wear
Nickel Based Super Alloys												
625	GP-N06625	<0.1	21.5	Bal	9.0	2.0	----	0.5	0.5	Nb:3.6,Al:<0.1,Ti:<0.1	34-36	Corrosion,Wear
622	----	<0.02	21.5	Bal	13.5	3.0	----	0.5	0.4	W:3.0,V:0.35	----	High Temp Corrosion
690	----	<0.02	29.0	Bal	----	10.0	----	----	----	----	----	High Temp Corrosion
718	----	0.04	18.5	Bal	3.0	19.0	----	----	----	Nb:5.0,Ti:1.0,Al:0.5	----	High Temp Corrosion
Nickel Based Hardfacing												
B27	----	<0.1	----	Bal	----	----	----	3.5	----	B:1.3	25-28	Build-up, Cast Iron
B40	----	0.2	9.0	Bal	----	2.9	----	3.1	----	B:1.7	37-42	Wear, Corrosion
B50	GP-N99645	0.4	12.0	Bal	----	3.5	----	3.8	----	B:2.4	48-52	Wear, Corrosion
B56	GP-N99645	0.5	14.5	Bal	----	4.0	----	3.7	----	B:3.0	53-57	Wear, Corrosion
Tool Steels												
H-13	GP-T20813	0.4	5.1	----	1.3	Bal	----	----	----	V:1.0	----	Build-Up
A11LVC	----	1.8	5.0	----	1.2	Bal	----	1.0	0.4	V:9.0	----	Wear, Corrosion
420CW	----	<2.5	12.8	----	1.3	Bal	----	<1.0	<1.0	V:9.3	----	Wear, Corrosion
4140	----	<0.5	1.0	----	0.2	Bal	----	<0.5	<1.0	----	----	Build-Up
NiTung Blends-Proprietary Alloys Developed for Extreme Wear Applications												
NT-40	----	----	----	----	----	----	----	----	----	40WC	----	----
NT-50	----	----	----	----	----	----	----	----	----	50WC	----	----
NT-60	----	----	----	----	----	----	----	----	----	60WC	----	----
NT-70	----	----	----	----	----	----	----	----	----	70WC	----	----

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