

Thermal Spray Wire

POLYMET ALLOY	DESCRIPTION	COMPETITOR EQUIVALENT		ROCKWELL HARDNESS	DIAMETER		APPLICATIONS
		TAFA	METCO & OTHER		.062"	.125"	
					1.6mm	3.2mm	
Iron-Based Hardfacing Alloys							
PMET 50	Fe Al	35 MXC		30-35 C	✓		Bond coat, anti-skid, traction rolls
PMET 223	LCr Carbide	98 MXC		35-40 C	✓		Good corrosion & wear, machineable
PMET 226	HCr Carbide		8222	55-60 C	✓		Abrasion resistance, aggregate handling
PMET 270	Amorphous Alloy	90 MXC		45-50 C	✓		Boiler tubes, wear resistance
PMET 273	Fe Cr B Si	95 MXC	Armacor-M	55-60 C	✓		Abrasion resistance, rolls, boiler tubes
PMET 296	Fe Cr Ni B	96 MXC	Armacor 16	50-55 C	✓		Abrasion resistance, boiler tubes
PMET 297	Tungsten Carbide	97MXC	Duocor	60-65 C	✓		Abrasion resistance, boiler tubes
Copper -Based Alloys							
PMET 590	Al Bronze	10T	Sprabronze AA	62-68 B	✓	✓	Housings, bearings, shafts, bond coats
PMET 599	Copper	05T		35-40 B	✓		High conductivity, electrical components
Aluminum-Based Alloys							
PMET 692	Al 6Si	01S	Metco SF	70-75 B	✓		Turbine engines, dimensional buildup
PMET 699	Aluminum	01T	Metco Al	60-65 B	✓	✓	Corrosion resistance, electrical conductivity
Iron-Based Alloys							
PMET 709	LC Steel	30T		95-105B	✓		Bearings, seating surfaces, economical option
PMET 710	304 SS	80T		90-100 B	✓		Corrosion resistance, print rolls, restoration
PMET 714	HC Steel	38T	Spraysteel 80	20-25 C	✓		Low shrink, shafts, housings, pistons, fans
PMET 718	Low Shrink Steel		Spraysteel LS	30-35 C		✓	Low shrink, dimensional restoration
PMET 720	420 SS	60T	Metcoloy 2	40-45 C	✓	✓	Wear resistance, machine elements
PMET 723	18 5 SS	55T	Metcoloy 5	90-96 B	✓	✓	Thick coatings, rams, rollers
PMET 730	316 SS	88T	Metcoloy 4	90-100 B	✓		Corrosion resistance, shafts, print rolls
PMET 731	Fe Cr Al	Alcro		85-90 B	✓		Boiler tubes, dimensional restoration
Nickel-Based Alloys							
PMET 806	Nickel	06T		55-60 B	✓		Corrosion resistance, impellers, sleeves
PMET 818	Alloy 718	78T	8718	25-30 C	✓		Oxidation resistance, turbine engines
PMET 821	Ni 20Cr	06C		85-95 B	✓		Oxidation resistance, machineable coatings
PMET 860	Alloy 625	71T	8625	90-95 B	✓		Oxidation resistance, corrosion resistance, digestors
PMET 876	Alloy C-276	77T	8276	30-40 C	✓		Resistance to reducing/oxidizing corrosives
PMET 877	Monel	70T		80-85 B	✓	✓	Restoration, rolls, sea water service
PMET 884	Ni 20Al	79B	405	60-80 B	✓	✓	Bond coats
PMET 885	Ni 5Al	75B	8400	65-85 B	✓		Bond coat, turbine engine part buildup
PMET 886	Ni Cr Al	73 MXC	8443	75-85 B	✓		Oxidation resistance, ceramic undercoat
PMET 887	Ni Cr Al Y	76 MXC		75-85 B	✓		Oxidation resistance, ceramic undercoat
PMET 888	Ni Mo Al	74 MXC	8447	75-85 B	✓		Wear resistance, buildup of steels
PMET 889	Ni Cr Ti	45 CT		30-35 C	✓		Corrosion resistance, boiler tubes
Other Alloys							
PMET 540	Zinc	02Z		65-70 B	✓	✓	Corrosion resistance, electrical conductivity
PMET 542	Babbitt	04T	Sprababbitt	65-70 B	0.078" (2mm)	✓	Bearings, solderable connections
PMET 549	Tin	02W		65-70 B	0.078" (2mm)	✓	Electrical conductivity
PMET 899	Molybdenum	13T	Sprabond	15-35 C	✓	✓	Corrosion & wear resistance, piston rings

Thermal Spray Powder *All powders are agglomerated and sintered

POLYMET ALLOY	DESCRIPTION	Particle Sizing
PMET 86-10-4	WC-10Co-4Cr	-45/+15 Microns
PMET 88-12	WC-12Co	-45/+15 Microns
PMET 83-17	WC-17Co	-45/+15 Microns
PMET 90-10	WC-10Ni	-45/+15 Microns

Gas Turbine

POLYMET ALLOY	DESCRIPTION	SPECIFICATIONS					APPLICATIONS
		GE	P&W	AMS	MSRR	OTHER	
Nickel-Based Alloys							
PMET 811	GTD 111	B50A880					Gas turbine engine components
PMET 818	Alloy 718			5832		A5.14 ERNiFeCr-2	Gas turbine engine frames & casings
PMET 820	René 220	B50TF239				PCC 1-59-02.061	Gas turbine engine structural components
PMET 823	GTD 222	B50A940, B50TF311					Gas turbine engine combustors
PMET 838	Inconel® 738	B50TF191					Gas turbine engine blades and vanes
PMET 839	Inconel® 939	B50TF250	PWA 1495				Gas turbine engine blades and vanes
PMET 842	René 142	B50TF274			MSRR 9500/247		Gas turbine engine blades
PMET 845	C 242				MSRR 9500/17		Gas turbine engine vanes
PMET 847	Mar M 247					EMS 55447	Gas turbine engine vanes
PMET 854	Haynes® 230®			5839		A5.14 ERNiCrWMo-1	Gas turbine engine ducts, and combustion linings
PMET 860	Alloy 625			5837		A5.14 ERNiCrMo-3	Gas turbine engine blades
PMET 863	C-263	B50A783		5966			Gas turbine engine frames & casings
PMET 865	Waspaloy®			5828	MSRR 9500/202		Gas turbine engine casings
PMET 870	Hastelloy® W			5786		A5.14 ERNiMo-3	Gas turbine engine hot section components
PMET 875	Hastelloy® X			5798		A5.14 ERNiCrMo-2	Gas turbine engine combustors
PMET 880	René 80	B50TF259					Gas turbine engine blades
Cobalt-Based Alloys							
PMET 905	L-605 (Alloy 25)			5796	MSRR 9500/23		Gas turbine engine hot section components
PMET 906	Alloy 6			5788	MSRR 9500/19	A5.21 ERCoCr-A	Valve seats, pump shafts, & sleeves
PMET 909	Mar M 509	B50TF89	PWA 1185			CROM RT 5027 B35	Gas turbine engine blades & vanes
PMET 912	Alloy 12				MSRR 9500/228	A5.21 ERCoCr-B	Lumber saw blades & cutting tools
PMET 913	Alloy 12H				MSRR 9500/15		Gas turbine components
PMET 914	FSX 414	B50A823					Gas turbine engine vanes
PMET 918	Mar M 918	B50A824		5814			Gas turbine engine vanes
PMET 921	Alloy 21			5835		A5.21 ERCoCr-E	Gas turbine components
PMET 931	Alloy 31			5789	MSRR 9500/25		Gas turbine engine blades
PMET 972	Merl 72		PWA 795		MSRR 9500/248		Gas turbine engine blades
PMET 980	T-800®	B50TF193				DMR 34.071	Gas turbine engine blades
PMET 988	Alloy 188			5801			Gas turbine engine hot section components
PMET 994	CM 64	B50TF55	PWA 694		MSRR 9500/226	DMR 34.070	Gas turbine engine blades
Stainless Steel Alloys							
PMET 747	347 5S			5680		A5.9 ER347	Oil refineries, FCC units, hanger rods

Industrial Hardfacing

POLYMET ALLOY	COMPETITOR EQUIVALENT	ROCKWELL HARDNESS	DIAMETERS		APPLICATIONS
			GMAW	GTAW	
Nickel-Based Alloys					
POLYWEAR 40	COLMONOY® 4	37-43 C	.045 (1.2mm), .062 (1.6mm)		Wear and corrosion
POLYWEAR 50	COLMONOY® 5	45-56 C	.045 (1.2mm), .062 (1.6mm)		Wear and corrosion
POLYWEAR 60	COLMONOY® 6	55-60 C	.045 (1.2mm), .062 (1.6mm)		Wear & Corrosion, Draw Blocks, Impeller Screws, Slurry Pipes
POLYTUNG NIBWC	DURMAT® NIFD	54-62 C	.062 (1.6mm)		Dredge cutter heads & teeth, ID elbows & pipes, oil tool bits, bucket teeth
POLYTUNG NiCrBWC	DURMAT® NICRW	59-67 C	.062 (1.6mm)		Dredge cutter heads & teeth, ID elbows & pipes, oil tool bits
Cobalt-Based Alloys					
POLYSTEEL 1	STELLITE® 1, CoCr-C	50-60 C	.045" (1.2mm), .062" (1.6mm)	.030" (.8mm) - .187" (4.8mm)	Screw components, hydropulper, pump sleeves
POLYSTEEL 6	STELLITE® 6, CoCr-A	40-44 C	.045" (1.2mm), .062" (1.6mm)	.030" (.8mm) - .312" (7.9mm)	Valve seats, gates, dies, extrusion screws
POLYSTEEL 12	STELLITE® 12, CoCr-B	43-47 C	.045" (1.2mm), .062" (1.6mm)	.030" (.8mm) - .312" (7.9mm)	Saw teeth, chain saw bars, valve plugs & seats, bearing areas
POLYSTEEL 21	STELLITE® 21, CoCr-E	30-35 C	.045" (1.2mm), .062" (1.6mm)	.030" (0.8mm) - .187" (4.8mm)	Steam valves, hot shears, chemical & petrochemical valves, dies