

## Thermal Spray Wire

POLYMET ALLOY	DESCRIPTION	COMPETITOR EQUIVALENT	ROCKWELL HARDNESS	DIAMETER		APPLICATIONS	
		TAFA	METCO & OTHER	.062"	.125"		
Iron-Based Hardfacing				1.6mm	3.2mm		
PMET 50	Fe Al	35 MXC	8235	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 290	Amorphous Alloy			60-65 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	8230	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, housing, pistons, fans
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 BONDRITE®	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	.062", .079"	✓	Bearings, solderable connections
PMET 549	Tin	02W		65-70 B	.091" (2.3mm)	✓	Electrical conductivity
PMET 899	Molybdenum	13T	Sprabond	15-35 C	✓	✓	Corrosion & wear resistance, piston rings

## Thermal Spray Powder & Masking

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
PMET 70-20-7	WC-20CRC-7Ni	-45/+15 Microns
PMET CRC25	CRC-25NiCr	-45/+15 Microns
PWD 106F	Chromium Oxide	-45/+15 Microns

POLYMET ALLOY	DESCRIPTION	Particle Sizing
PWD 130	Alumina Titania	-53/+15 Microns
PWD 136F	Cr- Si- Ti- Oxide	-63/+5 Microns
PWD 444	Ni Cr Al Mo Fe	-125/+45 Microns
PWD 447	Ni Al Mo	-90/+45 Microns
PWD 450	Ni Al	-90/+45 Microns
PWD 452	Fe Ni Al	-125/+45 Microns
SPRAYMASK	Liquid masking compound	1 Qt & 5 Gal Containers



Polymet Corporation is a world-class manufacturer of high performance wire for hardfacing, welding, and thermal spraying. We produce high quality products used in industries such as aerospace, power generation, nuclear, lumber, & mining. Our wires are ideal for demanding applications where wear factors such as metal to metal, metal to earth, high impact, high abrasion, corrosion, & high temperatures are present.

## Gas Turbine

POLYMET ALLOY	DESCRIPTION	SPECIFICATIONS					APPLICATIONS
		GE	P&W	AMS	MSRR	OTHER	
<b>Iron-Based Hardfacing Alloys</b>							
PMET 811	GTD 111	B50A880					Gas turbine engine components
PMET 818	Inconel 718			5832		A5.14 ERNiFeCr-2	Gas turbine engine frames & casings
PMET 820	Rene 220	B50TF239					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	Rene 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 860	Inconel 625			5837		A5.14 ERNiCrMo-3	Gas turbine engine blades
PMET 863	Hastelloy 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 ERNiMoCr-2	Gas turbine engine combustors
PMET 880	Rene 80	B50TF259					Gas turbine engine blades
<b>Cobalt-Based Alloys</b>							
PMET 905	L-605 (Alloy 25)			5796	MSRR 9500/23		Gas turbine engine hot section components
PMET 906	Alloy 6			5788	MSRR 9500/19	ERCoCr-A	Valve seats, pump shafts, & sleeves
PMET 909	Mar M 509	B50TF89	PWA 1185				Gas turbine engine blades & vanes
PMET 911	RMD 6000						Gas turbine engine vane brazing
PMET 912	Alloy 12				MSRR 9500/228	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		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	HS 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

## Industrial Hardfacing

POLYMET ALLOY	COMPETITOR EQUIVALENT	ROCKWELL HARDNESS	DIAMETERS		APPLICATIONS
			GMAW	GTAW	
<b>Nickel-Based Alloys</b>					
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
Poly Tung NiBWC	DURMAT® NIFD	54-62 C	.062 (1.6mm)		Dredge cutter heads & teeth, ID elbows & pipes, oil tool bits, bucket teeth
PolyTung NiCrWBC	DURMAT® NICRW	59-67 C	.062 (1.6mm)		Dredge cutter heads & teeth, ID elbows & pipes, oil tool bits
<b>Cobalt-Based Alloys</b>					
PolyStel 1	STELLITE® 1, CoCr-C	50-60 C	.045" (1.2mm), .062" (1.6mm)	.030" (.8mm) - .187" (4.8mm)	Screw components, hydropulper, pump sleeves
PolyStel 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
PolyStel 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
PolyStel 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