

Thermal Spray Wire

POLYMET ALLOY	DESCRIPTION	COMPETITOR EQUIVALENTS		ROCKWELL HARDNESS	DIAMETER		APPLICATIONS
		TAFSA	METCO & OTHER		1/16" 1.6,	1/8" 3.2mm	
Iron-Based Hardfacing Alloys							
PMET 50	Fe Al	35MXC		30-35 C	✓		Bond Coat, Anti-Skid, Traction Rolls
PMET 223	LCr Carbide	98MXC		35-40 C	✓		Good Corrosion & Wear, Machinable
PMET 226	HCr Carbide		8222	55-60 C	✓		Abrasion Resistance, Aggregate Handling
PMET 270	Amorphous Alloy	90MXC		45-50 C	✓		Boiler Tubes, Wear Resistance
PMET 273	Fe Cr B Si	95MXC	Armacor-M	55-60 C	✓		Abrasion Resistance, Rolls, Boiler Tubes
PMET 296	Fe Cr Ni B	96MXC	Armacor 16	50-55 C	✓		Abrasion Resistance, Boiler Tubes
PMET 297	Tung Carbide	97MXC	Duocor	60-65 C	✓		Abrasion Resistance, Boiler Tubes
Vecalloy B	Amorphous Alloy			65-70 C	✓		Abrasion Resistance, Boiler Tubes, Fans
Vecalloy R	Readable Alloy			50-55 HRC	✓		Abrasion Resistance, Boiler Tubes, Fans
Vecalloy CR-Free	Amorphous Alloy			60-67 HRC	✓		Abrasion Resistance, Boiler Tubes, Fans, Rolls
Copper-Based Alloys							
PMET 590	Al Bronze	10T	Sprbrnze AA	62-68 B	✓	✓	Housings, Bearings, Shafts, Bond Coats
PMET 599	Copper	OST		35-40 B	✓		High Conductivity, Electrical Components
Aluminum-Based Alloys							
PMET 692	Al 6Si	01S	Metco SF	70-75 B	✓		Turbine Engine, Dimensional Buildup
PMET 699	Aluminum	01T	Metco Al	60-65 B	✓	✓	Corrosion Resistance, Electric Conductivity
Iron-Based Alloys							
PMET 709	LC Steel	30T		95-105 B	✓		Economical, Bearings, Seating Surfaces
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 718	Low Shrink Steel		Spraysteel LS	30-35 C		✓	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, Dimension 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, Machinable Coatings
PMET 860	Alloy 625	71T	8625	90-95 B	✓		Oxidation Resistance, Corrosion, Digestors
PMET 866	Nicko-Shield			90-95 HRB	✓		Sulfur Resistance, Boiler Tubes, Ducting, Tanks
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	73MXC	8443	75-85 B	✓		Oxidation Resistance, High Temp. Bond Coats
PMET 887	Ni Cr Al Y	76MXC		75-85 B	✓		Oxidation Resistance, Ceramic Undercoat
PMET 888	Ni Mo Al	74MXC	8447	75-85 B	✓		Wear Resistance, Buildup of Steels
PMET 889	Ni Cr Ti	45CT		30-35 C	✓		Corrosion Resistance, Boiler Tubes
Other Alloys							
PMET 540	Zinc	02Z		65-70 B	✓	✓	Corrosion Resistance, Electrical Conductivity
PMET 542	Babbitt	04T	Sprabbitt	65-70 B	0.078	✓	Bearings, solderable connections
PMET 549	Tin	02W		65-70 B	0.078	✓	Electrical Conductivity
PMET 899	Molybdenum	13T	Sprabond	15-35 C	✓	✓	Corrosion & Wear, piston rings

Thermal Spray Powders *All powders are agglomerated and sintered

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



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

Gas Turbine

POLYMET ALLOY	DESCRIPTION	SPECIFICATIONS				ROCKWELL HARDNESS	APPLICATIONS
		GE	P&W	AMS	OTHER		
Nickel-Based Alloys							
PMET 802	Mar M 002				MSRR 9500/246		Gas Turbine Engine Structural Components
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			PCC 1-59-02.061		Gas Turbine Engine Structural Components
PMET 823	GTD 222	B50A940					Gas Turbine Engine Combustors
PMET 838	Inconel 738	B50TF191					Gas Turbine Engine Blades and Vanes
PMET 839	Inconel 939	B50TF250					Gas Turbine Engine Blades and Vanes
PMET 840	Inconel 939		PWA 1495				Gas Turbine Engine Blades and Vanes
PMET 842	Rene 142	B50TF274					Gas Turbine Engine Blades
PMET 845	C 242						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 ERNiCrMo-2		Gas Turbine Engine Combustors
PMET 880	Rene 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	40 - 47 C	Valve Seats, Pump Shafts & Sleeves
PMET 909	Mar M 509	B50TF89	PWA 1185		CHROM RT 5027 B35		Gas Turbine Engine Blades and Vanes
PMET 910	ADH	RMD6000 CL B					Gas Turbine Engine Vane Brazing
PMET 911	RMD 6000						Gas Turbine Engine Vane Brazing
PMET 912	Alloy 12				MSRR 9500/228	44-50 C	Lumber Saw Blades & Cutting Tools
PMET 913	Alloy 12H				MSRR 9500/15	45-54 C	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	25-35 C	Gas Turbine Components
PMET 931	Alloy 31			5789	MSRR 9500/25	21-27 C	Gas Turbine Engine Blades
PMET 972	Meri 72		PWA795		MSRR 9500/248		Gas Turbine Engine Blades
PMET 980	T-800	B50TF193			DMR 34.071	54-62 C	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	47-54 C	Gas Turbing Engine Blades

Industrial Hardfacing

POLYMET ALLOY	COMPETITOR'S EQUIVALENT	ROCKWELL HARDNESS	PRODUCT FORMS		APPLICATIONS
			GMAW	GTAW	
Nickel-Based Alloys					
POLYWEAR 50	COLMONOY® 5	45-56 HRC	.062" (1.6mm)		Wear & Corrosion
POLYWEAR 60	COLMONOY® 6	55-60 HRC	.062" (1.6mm)		Wear & Corrosion, Draw Blocks, Impeller Screws, Slurry Pipes
POLYTUNG NIBWC	DURMAT® NIFD	~ 2355 HV 0.1	.062" (1.6mm)		Dredge Cutter Heads & Teeth, ID Elbows & Pipes, Oil Tool Bits, Bucket Teeth
POLYTUNG NiCrBWC	DURMAT® NICRW	~ 2355 HV 0.1	.062" (1.6mm)		Dredge Cutter Heads & Teeth, ID Elbows & Pipes, Oil Tool Bits
Cobalt-Based Alloys					
POLYSTEL 1	STELLITE® 1	50-60 HRC	.045" (1.2mm), .062" (1.6mm)		Screw Components, Hydropulper, Pump Sleeves
POLYSTEL 190	STELLITE® 190	50-62 HRC			Bearing Journals for Tricone Drillbits, Saw Blades
POLYSTEL 6	STELLITE® 6	40-44 HRC	.045" (1.2mm), .062" (1.6mm)		Valve Seats, Gates, Dies, Extrusion Screws
POLYSTEL 12	STELLITE® 12	43-47 HRC	.045" (1.2mm), .062" (1.6mm)		Saw Teeth, Chain Saw Bars, Valve Plugs & Seats, Bearing Areas
POLYSTEL 12H	STELLITE® 12H	47-50 HRC			Saw Teeth, Chain Saw Bars
POLYSTEL 21	STELLITE® 21	30-35 HRC	.045" (1.2mm), .062" (1.6mm)		Steam Valves, Hot Shears, Chemical & Petrochemical Valves, Dies
Iron-Based Alloys					
VECALLOY 600		64-68 HRC	.045" (1.2mm), .062" (1.6mm), .093" (2.4mm)		Shaker Screens, Ground Engaging Tools, Chute Blocks, Wear Plates, Mill Liners, High Impact Mining Applications
VECALLOY 700		62-65 HRC	.045" (1.2mm), .062" (1.6mm), .093" (2.4mm)		Shaker Screens, Ground Engaging Tools, Chute Blocks, High Impact Mining Applications, Pipe ID
VECALLOY 752		68-69 HRC	.045" (1.2mm), .062" (1.6mm), .093" (2.4mm)		High Abrasion Environments, Cutter Heads, Bucket Teeth, Oil Tool Bits
VECALLOY 800		45-47 HRC	.045" (1.2mm), .062" (1.6mm), .093" (2.4mm)		Crawler Shoes, Crusher Hammers, Bucket Blades, Stone Chutes, Shovel Buckets, Other Manganese Steel Mining Applications