HARDFACING ALLOYS

PRODUCT	DESCRIPTION	CHARACTERISTICS / APPLICATIONS	HARDNESS
DURMAT-FTC	Fused Tungsten Carbide (FTC)	One of the hardest and most abrasion resistant materials used in the modern wear resistance and tool technology. Armouring metallic surfaces exposed to extreme mechanical stress.	~2360 HV
DURMAT-SFTC	Spherical Fused Tungsten Carbide (**SFTC**)	The most wear resistant FTC we can offer. Higher hardness due to spherical fused tungsten carbides. Armouring metallic surfaces exposed to extreme mechanical stress. E.g. used for reinforcing diamond tools.	~3000 HV
DURMAT-WC-IV	Crushed Sintered Tungsten Carbide	Deposits are highly resistant to abrasion. Concentrated wear protection for the area receiving maximum wear and easy application of an extremely hard and abrasion resistant protective surface for highly stressed areas.	
DURMAT-A	Rods for oxyacetylene welding filled with fused tungsten carbide (FTC)	For special hardfacing on machine parts of unalloyed, low alloyed or cast steel with a carbon content of up to 0.45%.	~2360 HV
DURMAT-A-PLUS	Rod for oxyacetylene welding filled with spherical fused tungsten carbide (**SFTC**)	Similar to DURMAT A, but due to spherical fused tungsten carbide content this alloy has a higher hardness and wear resistance.	~3000 HV
DURMAT-B	Nickel cored flexible rod coated with fused tungsten carbide (FTC) and Ni-Cr-B-Si	The overlay is highly resistant to acids, bases, lyes and other corrosive media and excessive wear conditions. Hardfacing of ferritic and austenitic steels (steel castings).	FTC: ~2360 HV Matrix: ~45 HRC
DURMAT-BK	Nickel cored flexible rod coated with mainly spherical fused/cast tungsten carbide (**SFTC**)	Similar to DURMAT B. Due to the high spherical fused tungsten carbide content this alloy shows a much better wear resistance.	FTC: ~3000 HV Matrix: ~45 HRC
DURMAT-NIA	Cold rolled, formed, closed seam nickel tube filled with fused tungsten carbide (FTC)	For oxyacetylene application. The overlay is extremely resistant to acids, bases, lyes and other corrosive media and other excessive wear conditions. Hardfacing on ferritic and austenitic steels (steel casings).	FTC: ~2360 HV Matrix: ~45-50 HRC
DURMAT-NIA-PLUS	Cold rolled, formed, closed seam nickel tube filled with spherical fused tungsten carbide (**SFTC**) and Ni, Cr, B and Si	Similar to DURMAT NIA. Due to the high spherical fused tungsten carbide content this alloy has a better wear resistance.	FTC: ~3000 HV Matrix: ~45-50 HRC
DURMAT-CS	Composite rods consisting of sintered tungsten carbide fragment in a ductile nickel silver matrix.	DURMAT–CS consists of sintered tungsten carbide fragments in a ductile nickel silver matrix. Available in two grades: wear resistance and cutting.	
DURMAT-E	Iron based tube metal electrode filled with medium size fused tungsten carbide (FTC)	For manual arc application. For hardfacing unalloyed and low alloyed steels (cast steels) with a maximum carbon content of 0.45%.	~55-58 HRC
DURMAT-E-PLUS	Iron based tube metal electrode filled with spherical fused tungsten carbide (**SFTC**)	Similar to DURMAT-E. Due to spherical fused tungsten carbide content, this alloy has a higher hardness and greater wear resistance.	~55-58 HRC
DURMAT-NISE	Tubular electrode filled with fused tungsten carbide and a special nickel alloy	For applications where extreme abrasion in combination with corrosion is encountered. Overlaying on steel castings, nickel based and stainless steel alloys.	FTC: ~2360 HV Matrix: ~47-50 HRC
DURMAT-NISE-PLUS	Tubular electrode filled with spherical fused tungsten carbide and a special nickel alloy	Similar to DURMAT NISE / NIFD. Due to spherical tungsten carbide content, this alloy shows a better wear resistance.	FTC: ~3000 HV Matrix: ~45-50 HRC
DURMAT-NI-3	Tubular electrode filled with fused tungsten carbide, very hard special carbides in combination with a special nickel alloy	For applications where extreme abrasion in combination with corrosion is encountered. Application on steel castings, nickel based and stainless steel alloys.	FTC: ~2360 HV Carbides: ~2900 HV Matrix: ~58 HRC
DURMAT-OA	Iron based open arc tubular wire filled with fused tungsten carbide (FTC)	DURMAT–OA is an open arc tubular wire filled with fused tungsten carbide for semi-automatic application, where extreme abrasive wear is encountered.	1st layer: ~64-66 HRC 2nd layer: ~66-68 HRC Carbide: ~2360 HV
DURMAT-NIFD	Cored wire filled with fused tungsten carbide and Ni-Cr-B-Si	To protect surfaces where extreme abrasive wear in combination with corrosion are encountered. Repairing & hardfacing of ferritic and austenitic steel tools and machine parts (steel castings).	FTC: ~2360 HV
DURMAT-NIFD-PLUS	Cored wire filled with spherical fused tungsten carbide (**SFTC**) and Ni-Cr-B-Si	Similar to DURMAT NIFD. Due to spherical fused tungsten carbide content this alloy has a better wear resistance.	FTC: ~3000 HV Matrix: ~45 HRC

HARDFACING ALLOYS (continued)

PRODUCT	DESCRIPTION	CHARACTERISTICS / APPLICATIONS	HARDNESS
DURMAT-NI-2	Cored wire filled with fused tungsten carbides in combination with very hard special carbides and Ni-Cr-B-Si	For semi-automatic welding applications. To protect surfaces where extreme abrasive wear in combination with corrosion are encountered. Repairing & hardfacing of ferritic and austenitic steel tools and machine parts (steel castings).	FTC: ~2360 HV Carbides: ~2900 HV Matrix: ~45 HRC
DURMAT-40-A	Oxyacetylene welding and spraying powder (NiCrBSi-alloy)	Rust and acid durable, resistant to heavy abrasion and heat. Corrosion and erosion durable. High thermal resistance up to 550°C (1022°F).	~35-39 HRC
DURMAT-60-A	Oxyacetylene welding and spraying powder (NiCrBSi)	Rust and acid durable, resistant to heavy abrasion and heat. Corrosion and erosion durable. High thermal resistance up to 550°C (1022°F)	~56 HRC
DURMAT-40-FTC	Oxyacetylene welding and spraying metal powder, blended: 60% DURMAT-60-A 40% DURMAT-FTC	Rust and acid durable, resistant to heavy abrasion and heat. Due to high tungsten carbide content, highly wear resistant. Protects components with heavy mechanical and mineral wear.	FTC: ~2340 HV 60-A: ~56 HRC
DURMAT-50-FTC	Oxyacetylene welding and spraying metal powder, blended: 50% DURMAT-60-A 50% DURMAT-FTC	Rust and acid durable, resistant to heavy abrasion and heat. Due to high tungsten carbide content, highly wear resistant. Protects components with heavy mechanical and mineral wear.	FTC: ~2340 HV 60-A: ~56 HRC
DURMAT-60-FTC	Oxyacetylene welding and spraying metal powder, blended: 60% DURMAT-60-A 40% DURMAT-FTC	Rust and acid durable, resistant to heavy abrasion and heat. Due to high tungsten carbide content, highly wear resistant. Protects components with heavy mechanical and mineral wear.	FTC: ~2340 HV 60-A: ~56 HRC
DURMAT-75-FTC	Oxyacetylene welding and spraying metal powder, blended: 25% DURMAT-60-A 75% DURMAT-FTC	Rust and acid durable, resistant to heavy abrasion and heat. Due to high tungsten carbide content, highly wear resistant. Protects components with heavy mechanical and mineral wear.	FTC: ~2340 HV 60-A: ~56 HRC
DURMAT-58-PTA	PTA Powder, nickel based (NiCrBSi)	Excellent resistant to wear and corrosion and a low friction coefficient. It is rust and acid durable, resistant to heavy abrasion and heat. It's extreme hardness allows for excellent gliding on high tensile strength steels and plastics.	~52 HRC
DURMAT-59-PTA	PTA Powder, nickel based (NiCrBSi)	Resistant to heavy abrasion and heat. The extreme hardness allows an excellent gliding on high tensile strength steels.	~50-55 HRC
DURMAT-61-PTA	PTA Powder, blended: 40% DURMAT-59-PTA 60%DURMAT-FTC	Rust and acid durable, resistant to heavy abrasion and heat. Due to high tungsten carbide content, highly wear resistant. Protects components with heavy mechanical and mineral wear.	FTC: ~2340 HV 59-PTA: ~50-55 HRC
DURMAT-65-PTA	PTA Powder, blended: 40% DURMAT-58-PTA 60% DURMAT-FTC	High wear and corrosion resistant alloy. Protects components which encounter heavy mechanical and mineral wear.	FTC: ~2340 HV 58-PTA: ~52 HRC
DURMAT-505-PTA	PTA Powder, iron–based (FeCrVC)	Resistant against heavy abrasion and impact. Due to the precipitation of fine special carbides, layers show an extreme hardness, combined with a high tenacity.	~55-60 HRC
DURMAT-506-PTA	PTA Powder, iron–based (FeCrC +18%VC)	Similar to DURMAT 505PTA, but based on the higher VC content more wear resistant.	~58-64 HRC
DURMAT-564-PTA	PTA Powder, iron–based (FeCrCVWB)	FeCrC alloy with B for wear protection of e. g. parts in the cement or brick industry.	~62-64 HRC @400° C: ~60 HRC @ 600° C: ~46-48 HRC