

THERMAL SPRAY POWDERS

PRODUCT	DESCRIPTION	COMPOSITION (WEIGHT-%)	APPLICATIONS	HARDNESS
DURMAT 101	WC/Co Agglomerated, sintered	88 WC / 12 Co	Co-bond carbide powder for wear resistant coatings produced by flame-, plasma or high-velocity-flame-spraying (HVOF).	~1200 HV
DURMAT 102	WC/Co Agglomerated, sintered	83 WC / 17 Co	Similar to DURMAT 101, but with a higher Co-content.	~1100 HV
DURMAT 103	WC/Ni Agglomerated, sintered	88 WC / 12 Ni	Ni-bond carbide powder for wear resistant coatings. In comparison with WC/Co layers they show an improved corrosion resistance in aqueous solutions.	~1000 HV
DURMAT 104	WC/Ni Agglomerated, sintered	83 WC / 17 Ni	Similar to DURMAT 103, but with a higher Ni-content.	~900 HV
DURMAT 105	WC/Co/Cr Agglomerated, sintered	86 WC / 10 Co / 4 Cr	In comparison with WC/Co coatings, DURMAT™ 105 shows a higher resistance against oxidation and corrosion in aqueous solutions.	1000 - 1300 HV
DURMAT 106	WC/Co/Cr Agglomerated, sintered	86 WC / 6 Co / 8 Cr	Similar to DURMAT 105, but with a higher Cr-content.	1000 - 1300 HV
DURMAT 107	WC/W ₂ C Fused Tungsten Carbide	3.9 – 4.0 C Balance W	Fused Tungsten Carbide is an eutectic melting blend of WC/W ₂ C.	~2300 HV
DURMAT 108	WC/CrC/Ni Agglomerated, sintered	73 WC / 20 CrC / 7 Ni	DURMAT 108 shows superior oxidation and corrosion properties than other WC-based materials. In addition it has a better chemical resistance than other WC-based materials.	
DURMAT 351	NiSF 60+ FTC Blended	DURMAT 456 + 50 % DURMAT 107	DURMAT 351 is rust and acid durable, resistant to heavy abrasion and heat. Due to the high FTC-content, the powder is heavy mechanical and mineral wear resistant.	107: ~2340 HV 456: ~56 HRC
DURMAT 352	NiSF 60+ FTC Blended	DURMAT 456 + 60 % DURMAT 107	DURMAT 352 is similar to DURMAT 351. Based on the higher FTC-content wear resistant of DURMAT 352 layers is much better.	107: ~2340 HV 456: ~56 HRC
DURMAT 353	NiSF 60 + FTC Blended	DURMAT 456 + 80 % DURMAT 107	DURMAT 353 is similar to DURMAT 352. Based on the higher FTC-content wear resistant of DURMAT 353 layers is much better.	107: ~2340 HV 456: ~56 HRC
DURMAT 354	NiSF 60+ WC/Co Blended	DURMAT 456 + 50 % DURMAT 101	354-is similar to 356. Based on the higher WC/Co-content wear resistant of DURMAT 354 layers is much better.	101: ~1200 HV 456: ~56 HRC
DURMAT 355	NiSF 60+ WC/Co Blended	DURMAT 456 + 80% DURMAT 101	355-coatings are erosion, abrasion and fret resistant. Similar to DURMAT 356 und DURMAT 354 based on a higher WC/Co-content.	101: ~1200 HV 456: ~56 HRC
DURMAT 356	NiSF 60+ WC/Co Blended	DURMAT 456 + 35% DURMAT 101	356-coatings are very dense and resist wear by abrasive grains or particle erosion/abrasion. Fretting resistant up to 540°C (1000°F).	101: ~1200 HV 456: ~56 HRC
DURMAT 450	Ni / Cr Water atomised	80 Ni / 20 Cr	Water atomised metal alloy for corrosion and oxidation resistant coatings. DURMAT™ 450 is also used as bond coat under ceramic layers.	
DURMAT 452	Ni / Al Water atomised	95 Ni / 5 Al	Water atomised NiAl alloy used to protect against particle erosion and oxidation. DURMAT™ 452 is also sprayed as a bond coat under ceramic layers.	
DURMAT 453	Ni/Cr/B/Si Gas atomised	7 – 8 Cr / 1.8 B / 3.8 Si Balance Ni	453 is rust and acid durable, resistant to heavy abrasion and heat.	~40 HRC
DURMAT 456	Ni/Cr/B/Si Gas atomised	16 - 17 Cr / 3.3 B / 3.8 Si Balance Ni	Similar to 453, but it is also recommended for carbon packs in refrigeration units.	~56 - 60 HRC
DURMAT 600	Cr ₂ O ₃ -HP (High Purity) Fused, crushed	99 Cr ₂ O ₃	DURMAT 600 is used as a protection against friction and sliding wear.	~1300 HV
DURMAT 601	Cr ₂ O ₃ Fused, crushed	92 Cr ₂ O ₃	Due to the high hardness and chemical resistance DURMAT 601-coatings are suitable in many industrial applications such as pump parts, bearings, seals and textile machinery.	~1300 HV
DURMAT 602	Cr ₂ O ₃ Fused, crushed	>96 Cr ₂ O ₃	High content of TiO ₂ and SiO ₂ . Less hardness compared to DURMAT 600. Typical application textile and pump industry.	~1000 HV