

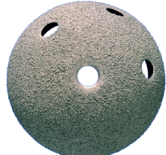







Coating and Surface Treatment Services

Coating	TiN (PVD-Arc)	TiNbN (PVD-Arc)	TPS (Titanium Plasma Spray)	Electro-chemical CaP deposition	Anodisation Type II	Anodisation Type III (Colouring)	HA blasted/Double Acid Etching/	HA blasted/Double Acid Etching/ CaP Coating
Proprietary name	N/A	N/A	N/A	BONIT®	DOTIZE®	N/A	DUOTex®	BONITex®
Thickness	3-6 µm	3-6 µm	30-800 µm	20 ± 10 µm	1-2 µm	20-200 nm	N/A	5 ± 3 µm
Roughness (R _a)	< 0,05 µm at polished surface	< 0,05 µm at polished surface	3,5-80 µm	N/A	< 1 µm	< 0,05 µm at polished surface	1,1 ± 0,5 µm	1,1 ± 0,5 µm
Porosity	N/A	N/A	20-40 %	60 %	N/A	N/A	N/A	≈ 60 % for soluble CaP
Adhesive strength	HF 1-2 (HRC Test VDI 3824)	HF 1-2 (HRC Test VDI 3824)	> 40 MPa	> 15 MPa	> 100 MPa	> 100 MPa	N/A	> 15 MPa for soluble CaP
Fatigue strength impact	No impact	No impact	Max. loss 15 %	No impact	Max. increase of 10 %	No impact	No impact	No impact
Ca/P ratio	N/A	N/A	N/A	1,1 ± 0,1 (BONIT®-HA > 1,67)	N/A	N/A	N/A	1,1 ± 0,1
Hardness	≈ 2300 HV (0,1 N)	≈ 2500 HV (0,1 N)	N/A	N/A	Increase of 20-30 %	N/A	N/A	N/A
Key characteristics	Protection against wear, corrosion and allergic reactions; increase of wettability	Protection against wear, corrosion and allergic reactions; increase of wettability	Enhancement of primary and secondary implant fixation	Enhancement of secondary implant fixation (rapid bone ingrowth)	Increase of fatigue strength, reduction of fretting corrosion, suppression of bone adhesion	Improvement of implant and instrument identification and handling	Enhancement of primary and secondary implant fixation	Enhancement of primary and secondary implant fixation
Main applications	Orthopaedic	Orthopaedic	Orthopaedic/Dental	Orthopaedic/Dental	Orthopaedic	Orthopaedic	Dental	Dental
Example (different scales)								

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