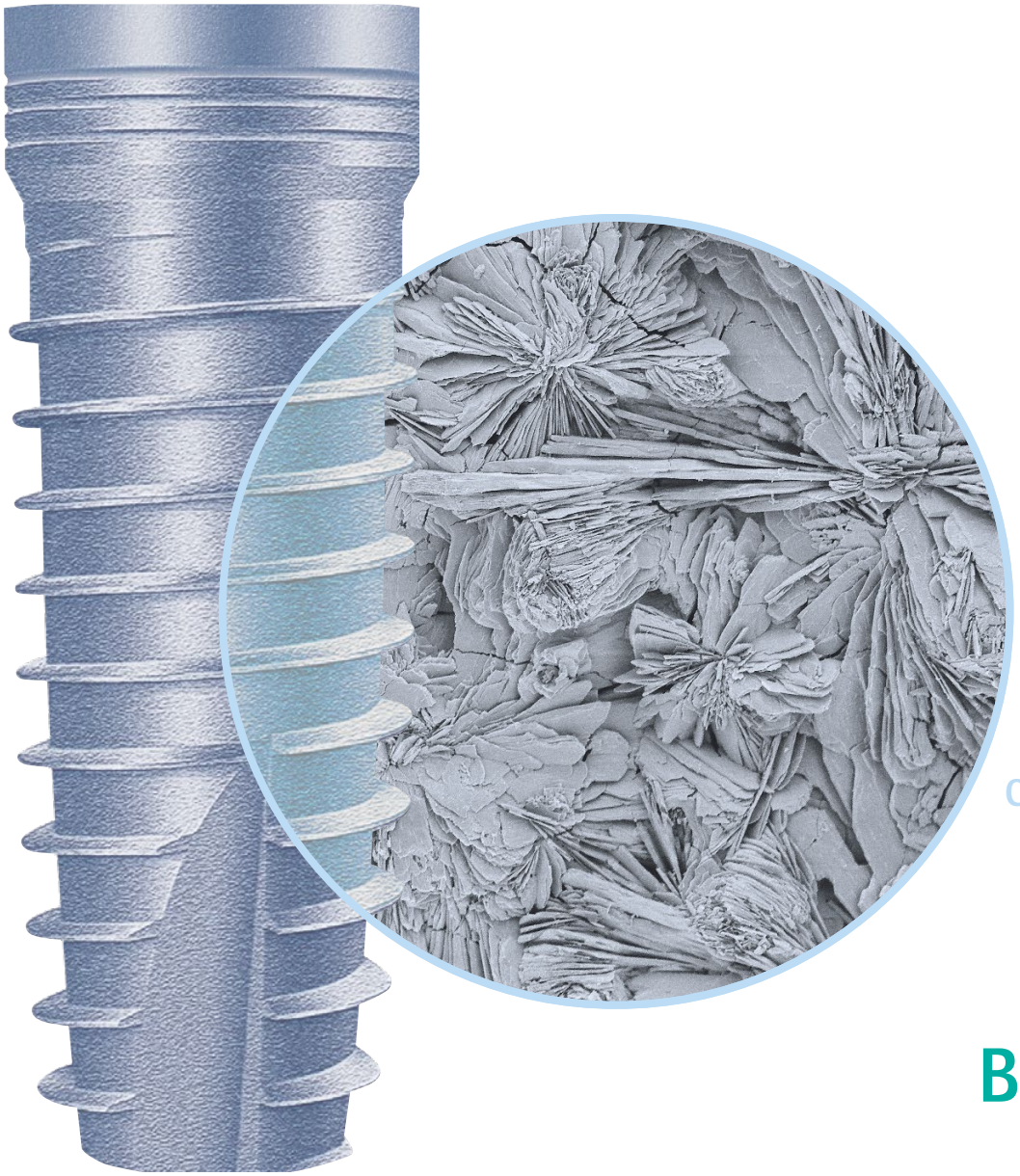
Our BONIT®-SURFACE for your IMPLANT



BONIT®
Bioactive calcium phosphate coating

DOT
medical implant solutions

BONIT® Implant Surface

BONIT® is a thin, fine-crystalline and firmly adherent calcium phosphate coating that is applied to the implant surface electrochemically. The calcium phosphate coating is composed, respectively, of a major proportion of brushite and a minor proportion of hydroxyapatite. BONIT®, which is a bioactive coating, supports the adhesion of osteoblast cells and simultaneously promotes their proliferation. It is fully resorbed over a period of 6-12 weeks after implant placement and is simultaneously replaced by newly formed bone tissue. The implant structure is also an important factor.*

Our offerings for our BONIT® coating include HA or corundum blasting beforehand. The main difference between both pre-treatments is the roughness of the surface (see table).

*Literature on request

Characterization of the Surface

Test criteria	Result
Color	Light gray
Layer thickness (EN ISO 2360)	20 ± 10 µm
Bond strength (ASTM F 1147-99)	≥ 15 MPa
Roughness R_a (after HA blasting)	R_a=1.1 ± 0.5 µm
Roughness R_a (after corundum blasting)	R_a=3.0 ± 1.5 µm
Phase composition of the BONIT® layer	≥ 70 % brushite / ≤ 30 % HA
Ca/P ratio of the BONIT® layer (EN ISO 11885-E22)	1.1 ± 0.1
Biocompatibility (DIN EN ISO 10993-1)	Biocompatible
Durability	5 years
Solubility (based on the BONIT® content)	• 18.3 % (after 7 days in physiological buffer solution [Gomori]) • 31.4 % (after 7 days in physiological buffer solution [Ducheyne])
Analysis of raw materials	Raw materials are subject to the requirements of the U.S. standard ASTM F 1609.
Surface structure	Uniform surface texture

Advantages of the Surface

- Osseoconductive surface
- Microstructure for surface enlargement
- Supports osseointegration as a result of its optimized surface structure
- Highly biocompatible
- Promotes osteogenic differentiation

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