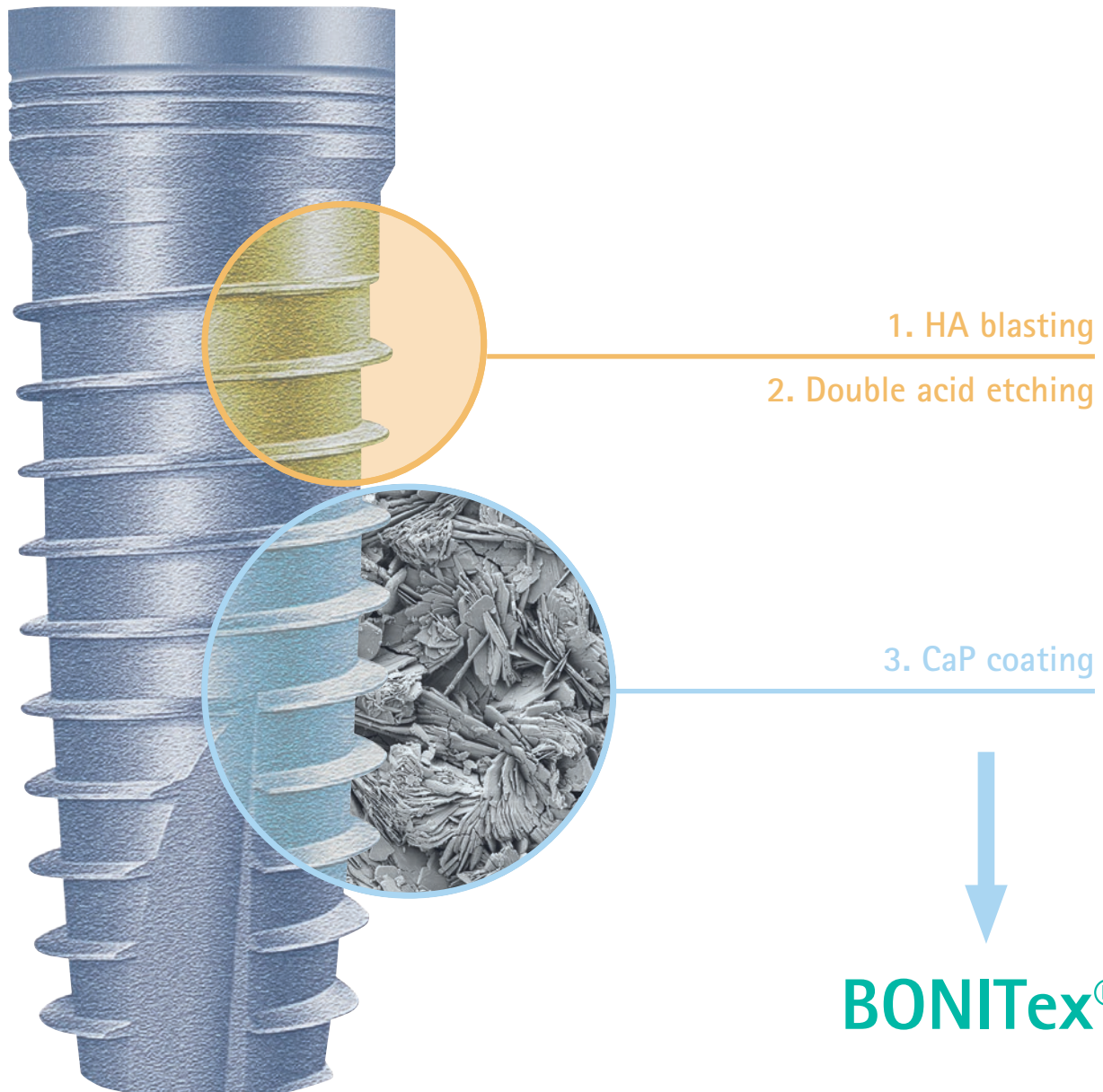


# Our BONITex<sup>®</sup>-SURFACE for your IMPLANT



*BONITex<sup>®</sup>  
HA-blasted, double acid etched surface featuring  
our bioactive calcium phosphate coating*

# BONITex® Implant Surface

Successful osseointegration does not only depend on the design of a product and the selection of its materials. It is a process that is also significantly influenced by the properties of the implant surface and is an essential prerequisite for the long-term success of an endosseous implant. The biological behavior of the implant surface is defined by its topography and chemical composition.\*

\*Literature on request

## Description of the Surface

The BONITex® coating is coating is comprised of a subtractive and an additive surface treatment. The subtractive process is comprised of HA blasting and double acid etching. The additive component of the BONITex® surface is a completely resorbable, thin, fine-crystalline and firmly adherent calcium phosphate coating (BONIT®).

## Characterization of the Surface

Test criteria	Result
Color	Light gray
Layer thickness (EN ISO 2360)	5 ± 3 µm
Bond strength (ASTM F 1147-99)	≥ 15 MPa
Roughness (after HA blasting and dual acid etching)	R <sub>a</sub> = 1.1 ± 0.5 µm
Phase composition of the applied BONIT® layer	≥ 70 % brushite / ≤ 30 % HA
Ca/P ratio of the applied BONIT® coating (EN ISO 11885-E22)	1.1 ± 0.1
Cytotoxicity (DIN EN ISO 10993-5)	Not cytotoxic
Durability	5 years
Solubility (based on the BONIT® content)	<ul style="list-style-type: none"><li>• 18.3 % (after 7 days in physiological buffer solution [Gomori])</li><li>• 31.4 % (after 7 days in physiological buffer solution [Ducheyne])</li></ul>
Analysis of raw materials	Raw materials are subject to the requirements of the U.S. standards ASTM F 1185 and ASTM F 1609.
Surface structure	Uniform surface texture

## Advantages of the Surface

- Microstructured surface topography with HA blasting and acid etching
- Complex surface pattern/significant surface enlargement
- Hydrophilic surface/high affinity for blood
- Increased primary stability with shorter healing time
- Active support of bone deposition
- Greater osseointegration of the surface
- Increased bone-implant contact in early stages (14 to 30 days) after implantation
- Highly biocompatible (BONIT® coating)
- Highly pure surface without contaminations (Implant Study University of Cologne)

DOT GmbH  
A Member of Eifeler Holdings  
Charles-Darwin-Ring 1a  
18059 Rostock, Germany

Phone: +49 381 40 33 50  
Fax: +49 381 40 33 599  
info@dot-coating.de  
www.dot-coating.de

**DOT**  
medical implant solutions