

IntimateBond™

Osteoblast Titanium Coating

Benefits include:

- ✓ Preferential Bone Cell Attachment
- ✓ Reduces Fibroblast Encapsulation
- ✓ 74% Greater Expulsion
- Force Required¹
- ✓ Works on PEEK and Ti Implants
- ✓ Maintains Imaging Properties
- ✓ Adherent and Impact Resistant
- ✓ FDA Master File

IntimateBond™
Osteoblast

Bare PEEK

Our proven and tested IntimateBond™ Osteoblast titanium coating is nano-engineered to maximize direct osteoblast attachment (ongrowth) to the entire surface of the implant, including graft channels. Over 50,000 FDA-cleared Spinal cage and Foot & Ankle implants have been completed to date with our coating. The IntimateBond™ Osteoblast secures bone tissue growth through and around the implant, thus significantly reducing future complications.

IntimateBond™ Osteoblast surface coatings can be applied to various types of spinal and orthopedic implants including machined and 3D-printed PEEK, PEKK, and titanium-based devices with a wide range of geometric configuration, texture, and porosity.

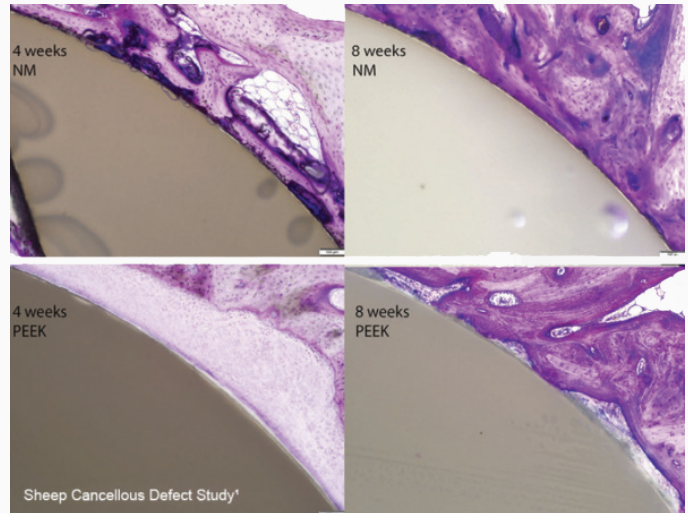
To receive a quote for our IntimateBond™ Osteoblast coating, or a nano-engineered surface solution with specific cell attachment properties suitable for spinal, orthopedic, dental, or cardiovascular implants, please contact us at info@implantsurfaces.com

1. Expulsion testing - The purpose of this test is to determine the mechanical resistance of spinal implants against expulsion loads. Test were conducted using IntimateBond coated PEEK test implants and uncoated PEEK control implants per Accutek protocol VBR-EXPUL-1000. Coated implants showed higher expulsion values (873 N ±42) versus uncoated PEEK (501 N ± 15), representing a 74% increase in Ultimate Force (N) required for implant expulsion.

2. Reprinted from Spine J_18_(2018)_ Walsh B et al, The in vivo response to a novel Ti coating compared with PEEK- evaluation of the periphery and inner surfaces of an implant, p1237, © 2018, with permission from Elsevier. (Note: NanoMetalene® referenced in paper is SeaSpine's brand name for IntimateBond™ Osteoblast.)

Fast Start:
Direct bone contact
before 4 weeks

Bone contact across the
entire IntimateBond™
surface at 8 weeks.



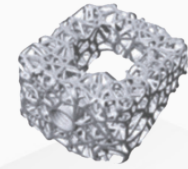
Typical non-reactive
Fibrous Tissue Interface

Some focal bone contact at 8
weeks. Fibroblasts still present

Photo Credit²: Osteoblasts (stained) with direct on-growth to IntimateBond coated PEEK (Tan). Bare PEEK with Fibroblasts (white) providing direct interference to osteoblast on-growth



IntimateBond™ Osteoblast
on PEEK



IntimateBond™ Osteoblast
on 3D Ti64



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