IMPROVED STABILITY
Enhanced primary and secondary stability due to increased surface friction and further rapid bone apposition may increase migration resistance.2

THIN LAYER, FULL VOLUME COATING
Micrometric titanium provides full coating on the caudal and cranial side of the cages, allowing extensive bone contact.

COMPLEX MICRO ROUGHNESS
TiPEEK rough micro structured and porous surface promotes osteoblastic differentiation and increases bone formation.6

OPTIMAL DIAGNOSTIC ASSESSMENT

TiPEEK cages are compatible with the diagnostic bio-imaging techniques and allow a clear fusion evaluation.

Clear radiographic evaluation. While maintaining the radiolucency of PEEK, the superficial Titanium "halo" represents a marker for cage positioning during surgery.

REFERENCES
1. M.Rickert et al. Transforaminal lumbar interbody fusion in PEEK oblique cages with and without titanium coating: results from a randomized clinical trial 8th M.O.R.E. International Symposium
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3. Geert Mahieu et al. A retrospective analysis of patients treated with TiPEEK cages in the cervical and lumbar spine 8th M.O.R.E. International Symposium
7. Sagomonyants KB, Biomaterials 29 (2008) 1563-1572
11. Olivares-Navarrete et al. Osteoblast maturation and new bone formation in response to titanium implant surface features are reduced with age. J Bone Miner Res. 2012; 27(8); 1773-1783

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**TITANIUM COATED PEEK, ENHANCED BONE CONTACT**

Medacta’s TiPEEK cages represent the next generation plasma sprayed Ti-Coated interbody fusion device designed for optimal surgical practice.

**BIOACTIVE SURFACE**

Unique bioactivity boosts an early hydroxyapatite-like layer foundation, facilitating bone formation and allowing for direct bone-implant bond.

**OSTEOCONDUCTIVE TECHNOLOGY**

The unique TiPEEK cages may contribute to the bony fusion process and enhance bone quality at the implant interface:

- Direct bone ingrowth around the Ti-Coating surface texture
- Bone ingrowth with fusion mass formation throughout the inside of the cage

**PEEK HERITAGE**

- Reduces stress shielding and facilitates bony fusion
- Allows proper load force transmission at the implant-tissue interface
- Supports bone formation and reduces osteolysis

**TITANIUM HERITAGE**

- Improved biocompatibility actively participates in the fusion process
- Osteoconductive surface
- Promotes osseointegration with the surrounding bone

**DISC HEIGHT PRESERVATION**

TiPeek cages provide superior behavior for substantial interbody height restoration and lordosis maintenance.

**PHYSIOLOGICAL LOAD SHARING**

Having a stiffness similar to the bone, TiPEEK cages provide a native-like support that may help to prevent subsidence.

**Elastic Modulus**

- Ti
- Ti-Alloy Cortical Bone
- TiPeek / PEEK Cancellous Bone

**HIGH FUSION RATE, LOW SUBSIDENCE**

- High level fusion rate (~90% at 3 months post-operative)
- Excellent solution for accelerated fusion & fast bone remodelling

**COMPREHENSIVE RANGE OF IMPLANTS**

The TiPEEK lumbar, posterior 3D and anterior cages, as well as cervical devices, are available in numerous footprints, heights, and sagittal profiles to accommodate various patient needs.

**DISC HEIGHT PRESERVATION**

- Greatly reduced subsidence risk for valuable intervertebral height preservation

**Cortical**

- Ti-Alloy Cortical Bone
- TiPeek / PEEK Cancellous Bone

**FUSION RATE**

- 20 months
- 40 months
- 60 months
- 80 months
- 100 months

**Elastic Modulus**

- Ti
- Ti-Alloy Cortical Bone
- TiPeek / PEEK Cancellous Bone

**FUSION RATE**

- 20 months
- 40 months
- 60 months
- 80 months
- 100 months

**COMPREHENSIVE RANGE OF IMPLANTS**

The TiPEEK lumbar, posterior 3D and anterior cages, as well as cervical devices, are available in numerous footprints, heights, and sagittal profiles to accommodate various patient needs.