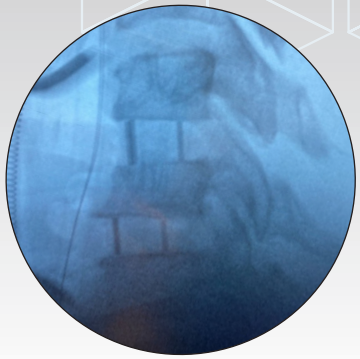
Inspire®

POROUS PEEK HA^FUSE™ CERVICAL INTERBODY FUSION SYSTEM

Pioneering Porous PEEK

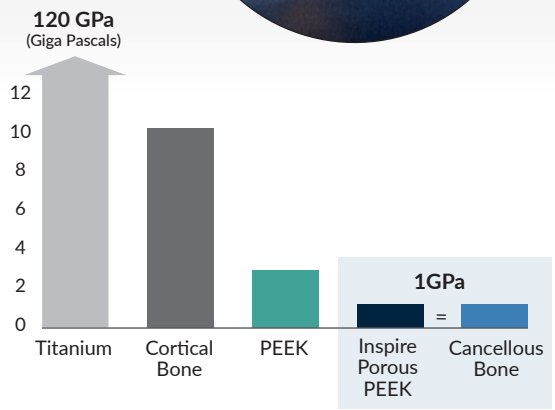


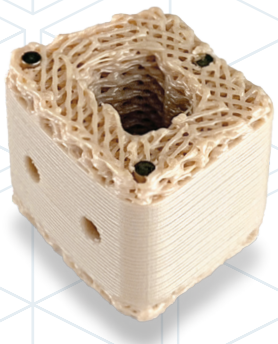
Design Rationale

- The **Benefit of PEEK** is a physiologic modulus of elasticity and radiolucency allowing physicians to accurately assess fusion progression over time.
- **Engineered, Fully Interconnected Porous Structure** throughout the implant, enabled by proprietary Fused Filament Fabrication 3D Printer, mimics natural human bone.
- Proprietary **HA^FUSE (Hydroxyapatite) Surface Nano-Texturing** designed to promote faster and enhanced Osseointegration.*

Material Comparison

The flexibility of Inspire lattice architecture is crafted in compliance with Wolff's Law to reduce the overall stiffness and prevent stress shielding by matching the modulus of elasticity of cancellous bone.



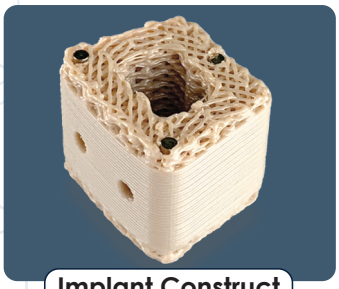


Curiteva pioneered and received FDA Clearance on the world's first 3D printed, fully interconnected porous PEEK structure, utilizing internally developed Fused Filament Fabrication novel process and printer. These proprietary printers create a unique porous scaffolding, resulting in a PEEK structure with superior biomechanical strength compared to traditional PEEK implants. This unique architecture and capability to print bone-like scaffolding structures, with the addition of the patented HA^FUSE nano-texturing, creates a superior biological environment for bone in-growth throughout the entirety of the implant structure.

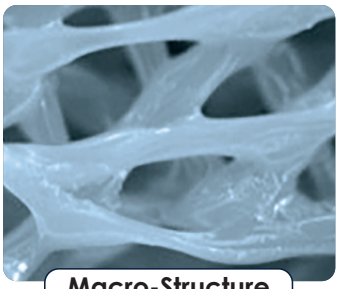
CURITEVA®

Inspire® 3D Porous PEEK HA^FUSE™ Technology

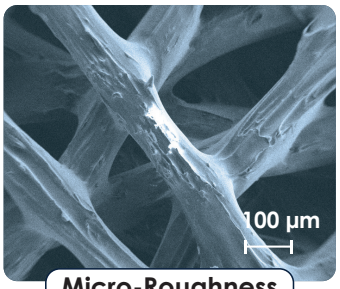
Structure Drives Biology



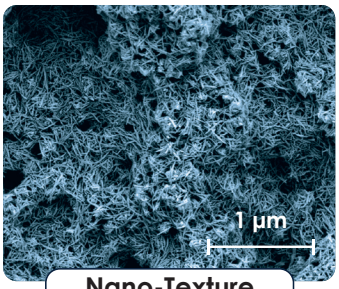
Implant Construct
MAG 1X



Macro-Structure
MAG 40X



Micro-Roughness
MAG 100X

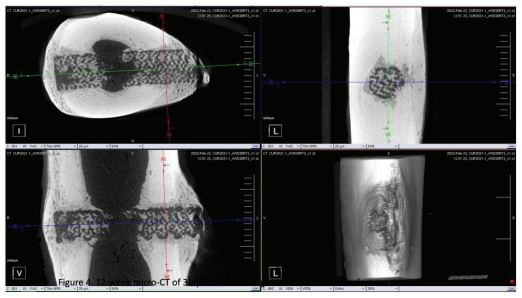


Nano-Texture
MAG 40,000X

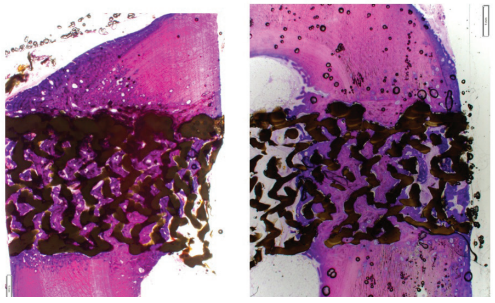
- 100% fully Interconnected Porosity
- Diamond shape pores (Triply Periodic Minimal Surface, TPMS), documented in literature as possessing superior biomechanic and biologic properties*
- Pore size distribution between 100 – 600 microns promoting Osteoconduction*
- Micron-scale surface roughness presents hydrophilic surfaces promoting bone apposition and enhanced Osseointegration*

HA^FUSE Promotes Osseointegration and Osteogenesis

- Sub-micron HA crystals bonded to 100% of the implant surfaces enabling bone to anchor directly to the implant, creating superior mechanical stability.
- Osteogenic potential derived from internal cavities with diamond (TPMS) structure, surface roughness, and HA^FUSE drives Immunomodulation.*
- Physiologic bone-like structures promote Osteogenesis and Immunomodulation leading to regenerative bone formation encouraging faster and enhanced Osseointegration between the implant and bone tissue.*



12 Week Micro CT Images (4yo ovine)*



12 Week Histology Images (4yo ovine)*

A TRUE PLATFORM TECHNOLOGY

The Inspire Porous PEEK HA^FUSE platform represents a revolution in biomaterials by delivering an interconnected porous, engineered structure ideal for Osseointegration, radiographic assessment, and optimal patient outcomes.

CURITEVA®
POWER TO HEAL

For more information email marketing@curiteva.com or call 877.9CURITEVA
Products patented and/or patent pending.

References available upon request*

QMSF-1257 Rev 5.1