

OUR EXPERTISE

Experience that delivers results.

Market Segments

- Orthopedic (joint and spine)
- Dental
- Cardiovascular
- Veterinary

Capabilities

- Hydroxylapatite coating (HA)
- Titanium plasma spray coating (TPS)
- Titanium on polyether ether ketone (PEEK)
- Rough porous TPS coating
- Asymatrix® coating
- Custom coating technologies
- Sintered bead coatings on titanium and Co/Cr
- Passivation per ASTM F-86
- Heat-treating
- Final cleaning and packaging

Coatings in Development

- Titanium on ultra-high molecular weight polyethylene (UHMWPE)
- Anti-wear ceramic coating

Special Services

- Staff metallurgist and validation specialist
- FDA consulting and 510k submission
- Package design
- New coating development

ABOUT ORCHID

Orchid is a worldwide leader of orthopedic medical device outsourcing, providing contract design and manufacturing services. We are a strategic sourcing partner that can handle an entire project or provide services at a single point in the process.

CONTACT US TODAY

Make your ideas a reality.



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PARTNER WITH US

Unparalleled
experience,
market-driven
solutions and
technical
innovations.



Orchid's coating divisions have been leaders in the orthopedic industry for decades. Through communication with our customers and suppliers, we continue to develop value-added, innovative technologies and services.

Our newly developed process for applying titanium coating to PEEK spinal implants combines biocompatibility with osteointegration. In addition to developing new coating technologies, we are also experts in the clinical success of hydroxylapatite coating (HA) and the high osseo-integration capability of titanium plasma spray (TPS).

If you want custom capabilities, rapid turnaround times, innovative technologies and an excellent track record, We can provide total project partnership right from the start to bring your products to market ahead of the curve.

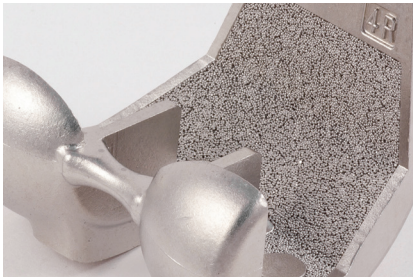


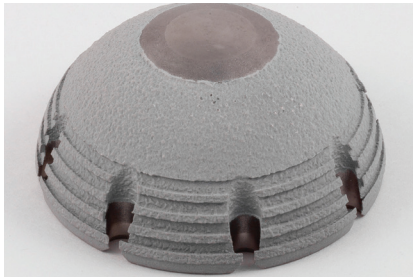

Implant Coatings and Surface Treatments

Leaders in the latest surface
engineering technologies



IMPLANT COATINGS AND SURFACE TREATMENTS

Meeting the challenge of implant fixation.

Sintered Coatings			Sprayed Coatings		
Spherical		Asymmatrix®	Titanium Plasma Spray (TPS) on metal	Hydroxylapatite (HA)	Titanium Plasma Spray (TPS) on PEEK
					
Bead coating of various sizes that creates a three-dimensional porous structure that can be applied to either titanium or Co/Cr implants.		An irregular bead coating structure with the added features of an extremely rough surface and increased porosity.	Creates interconnected porosity down to the substrate for titanium or Co/Cr implants using commercially pure titanium or Ti6Al4V.	The same mineral found in bone (60-70% of bone is mineral). Bone responds to it as an osteoconductive surface.	Creates interconnected porosity down to the substrate for PEEK implants using commercially pure titanium or Ti6Al4V.
Materials	Cp Ti on Ti alloy Co/Cr on Co/Cr	Cp Ti on Ti alloy Co/Cr on Co/Cr	Cp Ti on Ti alloy Cp Ti on Co/Cr Cp Ti on TiCarbide	HA on Ti alloy HA on Co/Cr HA on SS	Cp Ti on PEEK
Attachment Method	High-temperature sintering	High-temperature sintering	Plasma spray	Plasma spray	Plasma spray
Macro-Texture	Smooth, moderately rough	Rough	Rough	Smooth	Rough
Porosity Range (%)	30 – 50	50 – 70	20 – 60	Dense coating	20 – 60
Pore Size Range (µm)	100 – 300	100 – 300	100 - 300	Dense coating	100 - 300
Coating Thickness	> 0.020 in	> 0.020 in	0.005 – 0.038 in	25 – 75 µm	0.005 – 0.038 in

