

remanium®
star powder 



Laser melting with the best materials.

remanium® star powder.

Dentaurum has years of experience in the field of laser melting, and is therefore the ideal contact for this process in the dental industry.



Product advantages.

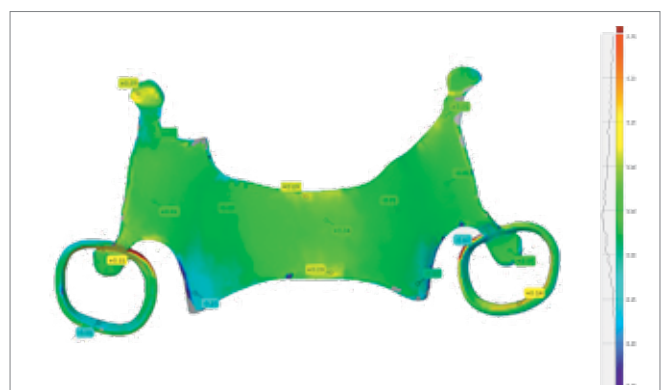
- ▶ Decades of experience in powder metallurgy in dental prosthetics and orthodontics
- ▶ Ideal grain size distribution for many laser melting units and areas of application
- ▶ Smooth and dense framework surfaces thanks to optimized grain size selection
- ▶ Same composition as the proven remanium® alloys for milling and casting
- ▶ Perfect suitability for partial dentures with scientifically tested elasticity in clasp constructions
- ▶ Modified CTE value ensures very good ceramic bonding for crowns and bridges
- ▶ All prosthetic work can be distributed simultaneously on one build plate
- ▶ Lowest tensions with specific guidelines for the recommended heat treatment

Simple and efficient heat treatment.

Dental restorations made with remanium® star powder can now be annealed free of tension in approx. 1 hour without shielding gas or special furnaces. This combines the proven product quality with high efficiency and flexibility.

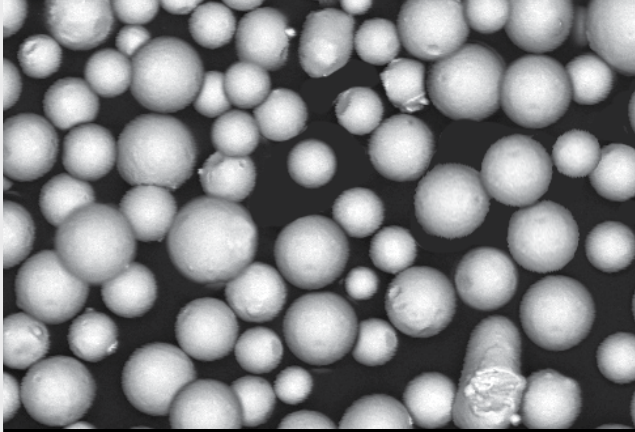


Partial denture fit after heat treatment.



Precision of the heat-treated partial denture in comparison to the original data.

Availability			Composition (% by mass)			
remanium® star powder Grain size 10 – 30 µm	5 kg	REF 102-620-70	Co 60.5	Cr 28.0	W 9.0	Si 1.5
Technical data						
Yield strength $R_{p0.2}$			800 MPa			
Tensile strength R_m			1170 MPa			
Hardness H			395 HV 10			
Elongation at rupture A_5			11%			
Modulus of elasticity E			230 GPa			
Density			8.6 g/cm ³			
CTE (25 °C - 500 °C / 77 – 932 °F)			14.4 x 10 ⁻⁶ K ⁻¹			



Spherical powder particles with homogeneous grain size distribution

remanium® star powder for partial dentures.

remanium® star powder is highly suited for the production of clasp-retained dentures, delivering results comparable to cast constructions. This was also scientifically proven by a continuous stress test:

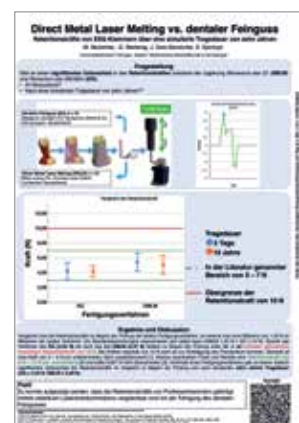
Conclusion of study by the University of Tübingen, Germany:

"...It was possible to show that the retention forces of dental clasps, manufactured by selective laser beam melting, are comparable with the forces of precision-cast clasps..."

Retention forces of one-piece cast clasps over a simulated time in-situ of ten years.

Mutschler, Moritz / Zylla, Isabella-Maria / Geis-Gerstorfer, Jürgen / Edelmann, Karsten / Krause, Joachim / Bünemann, Jens / Pederzani, Nils / Schmitt, Uwe / Mertins, Julia / Lagaris, Alexandros / Ebert, Rolf / Spintzyk, Sebastian

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UNIQUE

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Subject to modifications

