



BEGO Mediloy®

HIGHEST STANDARD, SUSTAINABLE SLM POWDER SOLUTIONS



Partners in Progress





ADDITIVE MANUFACTURING

REDEFINED

BEGO represents innovation, uncompromising quality, and exceptional expertise in dental manufacturing. For over three decades, we have been driving the development and advancement of cutting-edge CAD/CAM digital technologies in dentistry. As true pioneers of digital dentistry, we are proud to set industry standards and lead the way into the future.

With **Mediloy® S-Co**, **Mediloy® RPD** as well as **Mediloy® Titan Grade 5 SLM**, BEGO delivers three high-performance premium alloys engineered for the additive manufacturing of high-quality dental prosthesis in SLM systems – ideal for both dental laboratories and industrial production environments. These advanced materials unite exceptional quality, state-of-the-art manufacturing technology, and a strong commitment to sustainability, enabling fully digital, customized solutions for modern patient care. The result is superior precision, maximum efficiency, outstanding material performance, and exceptional process reliability.

BEGO Mediloy[®] S-Co



The non-precious metal alloy for advanced dental restorations

Mediloy[®] S-Co is a non-precious metal, type 5 cobalt-based dental alloy composed of cobalt, chromium, tungsten, and molybdenum. Specially engineered for additive manufacturing using the SLM process, it delivers outstanding performance and reliability in digital production workflows.

Mediloy[®] S-Co is ideally suited for the fabrication of high-quality dental restorations, including:

- Crowns and bridges (including porcelain fused to metal restorations)
- Removable partial denture (RPD) frameworks
- Implant-supported prosthetics

Designed for precision, strength, and consistency, Mediloy[®] S-Co enables efficient digital manufacturing and reliable clinical outcomes.



* Bar milled out of Mediloy[®] M-Co

Product details

Composition in mass %

Co 63,9 · Cr 24,7 · W 5,4 · Mo 5,0 · Si 1,0

Scope of Delivery

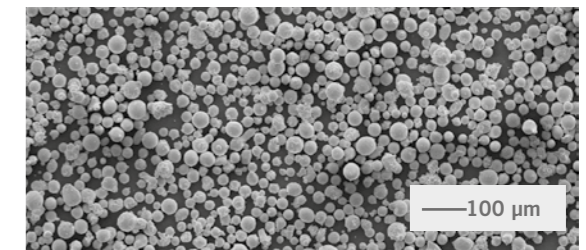
Content

REF

Mediloy[®] S-Co

5 kg bottle

50551



YOUR BENEFITS AT A GLANCE

- Homogeneous particle geometry with an optimized grain size distribution for outstanding flowability
- Reproducible manufacturing outcomes enabled by coordinated heat treatment and precise process control
- Pore-free microstructures deliver smooth, void-free, high-gloss surfaces and stable constructions thanks to high yield strength and tensile strength
- Classified as a Class IIb medical device in accordance with EC Directive 93/42/EEC
- Low thermal conductivity
- Tailored powder development focused on application, process optimization, and material performance
- Premium powder quality with low static and guaranteed purity, powered by our advanced 'anti-satellite system' (reduces particle adhesion, ensures spherical shape)
- Significantly reduced concentration of oxygen (O), nitrogen (N), and hydrogen (H) for excellent product quality and possible recycling
- Economical and efficient lab workflow with normal cooling cycle after ceramic firing, supported by a CTE of 14.0 (25 – 500 °C, 10⁻⁶ K⁻¹)

Mediloy[®] S-Co combines superior material performance with seamless compatibility across the world's top SLM systems, ensuring precision and reliability.



Curious?
Take a look here!

BEGO Mediloy® RPD

Proven alloy –
Trusted for years

The non-precious metal alloy for additive
manufacturing of removable partial dentures

Mediloy® RPD is a non-precious metal, type 5 cobalt-based dental alloy composed of cobalt, chromium, and molybdenum, and is specifically developed for additive manufacturing using the SLM process.

It is optimized for the efficient digital production of high-quality removable partial denture frameworks, delivering reliable performance, precision, and consistency.

Mediloy® RPD is ideally suited for the fabrication of high-quality, clasp-retained partial denture restorations.



Product details

Composition in mass %

Co 66,2 · Cr 28,2 · Mo 5,5 · N < 0,1

Scope of Delivery

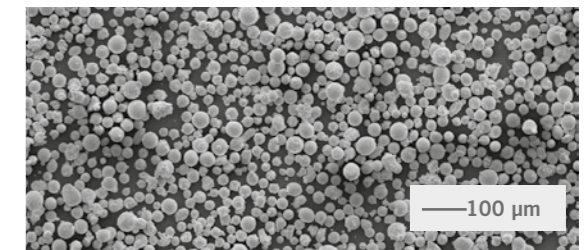
Mediloy® RPD

Content

5 kg bottle

REF

50532



YOUR BENEFITS AT A GLANCE

- Homogeneous particle geometry with an optimized grain size distribution for outstanding flowability
- Reproducible manufacturing outcomes enabled by coordinated heat treatment and precise process control
- Exceptional pore-free microstructures deliver smooth, high-gloss surfaces, outstanding fatigue strength, and stable, reliable constructions, combining superior material consistency with maximum performance
- Perfect fit, even in the most challenging cases, thanks to specially coordinated heat treatment process
- Ideal ductility for precise and reliable clasp activation
- Mediloy® RPD is a Class IIa medical device under EC Directive 93/42/EEC and meets US ASTM F-75 standards, ensuring global compliance and reliable performance
- Application specific powder developed by dental technicians for dental technicians
- Premium powder quality with low static and guaranteed purity, powered by our advanced 'anti-satellite system' (reduces particle adhesion, ensures spherical shape)
- Significantly reduced concentration of oxygen (O), nitrogen (N), and hydrogen (H) for excellent product quality and possible recycling
- High cost-effectiveness due to digitalization of CAD design and CAM manufacturing

Mediloy® RPD combines superior material performance with seamless compatibility across the world's top SLM systems, ensuring precision and reliability.



Curious?
Take a look here!

BEGO Mediloy® Titan Grade 5 SLM

Ideal for
Crowns
& Bridges

The non-precious alloy for the production of lightweight
and highly biocompatible dental restorations

Mediloy® Titan Grade 5 SLM is a non-precious metal powder, type 4 titanium-based dental alloy composed of titanium, aluminium and vanadium.

Specially developed for additive manufacturing using the SLM process, Mediloy® Titan Grade 5 SLM delivers reliable performance, ensuring predictable clinical outcome as well as supporting long-term prosthetics stability.

Mediloy® Titan Grade 5 SLM is ideally suited for the fabrication of high-quality dental restorations including:

- Crowns and bridges
- Removable partial denture (RPD) frameworks*

The alloy provides lightweight strength and excellent biocompatibility, resulting in pleasant wearing comfort and long-lasting functionality. At the same time, high powder purity enables efficient processing, reduced material waste, and stable reusability – making the solution economically advantageous while also environmentally responsible.

* Already available in US market, expected in EU in Q3/2026



Product details

Composition in mass %

Ti 89.8 · Al 6.0 · V 4.0 · Fe < 1.0 · O ≤ 0.1

Scope of Delivery	Content	REF
Mediloy® Titan Grade 5 SLM	2.5 kg bottle	50525



YOUR BENEFITS AT A GLANCE

- High biocompatibility, low allergy potential, and high corrosion resistance
- Proved alloy in human medicine with comprehensive long-term data
- Low heat conductivity enhances wearing comfort
- No hazardous elements according to ISO 22674
- Powder purity goes beyond requirements of standard ASTM F 136
- Low oxygen level in virgin powder
- Environmental protection due to multiple manufacturing cycles per batch and reuse of powder
- Secure ceramic veneering with the common ceramics developed for titanium alloy

Mediloy® Titan Grade 5 SLM combines superior material performance with seamless compatibility across the world's top SLM systems, ensuring precision and reliability.



Curious?
Take a look here!

Mediloy® SLM Powder

Material Properties

Material properties

Alloy features	Mediloy® S-Co	Mediloy® RPD	Mediloy® Titan Grade 5 SLM
Standards	ISO 22674 and ISO 9693	ISO 22674	ISO 22674 and ISO 9693
Particle size [µm]	10–45	10–45	20–63
Particle shape	round/spherical	round/spherical	round/spherical
Type acc. to ISO 22674	5/5*	5	4/4**
Solidus-/liquidus temperature [°C]	1,390 °C/1,425 °C	1,380 °C/1,420 °C	1,604 °C/1,660 °C
Density [g/cm³]	8.6/8.6*	8.5	4.3/4.3**
Modulus of elasticity [GPa]	228/238*	235	120/115**
0,2 % proof strength [MPa]	1.000/755*	800	875/880**
Elongation at fracture A ₅ [%]	8/5*	13	11/10**
Hardness [HV10]	470/425*	395	320/320**
Color	white***	white***	white***
CTE 25 – 500 °C, 10 ⁻⁶ K ⁻¹	14.0/13.7*	–	10.3/10.0**

* Stress relieving 800 °C and simulated ceramic firings 980 °C

** Stress relieving 900 °C and simulated ceramic firings 840 °C

*** BEGO colour code

Accessories

	Content	REF
Laser wire, Wiroweld		
• Ø 0.35 mm; 2.0 m – 1.5 g	1 unit	50003
• Ø 0.50 mm; 1.5 m – 2.0 g	1 unit	50005
Lot, Cobalt chrome solder	1 unit	52520
Flux, e.g. minoxyd	1 unit	52530
Welding Wire, Titan Grade 2 wire	1 unit	50008



MORE THAN JUST A POWDER

Our promise for tomorrow

Quality, Responsibility, and the Future of Dental Technology

At BEGO, we deliver products of the highest quality and technical precision. However, our responsibility doesn't stop with the material – it starts there.

Guided by sustainability, ethical practices, and safe dental care solutions, we are shaping the future of dental technology today.

SUSTAINABILITY THAT WORKS – SHAPING THE FUTURE

- CO₂-reduced powder production powered entirely by 100 % green energy
- Sustainable powder handling and recycling for efficient resource use
- UN-aligned sustainability strategy with the goal of achieving net-zero emissions
- Ressource-efficient logistics with global delivery capabilities
- Secure raw material supply with full traceability



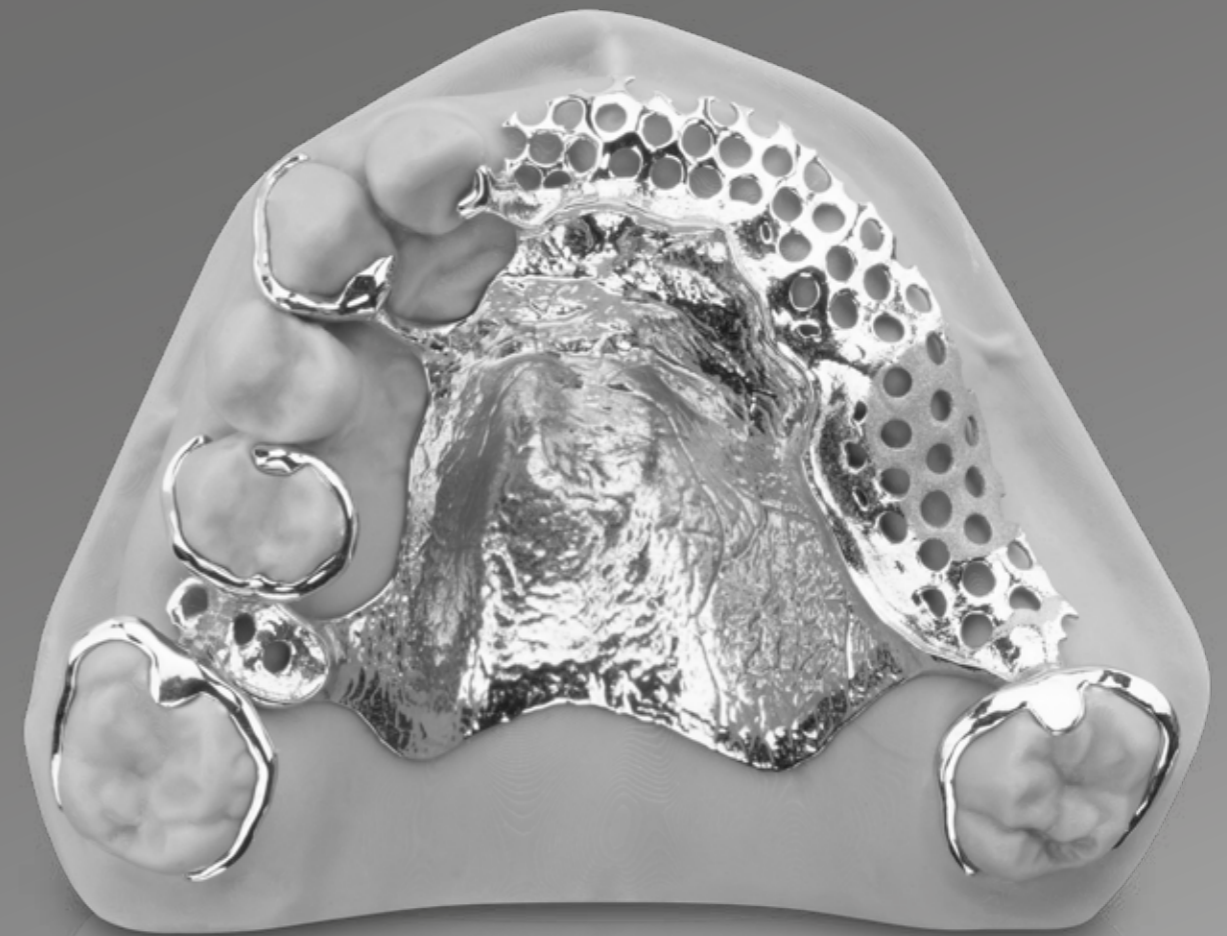
RESPONSIBILITY

BUILDING TRUST

- Medical device approval for all BEGO powder alloys
- Best possible allergy safety due to biocompatibility and corrosion resistance - free of nickel, cadmium and beryllium
- Modern R&D center integrated test procedures including dental application specialists
- Strict adherence to legal and regulatory requirements
- Zero tolerance for child labour and illegal employment
- Appreciative and respectful cooperation at eye level in a modern working environment



FOR OVER 135 YEARS,
RELIABILITY AND
INNOVATION HAVE
DRIVEN US TO
DELIVER SOLUTIONS
THAT LEAD TODAY AND
DEFINE THE FUTURE.



PARTNERS
IN PROGRESS

www.bego.com



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