



Crown and Bridge alloys at a glance

	<i>remanium® star</i>	<i>remanium® 2000+</i>	<i>remanium® segura</i>	<i>remanium® 2001</i>	<i>remanium® LFC</i>
Characteristics	remanium® star is a CoCr porcelain bonding alloy of a new generation with exceptionally reduced hardness.	remanium® 2000+ is a CoCr ceramic bonding alloy of a new generation. This alloy is the result of our continuous development of our classic remanium® 2000. Optimal physical properties due to the continuous casting technique.	remanium® segura is a new generation chrome cobalt metal-ceramic alloy, that shows reliable handling characteristics with all casting techniques, especially vacuum/pressure casting.	remanium® 2001 is a CoCr ceramic bonding alloy for crown and bridgework. Optimal physical properties due to the continuous casting technique.	remanium® LFC is a modern chrome cobalt alloy specially designed for metal-ceramic veneering of crown and bridgework using low-fusing ceramic (LFC).
Applications	Multi-purpose alloy: <ul style="list-style-type: none"> • Crowns and bridges • Double crowns • Implant supported supra structures • Maryland bridges • Secondary structures for cast partial denture (Combination work) 	Multi-purpose alloy: <ul style="list-style-type: none"> • Crowns and bridges • Double crowns • Implant supported supra structures • Maryland bridges • Secondary structures for cast partial denture (Combination work) 	Multi-purpose alloy: <ul style="list-style-type: none"> • Crowns and bridges • Double crowns • Implant supported supra structures • Maryland bridges • Secondary structures for cast partial denture (Combination work) 	Multi-purpose alloy: <ul style="list-style-type: none"> • Crowns and bridges • Double crowns • Maryland bridges 	Multi-purpose alloy: <ul style="list-style-type: none"> • Crowns and bridges • Double crowns • Secondary structures for cast partial denture (Combination work)
Advantages	<ul style="list-style-type: none"> • Extremely easy to work with, especially when milling or polishing due to the reduced hardness • Excellent porcelain firing because of the low thermal expansion coefficient • Exceptionally free-flowing • Flexibility in casting: Can be melt in a high frequency induction casting unit, or with the propane/oxygen torch • Increased efficiency: <ul style="list-style-type: none"> ✓ Oxide firing is not necessary ✓ Suitable for laser welding because carbon-free 	<ul style="list-style-type: none"> • Exceptionally free-flowing • Flexibility in casting: Can be melted in a high frequency induction casting unit, or with the propane/oxygen torch • Increased efficiency: <ul style="list-style-type: none"> ✓ Oxide firing is not necessary • Suitable for laser welding because carbon-free • The surface of ingot of 6 grams produced by the continuous casting technique is 30 % lower than the surface of an ingot produced by the investment casting technique. This results in less oxides in the crucible. 	<ul style="list-style-type: none"> • reliable melting and casting characteristics, especially with vacuum/pressure casting, resulting from the narrow melting range. • no danger of spattering or increased slagging • small ingots (4g) allow exact portioning of the alloy: ideal and economical filling of the crucible • high mechanical strength thanks to tantalum mixed-crystal reinforcement • optimised firing behaviour of the veneering ceramic through low oxidation • polished surface has a radiant lustre due to the high chrome content. 	<ul style="list-style-type: none"> • Exceptionally free-flowing • Flexibility in casting: Can be melt in a high frequency induction casting unit, or with the propane/oxygen torch • Increased efficiency: <ul style="list-style-type: none"> ✓ Oxide firing is not necessary • Suitable for laser welding because carbon-free 	<ul style="list-style-type: none"> • excellent melting and casting behaviour with all melting and casting techniques • effortless trimming and polishing • free from nickel and beryllium • high purity resulting from continuous casting production • multi-indicative • reliable veneering using LFC-porcelains which, until now, were used only with precious alloys • high corrosion resistance • high mechanical strength • good laser welding characteristics
Composition (percentage by mass)	Co Cr W Si 60.5 28 9 1.5	Co Cr Mo W Si 61 25 7 5 1.5	Co Cr Mo W Si Ta 58 30 3 5.5 1.5 1.25	Co Cr Mo W Si 63 23 7.3 4.3 1.6	Co Cr Fe Mo Mn 33 30 29 5 1.5
Others < 1%	Mn, N, Nb	Mn, N	N	Mn, N	Si, N, C
Availability	50 g REF 102-621-00 250 g REF 102-622-00 1000 g REF 102-620-00	50 g REF 102-601-10 250 g REF 102-602-10 1000 g REF 102-600-10	50 g REF 102-631-00 250 g REF 102-632-00 1000 g REF 102-630-00	50 g REF 102-600-02 1000 g REF 102-600-01	50 g REF 102-641-00 250 g REF 102-642-00 1000 g REF 102-640-00

Safety through certified quality



Best biocompatibility: Laboratory tests confirm the outstanding corrosion resistance, and tests conducted by independent institutes acknowledge the biological compatibility on the basis of cytotoxicity tests. Please request our certifications. All CoCr crown and bridge alloys are free of beryllium, iron (except remanium® LFC), nickel, gallium, indium and copper.



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Dentaurum Crown and Bridge Alloys relevant characteristics	remanium® star	remanium® 2000+	remanium® segura	remanium® 2001	remanium® LFC
Melting	+++	+++	+++	+++	+++
Castability	+++	+++	+++	+++	+++
Propane/oxygen melt	+++	+++	+++	+++	+++
Trimming	+++	++	++	++	+++
Milling	+++	++	++	++	+++
Porcelain bonding	+++	+++	+++	+++	+++ (LFC ¹)
Polishing	+++	+++	+++	+++	+++
Oxide firing	no	no	no	no	no
Soldering with ...	REF 102-306-00	REF 102-306-00	REF 102-306-00	REF 102-306-00	REF 102-306-00
Laser welding	+++	+++	+++	+++	+++
Investment	Trivest Castorit® all speed Castorit® super C	Trivest Castorit® all speed Castorit® super C	Trivest Castorit® all speed Castorit® super C	Trivest Castorit® all speed Castorit® super C	Trivest Castorit® all speed Castorit® super C
Technical data					
Yield strength R _{p0,2} (MPa)	620	700	760	660	660
Tensile strength R _m (MPa)	845	900	940	850	950
Modulus of elasticity E (GPa)	190	200	211	195	200
Hardness HV ₁₀	280	340	340	336	315
Elongation A ₅ (%)	10,2	7	5,3	5,5	11
Solidus temperature T _s (°C/°F)	1320	1290	1329	1325	1280
Liquidus temperature T _l (°C/°F)	1420	1415	1385	1415	1350
Density (g/cm ³)	8.6	8.6	8.6	8.6	8.2
Coefficient of thermal expansion (25–500°C) (K ⁻¹)	14.1 x 10 ⁻⁶	14 x 10 ⁻⁶	14.4 x 10 ⁻⁶	14.2 x 10 ⁻⁶	15.9 x 10 ⁻⁶

+++ = excellent ++ = very good

¹ LFC = Low Fusing Ceramics