



Non-Precious Metal Alloys



Starbond CoS

CoCrWMo-bonding alloy for conventional, high melting (low expanding) ceramics – free of nickel, beryllium, lead and cadmium – type pursuant to DIN EN ISO 22674.

- Extremely corrosion resistance
- Biocompatible
- Very patient-friendly due to its low thermal conductivity

- Easy working characteristics and very good for polishing, due to a low hardness of 280 HV 10
- A CTE of 14.0 ensures flexibility regarding the selection of ceramics
- Highest purity
- No cooling phase required, depending on the ceramics
- Excellent metal-ceramic bonding
- Laser weldable

Composition:

Co	Cr	W	Mo	Si	C, Fe, Mn, N
59 %	25 %	9.5 %	3.5 %	1 %	< 1 %

Technical properties:

Proof stress (Rp 0.2)	650 MPa	Melting range	1305 - 1400 °C
Ultimate tensile strength	910 MPa	Preheating temperature	850 - 950 °C
Elongation	8 %	Casting temperature	1500 - 1550 °C
Elastic modulus	200 GPa	CTE (25 - 600 °C)	14.0 x 10 ⁻⁶ K ⁻¹
Vickers hardness	280 HV 10	Laser weldable	Yes
Density	8.8 g/cm ³	Type (DIN EN ISO 22674)	5



	Ref.
1000 g	133000
250 g	133250

Starbond Easy

CoCrW-bonding alloy for conventional, high melting (low expanding) ceramics – free of nickel, beryllium, lead and cadmium – type 4 pursuant to DIN EN ISO 22674.

- Extremely corrosion resistance
- Biocompatible
- Very patient-friendly due to its low thermal conductivity

- Easy working characteristics and very good for polishing, due to a low hardness of 285 HV 10
- A CTE of 14.4 ensures flexibility regarding the selection of ceramic
- Highest purity
- Excellent metal-ceramic bonding
- Laser weldable

Composition:

Co	Cr	W	Si	C, Mn, Fe
61 %	27.5 %	8.5 %	1.6 %	< 1 %

Technical properties:

Proof stress (Rp 0.2)	610 MPa	Melting range	1310 - 1410 °C
Ultimate tensile strength	830 MPa	Preheating temperature	850 - 950 °C
Elongation	10 %	Casting temperature	1480 - 1530 °C
Elastic modulus	190 GPa	CTE (25 - 600 °C)	14.4 x 10 ⁻⁶ K ⁻¹
Vickers hardness	285 HV 10	Laser weldable	Yes
Density	8.7 g/cm ³	Type (DIN EN ISO 22674)	4



	Ref.
1000 g	140000
250 g	140250

MoguCera C

CoCrMo-bonding alloy for conventional, high melting (low expanding) ceramics – free of nickel, beryllium, lead and cadmium – type 5 pursuant to DIN EN ISO 22674.

- Extremely corrosion resistance
- Biocompatible
- Very patient-friendly due to its low thermal conductivity

- Easy to process
- Very easy to polish due to a low hardness of 300 HV 10
- Highest purity
- Excellent metal-ceramic bonding
- Laser weldable

Composition:

Co	Cr	Mo	Mn	C, Si
65 %	28 %	5 %	1 %	< 1 %

Technical properties:

Proof stress (Rp 0.2)	508 MPa	Melting range	1370 - 1435 °C
Ultimate tensile strength	795 MPa	Preheating temperature	850 - 950 °C
Elongation	9 %	Casting temperature	1535 - 1590 °C
Elastic modulus	209 GPa	CTE (25 - 600 °C)	14.1 x 10 ⁻⁶ K ⁻¹
Vickers hardness	300 HV 10	Laser weldable	Yes
Density	8.3 g/cm ³	Type (DIN EN ISO 22674)	5



	Ref.
1000 g	138000

Starbond LFC

LFC-bonding alloy with a large range of indications – free of nickel, beryllium, lead and cadmium – type 4 pursuant to DIN EN ISO 22674.

- Excellent bonding as a result of low melting ceramics
- Extremely corrosion resistant
- Biocompatible
- Very patient-friendly due to its low thermal conductivity
- Wide range of indications, including wide-span bridges
- A CTE of 15.9
- Highest purity
- Laser weldable

Composition:

Co	Cr	Fe	Mo	Si	Mn	N, C
34 %	28.5 %	30 %	5 %	1 %	1 %	< 1 %

Technical properties:

Proof stress (Rp 0.2)	580 MPa	Melting range	1300 - 1370 °C
Ultimate tensile strength	860 MPa	Preheating temperature	850 - 950 °C
Elongation	11 %	Casting temperature	1470 - 1520 °C
Elastic modulus	195 - 205 GPa	CTE (25 - 600 °C)	15.9 x 10 ⁻⁶ K ⁻¹
Vickers hardness	315 HV 10	Laser weldable	Yes
Density	8.1 g/cm ³	Type (DIN EN ISO 22674)	4



	Ref.
1000 g	134000
250 g	134250

MoguCera N

NiCr-bonding alloy for conventional, high melting (low expansion) ceramics – free of nickel, beryllium, lead and cadmium – type 4 pursuant to DIN EN ISO 22674.

- Biocompatible and corrosion resistant
- Very patient-friendly due to its low thermal conductivity
- Easy working characteristics and very good for polishing, due to a low hardness of 245 HV 10
- Highest purity
- Excellent metal-ceramic bonding
- Laser weldable

Composition:

Ni	Cr	Mo	Si	Mn
62 %	24 %	11 %	1.6 %	< 1 %

Technical properties:

Proof stress (Rp 0.2)	379 MPa	Melting range	1290 - 1350 °C
Ultimate tensile strength	664 MPa	Preheating temperature	850 - 950 °C
Elongation	8 %	Casting temperature	1450 - 1500 °C
Elastic modulus	200 GPa	CTE (25 - 600 °C)	14.4 x 10 ⁻⁶ K ⁻¹
Vickers hardness	245 HV 10	Laser weldable	Yes
Density	8.3 g/cm ³	Type (DIN EN ISO 22674)	4



	Ref.
1000 g	139000

Starbond Ni

NiCr-bonding alloy for conventional, high melting (low expansion) – free of nickel, beryllium, lead and cadmium – type 3 pursuant to DIN EN ISO 22674.

- Biocompatible and corrosion resistant
- Very patient-friendly due to its low thermal conductivity
- Easy working characteristics and very good for polishing, due to a low hardness of 200 HV 10
- No cooling phase required, depending on the ceramics
- A CTE of 14.0 ensures flexibility regarding the selection of ceramics
- Highest purity
- Excellent metal-ceramic bonding
- Laser weldable

Composition:

Ni	Cr	Mo	Fe	Si	C
60.7 %	24 %	11 %	1.5 %	1.8 %	< 1 %

Technical properties:

Proof stress (Rp 0.2)	340 - 355 MPa	Melting range	1310 - 1410 °C
Ultimate tensile strength	490 - 510 MPa	Preheating temperature	850 - 950 °C
Elongation	5 %	Casting temperature	1510 - 1560 °C
Elastic modulus	200 GPa	CTE (25 - 600 °C)	14.0 x 10 ⁻⁶ K ⁻¹
Vickers hardness	200 HV 10	Laser weldable	Yes
Density	8.2 - 8.3 g/cm ³	Type (DIN EN ISO 22674)	3



	Ref.
1000 g	131000

Starbond Co

CoCr-partial denture alloy (ceramic) for demanding combination works and graceful clasp prostheses of nickel, beryllium, lead and cadmium – type 5 pursuant to DIN EN ISO 22674.

- Spring-hard and stable
- Laser weldable
- Optimal material properties
- Easy to manipulate
- Easy to polish
- Highest purity

Composition:

Co	Cr	Mo	Si	C, Fe, Mn
62 %	30 %	5.5 %	1 %	< 1 %

Technical properties:

Proof stress (Rp 0.2)	500 MPa	Melting range	1200 - 1385 °C
Ultimate tensile strength	760 MPa	Preheating temperature	850 - 950 °C
Elongation	6 %	Casting temperature	1485 - 1540 °C
Elastic modulus	250 GPa	CTE (25 - 600 °C)	14.9 x 10 ⁻⁶ K ⁻¹
Vickers hardness	380 HV 10	Laser weldable	Yes
Density	8.1 g/cm ³	Type (DIN EN ISO 22674)	5



1000 g

Ref.

132000

Modelstar S

CoCr-partial denture alloy for the full range of removable dental prostheses, from clasp prostheses through to combination works – free of nickel, beryllium, lead and cadmium – type 5 pursuant to DIN EN ISO 22674.

- Spring-hard
- Laser weldable
- Optimal material properties
- Easy to work with
- Very easy to polish
- Highest purity

Composition

Co	Cr	Mo	C, Fe, Si, Mn
62.7 %	29 %	6 %	< 1 %

Technical properties:

Proof stress (Rp 0.2)	510 - 600 MPa	Melting range	1170 - 1390 °C
Ultimate tensile strength	770 - 780 MPa	Preheating temperature	850 - 950 °C
Elongation	> 3 %	Casting temperature	1490 - 1540 °C
Elastic modulus	200 - 230 GPa	Laser weldable	Yes
Vickers hardness	355 HV 10	Type (DIN EN ISO 22674)	5
Density	8.4 g/cm ³		



1000 g

250 g

Ref.

132100

132250

Mogucast EH

CoCr-partial denture alloy for demanding combination works – free of nickel, beryllium, lead and cadmium – type 5 pursuant to DIN EN ISO 22674.

- Extra hard and stable
- Laser weldable
- Optimal material properties
- Easy to work with and polish
- Highest purity
- Particularly suitable for the casting of 3D printed works
- Extremely good fit

Composition:

Co	Cr	W	Nb	C, V, Mo, Mn, Si
62 %	25 %	9 %	2 %	< 1 %

Technical properties:

Proof stress (Rp 0.2)	662 MPa	Melting range	1320 - 1400 °C
Ultimate tensile strength	877 MPa	Preheating temperature	850 - 950 °C
Elongation	> 4 %	Casting temperature	1500 - 1550 °C
Elastic modulus	200 - 210 GPa	Laser weldable	Yes
Vickers hardness	420 HV 10	Type (DIN EN ISO 22674)	5
Density	8.7 g/cm ³		



1000 g

Ref.

132200

Universal bonding

Increases adhesion of the ceramic to precious and non-precious bonding alloys
– ideal substrate for basic masses – prevents discolouration – easy deflagration of gold paste.
For approx. 200-300 units.

Syringe 2 ml with brush

Ref.
271060



Starbond Lot

Soldering rods for all Starbond alloys – free of nickel, beryllium and cadmium for tension
– free connections. Working temperature: 1,200 - 1,240 °C – bondable.

Composition:

Co	Cr	Mo	Si	B, C, Mn, Fe
61.5 %	30 %	4 %	3.5 %	< 1 %

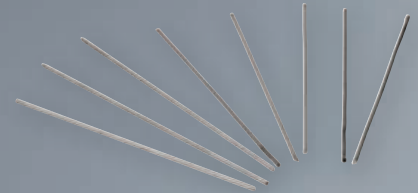
25 g

Ref.

121525

5 g

121526



StarSolder

Ready-to-use universal soldering rods for all non-precious alloys – free of beryllium and cadmium – ensures tension – free connections. Working temperature: 1,100 - 1,150 °C – bondable.

Composition:

Co	Cr	Ni	Si	W	B, Fe, C
53 %	20 %	17 %	8 %	4.5 %	< 1 %

25 g

Ref.

121515

5 g

121516



StarWire

CoCr - Laser welding wire - free of beryllium and cadmium – free of carbon – length: 4.3 m
XXL-packing) – bondable.

Composition:

Co	Cr	Mo	C, Si, Mn, Fe, Ni
65 %	28 %	5,5 %	< 1 %

Ø 0.5 mm/4.3 m

Ref.

121500

Ø 0.35 mm/4.3 m

121600





Starbond CoS



Starbond CoS Disc



Starbond CoS Soft Disc



Starbond CoS Powder

High-quality alloy for casting, Milling, laser melting

The non-precious metal bonding alloy Starbond CoS is well proven as conventional casting alloy in the dental laboratory and has been used millions of times. Also in the era of digital dentistry, many dental technicians wish to continue working with the same alloy components and compositions and thus the same positive processing characteristics. Starbond CoS is therefore also available as milling blank optimized for the dental CNC-milling and as alloy powder for laser melting.



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Quality Assurance

EN ISO 13485
Annex V, Directive 93/42/EEC
Annex II, Directive 93/42/EEC