# Overview of materials and alloys

## 1. Cobalt-based alloys

**chemical composition in wt %**

| Material Designation | Co | Ni | Cr | W | Mo | Si | Fe | Mn | Ta | Nb | C | N | B |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Crowns and bridges / partial dentures** | | | | | | | | | | | | | |
| remanium® star | 60.5 | – | 28.0 | 9.0 | – | 1.5 | – | < 1.0 | – | < 1.0 | – | < 1.0 | – |
| remanium® LMF140 | 65.5 | – | 28.5 | < 1.0 | 6.0 | < 1.0 | < 1.0 | < 1.0 | – | – | – | < 1.0 | – |
| remanium® secura | 58.0 | – | 30.0 | 5.5 | 3.0 | 1.5 | – | – | 1.25 | – | – | < 1.0 | – |
| remanium® 2000+ | 63.0 | – | 23.0 | 5.0 | 7.0 | 1.5 | – | < 1.0 | – | – | – | < 1.0 | – |
| remanium® 2001 | 63.0 | – | 23.0 | 4.3 | 7.3 | 1.6 | – | < 1.0 | – | – | – | < 1.0 | – |
| remanium® GM 280 | 61.0 | – | 28.0 | 8.0 | – | 1.5 | – | < 1.0 | – | < 1.0 | – | < 1.0 | – |
| remanium® GM 380+ | 64.6 | – | 29.0 | – | 4.5 | < 1.0 | – | < 1.0 | – | – | < 1.0 | < 1.0 | – |
| remanium® GM 800+ | 58.3 | – | 32.0 | 1.5 | 6.5 | 1.0 | – | < 1.0 | – | – | < 1.0 | < 1.0 | – |
| remanium® GM 900 | 62.0 | – | 30.0 | – | 5.5 | 1.2 | – | – | 1.2 | – | – | < 1.0 | – |
| **Solders and filler materials** | | | | | | | | | | | | | |
| CoCrMo-Sold 1 | 69.8 | – | 19.0 | – | 5.0 | 5.0 | – | – | – | – | – | – | 1.2 |
| CoCr welding wire | 65.0 | – | 28.0 | – | 5.5 | < 1.0 | – | < 1.0 | – | – | – | < 1.0 | – |

## 2. Nickel-based alloys

**chemical composition in wt %**

| Material Designation | Co | Ni | Cr | Mo | Si | Fe | Mn | Ti | Al | Nb | B |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Crowns and bridges / partial dentures** | | | | | | | | | | | |
| remanium® G-soft | – | 66.0 | 26.5 | 5.0 | 1.5 | – | < 1.0 | – | – | – | < 1.0 |
| remanium® CSe | –[1] | 60.0 | 26.0 | 11.0 | 1.5 | 1.2 | – | – | – | – | – |
| **Solders and filler materials** | | | | | | | | | | | |
| NiCr-Sold 1 | – | 63.0 | 19.0 | 10.0 | 7.0 | – | – | – | – | – | 1.0 |
| NiCr welding wire | < 1.0 | 63.0 | 22.0 | 9.0 | – | < 1.0 | – | < 1.0 | < 1.0 | 3.5 | – |

## 3. Titanium / Titanium alloys

**chemical composition in wt %**

| Material Quality | Norm | Number (DIN) | Ti | Al | V | Fe | C | N | H | O |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | DIN EN ISO 5832-2 | 3.7025 | > 99.5 | – | – | < 0.2 | < 0.08 | < 0.03 | < 0.0125 | < 0.18 |
| 2 | DIN EN ISO 5832-2 | 3.7035 | > 99.3 | – | – | < 0.3 | < 0.08 | < 0.03 | < 0.0125 | < 0.25 |
| 3 | DIN EN ISO 5832-2 | 3.7055 | > 99.2 | – | – | < 0.3 | < 0.08 | < 0.05 | < 0.0125 | < 0.35 |
| 4 | DIN EN ISO 5832-2 | 3.7065 | > 99.0 | – | – | < 0.5 | < 0.08 | < 0.05 | < 0.0125 | < 0.40 |
| 5 | DIN EN ISO 5832-3 | 3.7165 | 90.0 | 6.0 | 4.0 | < 0.3 | < 0.08 | < 0.05 | < 0.0150 | < 0.20 |
| 23[2] | DIN EN ISO 5832-3 | 3.7165 | 90.0 | 6.0 | 4.0 | < 0.25 | < 0.08 | < 0.05 | < 0.0120 | < 0.13 |

[1] up to 09/2021: < 1.0 %
[2] fulfills the requirements for Ti Al6 V4 ELI; chemical composition acc. to ASTM F 136

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