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## FORMALLOY - S

### Nominal Composition (mass %)

|       |           |
|-------|-----------|
| Co    | Balance   |
| Cr    | 29        |
| Mo    | 5.9       |
| C     | Max. 0.50 |
| Ni    | Max. 0.10 |
| Fe    | 0.70      |
| Si    | Max. 1.0  |
| Other | Max. 0.50 |

\* This alloy is Nickel, Beryllium and Cadmium free as defined by ISO 6871-1 and ISO 22674

**FORMALLOY-S** is a cobalt chromium base-metal casting alloy for the manufacture of removable partial dentures and bridgework. It conforms to the following International Standards:

|               |                                                                                                     |
|---------------|-----------------------------------------------------------------------------------------------------|
| EN 1641 §4.2  | Dentistry – Medical Devices for Dentistry – Materials<br>(Harmonised Standard i.a.w. MDD 93/42/EEC) |
| EN ISO 6871-1 | Dental base metal casting alloys (Referenced in EN 1641)                                            |
| ISO 22674     | Dentistry - Metallic Materials for fixed and removable restoration and appliances<br>(Type 4 and 5) |

### Nominal Properties (as-cast)

|                                      |                           |
|--------------------------------------|---------------------------|
| Proof Stress (Rp0.2)                 | 600 MPa                   |
| Tensile Elongation                   | > 3.0 %                   |
| Ultimate Tensile Strength            | 770-780 MPa               |
| Elastic Modulus                      | 200-230 GPa               |
| Vickers Hardness (HV <sub>30</sub> ) | 330-380                   |
| Density                              | 8.3-8.4 g/cm <sup>3</sup> |
| Melting Range (heating)              | 1400-1430°C               |
| Solidification Range (cooling)       | 1285-1350°C               |
| Thermal expansion coefficient        | ≈ 13.4 µm/m.°C (25-500°C) |