AUBERT&DUVAL

Cobalt-based Alloy

M64BC

CoCr28Mo

SPECIFICATIONS

European standards:

- CoCr28Mo

UNS : R31537

Medical standards:

- ISO: 5832-12
- ASTM: F1537

COMPOSITION

Carbon	<0.14
Chromium	28.00
Molybdenum	6.00
Nickel	<1.00
Cobalt	Base

.....With the addition of nitrogen

TYPICAL MECHANICAL PROPERTIES

- In the solution treated condition (average properties):
  - UTS: 1160 N/mm^2
  - 0.2 % Yield strength: 650 N/mm^2
  - Elongation (5d): 35 %
- Thermomechanical condition (min. properties):
  - UTS: >1175 N/mm^2
  - 0.2 % Yield strength: > 850 N/mm^2
  - Elongation (5d): > 14 %

APPLICATIONS

- Production of permanent surgical implants and any parts implanted in the human body.

CHARACTERISTICS

- M64BC is a cobalt alloy with a high chromium and molybdenum content.
- Its high corrosion resistance makes it particularly suitable for the production of implants in contact with living tissue.
- Its composition has been optimised to enable it to be closed-die forged.
- The high level of mechanical strength that can be attained during this operation results in a steel with excellent fatigue properties while maintaining good toughness. It is therefore possible to produce very thin parts with a high level of safety.

HEAT TREATMENT

- M64BC is generally used in the hot-processed condition in order to attain a high level of mechanical strength. This may be adjusted according to the thermomechanical processing conditions (temperature/amount of deformation) within a wide range of values while retaining very good ductility.
- For some applications requiring maximum softening, solution treatment at 1050/1100°C followed by air or water cooling may be carried out.

PHYSICAL PROPERTIES

- Density: 8.3
- Mean coefficient of expansion in m/m.°C:
  - between 20°C and 200°C: 12.1 x 10^{-6}
- Modulus of elasticity in N/mm^2:
  - at 20°C: 225 x 10^3

FORGING

- Please contact us

Contact:

www.aubertduval.com