

## MEDILOY S-Co

### GENERAL INFORMATION

COBALT CHROME ALLOYS ARE MAINLY USED FOR DENTAL APPLICATIONS, SUCH AS BRIDGES, CROWNS AND ABUTMENTS. MECHANICAL PROPERTIES OF THIS MATERIAL ARE OUTSTANDING: TOUGHNESS, CORROSION RESISTANCE AND GEOMETRICAL STABILITY ARE ONLY SOME OF THEM.

DENSITY

 8.6 KG/DM<sup>3</sup>

BIO-COMPATIBILITY

EXCELLENT

MACHINABILITY

VERY GOOD

WELDABILITY

GOOD

CORROSION RESISTANCE

VERY GOOD

## CHEMICAL COMPOSITION (ACCORDING TO SUPPLIER)

Co	Cr	Mo	W	Si
63.9 %	24.7 %	5 %	5.4 %	< 1 %

## MECHANICAL PROPERTIES

### AS BUILT

YIELD STRENGTH <sup>1</sup>	1090 MPa
TENSILE STRENGTH <sup>1</sup>	1315 MPa
ELONGATION A <sup>1</sup>	4.2 %
C.T.E.	$14.3 \cdot 10^{-6} \times K^{-1}$
YOUNG'S MODULUS <sup>1</sup>	215 GPa
HARDNESS <sup>2</sup>	469 HV
RELATIVE DENSITY	OVER 99.97 %

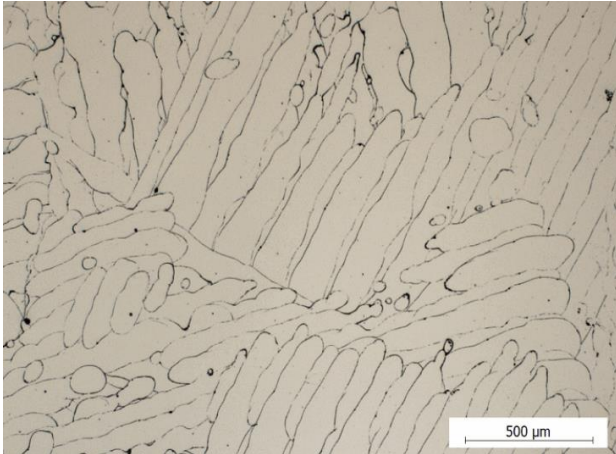
<sup>1</sup> TESTED ACCORDING TO EN 6892-1:2009

<sup>2</sup> MEASURED ACCORDING TO ASTM E10-15

## SURFACE QUALITY

RA	8 μm
Rz	40 μm

MEASURED IN COMPLIANCE WITH ISO 4287-1997. RESULTS STRONGLY DEPEND ON SAMPLE GEOMETRICAL COMPLEXITY AND ORIENTATION.

**MICROSTRUCTURE** (ACCORDING TO ASTM E112)

MAGNIFICATION: 30X



MAGNIFICATION: 150X

**NOTES**

ALL THE VALUES IN THIS DOCUMENT REFER TO A COMBINATION OF GEOMETRIES, POWDERS AND PARAMETERS DEVELOPED BY SISMA, THEREFORE THEY MUST BE INTENDED FOR INFORMATION ONLY. INFORMATIONS WRITTEN IN THIS FORM ARE SUBJECTED TO SUDDEN MODIFICATION WITHOUT PRIOR NOTICE, AND DO NOT GRANT FINAL RESULT.