

CO-BASE ALLOYS

Application Segments

Engineering

Available Product Variants

Long Products*

Semi-Finished Products / Billet

* Presented data refer exclusively to long products. Please observe the detailed explanations at the end of the data sheet (pdf).

Product Description

BÖHLER L135 is a low carbon cobalt-28chromium-6molybdenum alloy (UNS R31537) known as Alloy 1 of this group of metals in the form of bar and wire, typically used for the manufacture of surgical implants, e.g. endoimplants like hip-joints. The alloy composition covered by this specification has been successfully employed in human implants. Long-term clinical experience has shown an acceptable level of biological response. The alloy shows good corrosion resistance and good fatigue and wear resistance. This alloy is especially applicable for medical implants (endoprosthesis and osteosynthesis), wherever high mechanical stress is expected. It is also widely used in micromechanics and watchmaking industries, where hardness, toughness, ductility and corrosion resistance are required. It is non-magnetic.

Process Melting

Airmelted + ESR

Applications

> Surgery > Orthopedics > Cardiology

Technical data

Material designation		Standards	
Alloy 1	Market grade	ISO 5832-12	EN ISO
Co28Cr6Mo	EN	F1537	ASTM
R31537	UNS		

Chemical composition (wt. %)

C	Si	Mn	Cr	Mo	Ni	Co	Fe	N
max. 0.14	max. 1.0	max. 1.0	26.0 to 30.0	5.0 to 7.0	max. 1.0	REM	max. 0.75	max. 0.25

Related to ASTM F1537

Delivery condition

Annealed	
Tensile Strength (MPa)	min. 897
Yield Strength (MPa)	min. 517

If other available product variants are listed in addition to long products, please note that these may differ in terms of melting process, technical data, delivery and surface condition as well as available product dimensions. For mandatory technical specifications, other requirements and dimensions, please contact our regional voestalpine BÖHLER sales companies. The data contained in this brochure is merely for general information and therefore shall not be binding on the company. We may be bound only through a contract explicitly stipulating such data as binding. Measurement data are laboratory values and can deviate from practical analyses. The manufacture of our products does not involve the use of substances detrimental to health or to the ozone layer.

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ONE STEP AHEAD.