

TECHNICAL DATA

TRIBALOY™ T-400C ALLOY

TRIBALOY™ COBALT-BASED ALLOYS consist of a hard, intermetallic (Laves) phase dispersed in a softer matrix of eutectic or solid solution. They exhibit outstanding resistance to wear and galling, high corrosion resistance and are particularly suitable where lubrication is a problem. Wear resistance of Tribaloy™ alloys is highly dependent on the volume percentage of Laves phase.

TRIBALOY™ T-400C is a Laves-phase-containing, cobalt-based alloy with improved oxidation, corrosion and high temperature wear resistance over the traditional Tribaloy™ T-400. It also has improved castability and weldability. It is a high-performance alloy for severe wear and corrosive conditions. Available product forms include castings and powders for PTA welding and HVOF thermal spraying. NOTE: volume percentage of Laves phase depends strongly on dilution and cooling rate and other thermal history.

NOMINAL CHEMICAL COMPOSITION (MASS%)

ALLOY	Co	Cr	Mo	C	Si	Others
T-400C	Bal.	14,0	27,0	<0,1	2,6	Ni, Fe

PHYSICAL PROPERTIES

ALLOY	Hardness	Density	Melting Range
T-400C	48 - 56 HRC	~ 8,9 g/cm ³	~ 1270 – 1320°C

NOMINAL HOT HARDNESS (HV resp. DPH) AS CAST

20°C	300°C	400°C	530°C	640°C	750°C
595	480	480	460	470	430

EXAMPLE FOR TENSILE PROPERTIES AT ROOM TEMPERATURE

PRODUCT FORM	Ultimate Tensile Strength Rm	Yield Stress Rp (0,2%)	Elongation A
Investment Casting, As cast	~ 650 MPa	N.A.	<< 1%

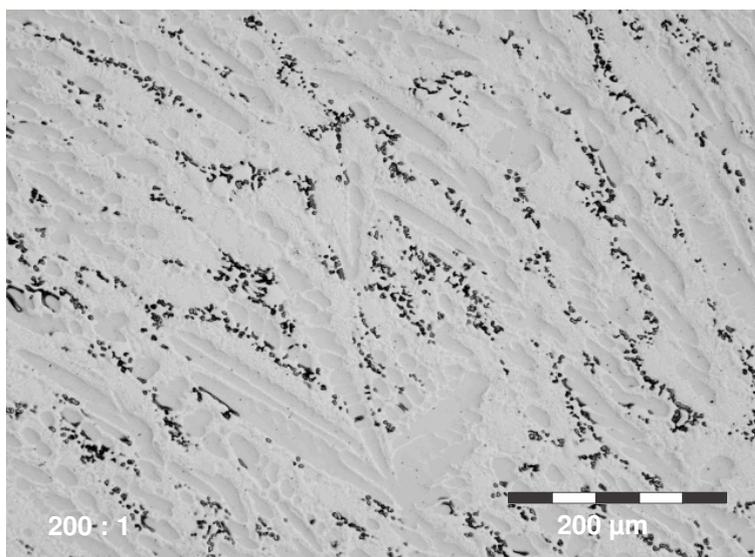
PRODUCT FORMS

Components			
Castings	Cladded / Hardfaced	PM / HIP parts*	ALM parts*

* On special request.

Consumables for Cladding / Hardfacing and Additive Layer Manufacturing (ALM)				
Rods	TIG-Welding		Oxy-Acetylene Welding	
Powder	PTA Cladding	Laser Cladding	HVOF Spraying	ALM

TYPICAL STRUCTURES



Casted T-400C Alloy (Resin Shell Casting)

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