

TECHNICAL DATA

TRIBALLOY™ T-800 ALLOY

TRIBALLOY™ 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 Triballoy™ alloys is highly dependent on the volume percentage of Laves phase.

TRIBALLOY™ T-800 was designed to resist high temperature wear and abrasion. It has exceptional oxidation and corrosion resistance due to its high Cr content. T-800 is harder and has better abrasive wear resistance than Triballoy™ T-400. NOTE: Wear resistance of Triballoy™ alloys is highly dependent on the volume percentage of Laves phase. Therefore, test results vary significantly with dilution and cooling rate and other thermal history. Should be considered for valve trim, mechanical seals and thrust rings.

CORROSION RESISTANCE

T-800 shows excellent corrosion resistance in Acetic Acid (concentration 50%, boiling) and in Phosphoric Acid (concentration 85%, 66°C). Also in Sulphuric Acid (concentration 5%, 66°C) excellent corrosion resistance has been observed.

NOMINAL CHEMICAL COMPOSITION (MASS%)

ALLOY	Co	Cr	Mo	C	Si	Others
T-800	Bal.	17,5	28,5	<0,1	3,5	Ni, Fe

PHYSICAL PROPERTIES

ALLOY	Hardness	Density	Melting Range
T-800	54 - 62 HRC	~ 8,6 g/cm ³	~ 1290 – 1350 °C

NOMINAL HOT HARDNESS (HV resp. DPH) AS CAST

20 °C	100 °C	200 °C	300 °C	400 °C	500 °C	600 °C	700 °C
725	720	710	690	670	630	570	430

EXAMPLE FOR TENSILE PROPERTIES AT ROOM TEMPERATURE

PRODUCT FORM	Ultimate Tensile Strength R _m	Yield Stress R _p (0,2%)	Elongation A
Investment Casting, As cast	~ 710 MPa	N.A.	<< 1%

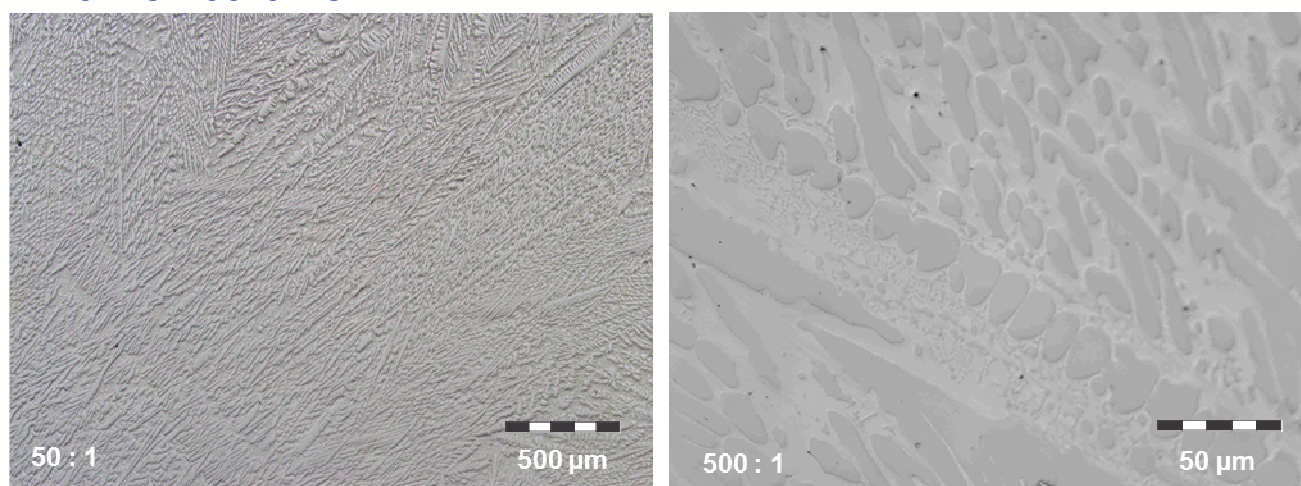
PRODUCT FORMS

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-800 Alloy (Resin Shell Casting)

Deloro Wear Solutions GmbH manufactures and markets sophisticated alloys in the form of castings, powders, coatings, consumables, and machined parts that resist wear, corrosion, and abrasion. Information provided in this document is intended only for general guidance about Deloro Wear Solutions™ products and is the best information in our possession at the time. Product users may request information about their individual use of our products, but Deloro Wear Solutions™ does not warrant or guarantee this information in any way. Selection and purchase of Deloro Wear Solutions™ products is the sole responsibility of the product user based on the suitability of each use. Individual applications must be fully evaluated by the user, including compliance with applicable laws, regulations, and non-infringement. Deloro Wear Solutions™ cannot know or anticipate the many variables that affect individual product use and individual performance results may vary. For these reasons, Deloro Wear Solutions™ does not warrant or guarantee advice or information in this document, assumes no liability regarding the same, and expressly disclaims any warranty of any kind, including any warranty of fitness for a particular purpose, regarding the same.