



## TECHNICAL DATASHEET

**Custom 465<sup>®</sup> – 1.4614 – X2CrNiTi 12-11-2  
FT 039 – Version 0**

Martensitic stainless steel, precipitation hardened and produced using a VIM/VAR process. Offering exceptional hardness and mechanical strength, its corrosion resistance equals that of an AISI 304. It is delivered in a machinable, solution heat treated state.

APPLICATIONS	ADVANTAGES
Surgical and dental instruments, Aerospace, automotive, chemical, pharmaceutical and food industries	High corrosion resistance Hardness Toughness
STANDARDS	SHAPES
WERKSTOFF NR. 1.4614 ASTM F899 AMS 5936	<b>BAR</b>  Diameter 4.76-50 mm  Length 3000-3500 mm  Tolerance h9 $\varnothing$ <30 h11 $\varnothing$ $\geq$ 30.0

### ➤ CHEMICAL COMPOSITION

%	C	P	Si	Ni	Ti	Mn	S	Cr	Mo	Fe
min				10.75	1.50			11.00	0.75	residue
max	0.02	0.015	0.25	11.25	1.80	0.25	0.010	12.50	1.25	



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### ➤ HEAT TREATMENT

Condition		Hardness
Softened (Condition A)	Solution annealed: Heated to 982°C for 1 hour. A cryogenic phase of -80°C ≥ 8 hours is advised to help optimise the product properties.	331 HB

### ➤ MECHANICAL PROPERTIES

Condition	Rm Tensile strength (MPa)	Rp0.2 Yield strength (MPa)	4D elongation (%)	Ra (%)
Solution heat treated	951	683	20	
H950 - 510°C	1765	1669	13	62
H975 - 524°C	1703	1620	13	61
H1000 - 538°C	1593	1510	15	63
H1050 - 566°C	1482	1386	17	66

### ➤ PHYSICAL PROPERTIES

Density (g/cm <sup>3</sup> )	7.8
Typical hardness (HRc)	47-50
Modulus of elasticity at 20°C (N/mm <sup>2</sup> )	202 x10 <sup>3</sup>
Thermal conductivity at 20°C (W/m °C)	15
Electrical resistance μohm-mm	824 (H900)
Magnetic	YES

The information and technical data contained in this sheet are for information purposes only. Only the information written on our material analysis certificates will be official.