Technical Bulletin

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Precision Tweezers

DESCRIPTION

A complete range of precision tweezers manufactured in anti-magnetic stainless steel. Typical applications include tools and equipment for laboratory and medical applications in mild aggressive chemical environments.

FEATURES AND BENEFITS

- Made of Stainless steel
- (Low carbon austenitic steel material number 1.4404 DIN X2CrNiMo 17-12-2 AISI number 316L Thyssen steel)
- Contains from 16.5 to 18.5 wt% chromium and has important quantities of nickel and molybdenum as additional alloying elements.
- Non-magnetisable.
- Good corrosion resistance and toughness are primary requirements.
- Typical applications include tools and equipment for laboratory and medical applications in mild aggressive chemical environments.

COMPOSITION

Component	Wt %	Component	Wt%	Component	Wt%
C	<0.03	Si	<1.0	Mn	<2.0
P	<0.045	S	<0.03	Cr	16.5 – 18.5
Mo	2.0-2.5	Ni	10.0 – 13.00		

Mechanical Properties:

State	Annealed
Density	8.0 g/cm3
Hardness HB30	<215
Hardness Rockwell B	79
Tensile strength ultimate	500-700 MPa
Tensile strength yield	290
0.2% Yield stress	>200 MPa
Elongation, break	40%
Modulus of elasticity	200 GPa

Thermal Properties:

Coef of lin therm expansion	16.0 E-6/degrees C	20-100 degrees C
Coef of lint herm expansion	17.0 E-6/ degrees C	20-300 degrees C
Specific heat capacity:	0.50J (g.K)	
Thermal conductivity:	15W/m.K)	

Continuous use temperature: 300 degrees C

Max service temperature, air 825 degrees C

Electrical Properties
Resistivity: 0.75 E-4 ohm.cm