TECHNICAL DATA SHEET

Stainless steel type SA.B

General notes:

- **Austenitic steel** (Material number 1.4301, DIN X5CrNi1810, AISI number 304)
- contains from 17.5 to 20 wt% chromium and has important quantities of nickel
- non-magnetizable
- good corrosion resistance to a wide range of atmospheric environments and many corrosive media
- generally used where corrosion resistance and toughness are primary requirements
- typical applications include tweezers for the electronic industry, screws, machinery parts and food-handling equipment

Composition

Component	Wt.%	Component	Wt.%	Component	Wt.%
C	≤0.08	Si	≤1.0	Mn	≤2.0
P	≤0.045	S	≤0.03	Cr	17.5-20.0
Mo	2.5-3.0	Ni	8.0-11.0		

Mechanical properties

State	**annealed**
Density	**8.0 g/cm^3**
Hardness, Vickers	**210 HV**
Tensile strength, ultimate	**600 MPa**
Tensile strength, yield	**330**
0.2% Yield stress	≥ **290 MPa**
Elongation, break	**55%**
Modulus of elasticity	**193 GPa**

Thermal properties

Coef. of lin. therm expansion	**16.0 E-6/°C**	*20°C-100°C*
Coef. of lin. therm expansion	**17.0 E-6/°C**	*20°C-300°C*
Specific heat capacity	**0.50 J/(g·K)**	
Thermal conductivity	**16 W/(m·K)**	
Continuos use temperature	**350°C**	
Max service temperature, air	**925°C**	

Electrical properties

Resistivity	**0.72 E-4 Ohm.cm**

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