



WIRE
Precision wire
Sandvik 5R60



MATERIAL DATASHEET S-2809-ENG January 2006

Sandvik 5R60 is an austenitic stainless steel alloy suitable for service in less severe oil and gas environments. It is characterised by:

- Good resistance to general corrosion and better resistance to pitting than AISI 304, because of the alloying with Mo.
- High tensile strength

CHEMICAL COMPOSITION (NOMINAL), %

C	Si	Mn	P	S	Cr	Ni	Mo
max.	max.	max.	max.	max.			
0.04	0.6	1.2	0.030	0.015	17	11	2.6

STANDARDS

Type of steel

Sandvik Grade	5R60
ASTM TP	316
UNS	S31600

FORMS OF SUPPLY

Sandvik 5R60 precision wire is supplied cold drawn and degreased, in continuous lengths, without welds, on metallic spools.

Product programme

Diameter		Breaking load		Weight	
mm	inch	N	lbf	kg/1 000 m	lb/1 000 ft
2.083	0.082	5109	1149	27.5	18.4
2.337	0.092	6431	1446	34.6	23.2
2.667	0.105	7845	1765	45.0	30.2
2.743	0.108	8287	1870	47.6	32.0
3.175	0.125	11131	2500	63.8	42.8
3.810	0.150	15985	3890	91.4	61.27
4.064	0.160	18157	4082	103.8	69.60

MECHANICAL PROPERTIES

Sandvik 5R60 is tested and certified in accordance with a minimum nominal tensile strength. Proof strength is approximately 90 % of the tensile strength. Sandvik 5R60 is able, therefore, to resist high loads without permanent set of the wire.

At 20°C (68°F)

Proof strength, R _{p0.2}		Tensile strength, R _m		Dimension	
MPa	ksi	MPa	ksi	inch	mm
min.	min.	min.	min.		
1350	200	1500	220	≤ 0.092	≤ 2.337
1260	183	1400	203	≥ 0.105	≥ 2.667

PHYSICAL PROPERTIES

Density

8.0 g/cm³, 0.29 lb/in³

Specific heat capacity, at 20 °C (68 °F)

485 J/kg °C, 0.12 Btu/lb h °F,

Thermal expansion

30 - 100 °C, 16.5 *10⁻⁶/ °C, 86 - 210 °F, 9.5 *10⁻⁶/ °F

Thermal conductivity at 20 °C (68 °F)

15 W/m °C, 9 Btu/ft h °F

Permeability, at 20 °C (68 °F)

1.004

Resistivity, at 20 °C (68 °F)

0.80 μΩm (31 μΩ inch)

Modulus of Elasticity, at 20 °C (68 °F)

180 000 MPa, 26 100 ksi

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Recommendations are for guidance only, and the suitability of a material for a specific application can be confirmed only when we know the actual service conditions. Continuous development may necessitate changes in technical data without notice.

