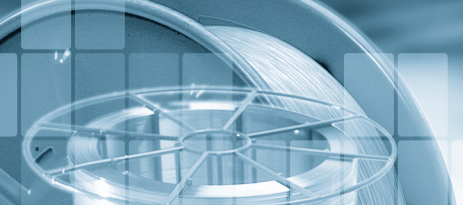

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Sandvik 5R60 for wirelines

(Wire)

Sandvik 5R60 is an austenitic stainless steel alloy suitable for service in less severe oil and gas wells. The grade is characterized by:

- Good resistance to general corrosion
- Better resistance to pitting than ASTM 304, because of the molybdenum content
- High tensile strength

PRE* value: 25

* PRE, Pitting Resistance Equivalent = %Cr + 3.3 x %Mo + 16 x %N

STANDARDS

- ASTM 316
- UNS S31600
- EN number 1.4436

CHEMICAL COMPOSITION (NOMINAL) %

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

FORMS OF SUPPLY

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

PRODUCT PROGRAM

Diameter		Breaking load		Weight	
mm	in.	N	lbf	kg/1000 m	lb/1000 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	1758	45.0	30.2
2.743	0.108	8287	1860	47.6	32.0
3.175	0.125	11131	2491	63.8	42.8
3.810	0.150	15985	3587	91.4	61.27
4.064	0.160	18157	4082	103.8	69.60

MECHANICAL PROPERTIES

Wire in 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, Rm*		Dimension	
MPa	ksi	MPa	ksi	in.	mm
1350	200	1500	220	< 0.092	< 2.337
1260	183	1400	203	> 0.105	> 2.667

* Min. values

PHYSICAL PROPERTIES

Density: 8.0 g/cm^3, 0.29 lb/in^3
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 µΩin.
Modulus of Elasticity, at 20°C (68°F)**:** 180 000 MPa, 26 100 ksi

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