

GRR8
INDUSTRIES



steel wire rope
stainless steel and pvc covered

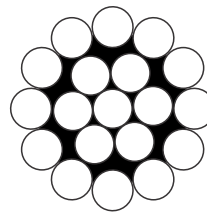


labour

Department:
Labour
REPUBLIC OF SOUTH AFRICA

1x19 Stainless Steel

AISI 316 or 304

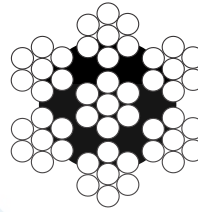


SWR dia	Weight	Minimum breaking load
[mm]	[kg/100m]	[t]
1.5	1.10	0.213
4.0	7.80	1.284
6.0	17.60	2.875
7.0	23.90	3.548
8.0	31.20	4.639

7x7 Stainless Steel

AISI 316 or 304

lay-up of wires 1-6

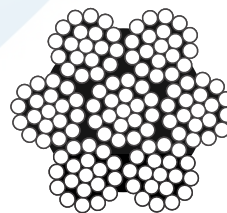


SWR dia	Weight	Minimum breaking load
[mm]	[kg/100m]	[t]
1.0	0.40	0.060
1.5	0.60	0.125
2.0	1.60	0.241
2.5	2.30	0.378
3.0	3.40	0.544
4.0	6.00	0.967
5.0	9.50	1.509

7x19 Stainless Steel

AISI 316 or 304

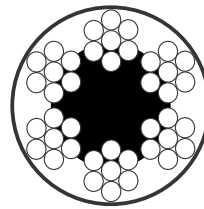
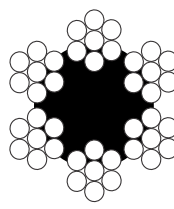
lay-up of wires 1-6-12



SWR dia	Weight	Minimum breaking load
[mm]	[kg/100m]	[t]
3.0	3.30	0.509
4.0	5.90	0.906
5.0	9.30	1.417
6.0	13.40	2.039
8.0	23.80	3.630
10.0	37.20	5.669
12.0	53.50	8.157
14.0	72.80	11.114
16.0	97.40	15.295

6x7 FC

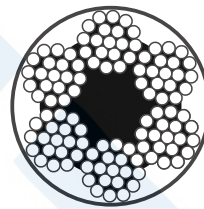
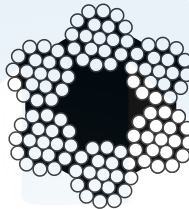
lay-up of wires 1-6



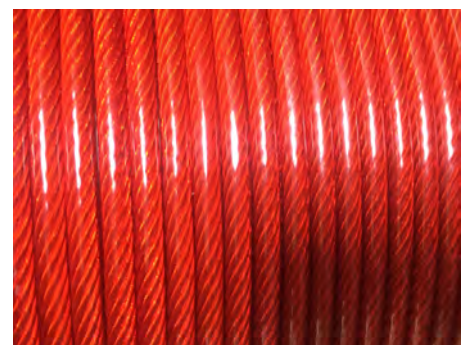
SWR dia	Weight	Minimum breaking load	PVC cover colour
[mm]	[kg/100m]	[t]	
1.5	1.35	0.134	-
1.5 - 3.0	1.60	0.134	yellow or clear
2.0	1.40	0.239	-
3.0	3.10	0.539	-
3.0 - 5.0	5.10	0.539	red or clear
4.0	5.50	0.959	-
4.0 - 6.0	8.20	0.959	blue or clear
5.0	8.60	1.498	-
6.0	12.50	2.157	-
10.0	33.90	5.993	-

6x19 FC

lay-up of wires 1-6-12



SWR dia	Weight	Minimum breaking load	PVC cover colour
[mm]	[kg/100m]	[t]	
3.0	3.10	0.498	-
3.0 - 5.0	4.80	0.498	red or clear
4.0	5.50	0.886	-
4.0 - 6.0	8.00	0.886	-
5.0	8.70	1.385	blue or clear
6.0	12.50	1.995	-
6.0 - 8.0	17.10	1.995	black or clear
8.0	22.10	3.547	-
8.0 - 10.0	53.60	3.547	clear
10.0	34.60	5.542	-



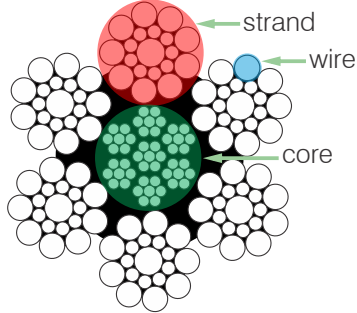
General information



Wire rope is made by spinning individual wires together to form a strand and then closing a number of strands helically around a centre core to form the rope.

Core

Steel wire ropes are supplied with either fibre or steel cores, the choice being dependent on the use for which the rope is intended. The principle function of the core is to provide support to the strands and maintain them in the correct positions under working conditions.



Diameter

Measurements are taken at 2 points at least one meter apart and 2 diameters are measured at 90° one from the other. The average thus obtained is the practical diameter.



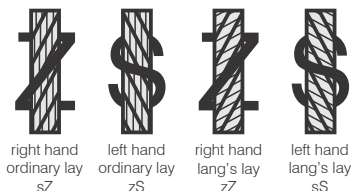
Stainless steel grades

Type 304 - the most common grade, classic 18/8 (18% chromium, 8% nickel) stainless steel. Also known as A2 stainless steel.

Type 316 - the second most common grade, alloy addition of molybdenum prevents specific forms of corrosion. Also known as marine grade stainless steel due to its increased resistance to chloride corrosion.

Rope lay

When the wires in the outer strands lie in the same direction as the strands themselves, this is known as Lang's Lay and when they lie in the opposition direction to the strands, this is known as Ordinary or Regular Lay. Ordinary lay ropes are generally used because of their stability, however Lang's lay has increased resistance to abrasion and is more flexible.



Lubrication

Wire ropes are lubricated as protection against oxidization and to reduce friction between wire and strands. During the closing of the rope, all wires and all strands are lubricated. The type of lubrication varies according to the application. Re-lubrication should be carried out periodically to extend the lifespan of the rope.

Galvanising

Zinc coating known as galvanising provides sacrificial protection to the underlying steel wire for protection against corrosion, where the rope is exposed to corrosive agents such as salt, water and moisture. Galvanised rope generally has a lower breaking load than bright ropes (uncoated). For hoisting equipment in locations where corrosive conditions are present, heavily lubricated bright ropes are usually preferred to galvanised.

Preformed wire rope

Generally, ropes are supplied preformed. In preformed rope the wires and strands are pre-shaped by running the rope through a preforming head, giving it the helix it takes up, prior to assembly into the finished rope. This prevents the wires from straitening and leaves them relaxed in their normal positions. The benefits of this process are:

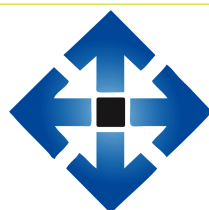
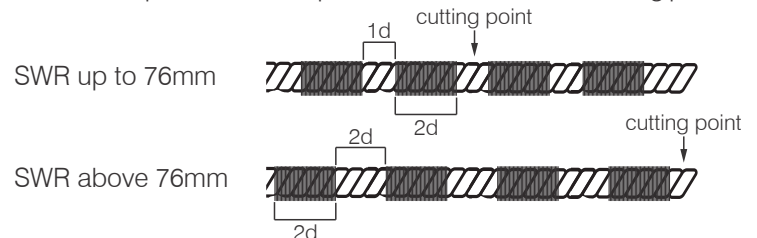
- the exposed ends do not untwist
- broken wire ends lie flat
- easy handling during installation
- less prone to kinking and twisting

Rotating resistant ropes should not be regarded as preformed.

Cutting wire rope

When cutting wire rope up to 76mm diameter, a minimum of 2 wire servings, each twice the rope diameter in length and placed one rope diameter apart, should be placed either side of the cutting point.

For wires above 76mm diameter, a minimum of 4 wire servings, each twice the rope diameter in length and placed two rope diameters apart, should be placed either side of the cutting point.



GR8 INDUSTRIES

JOHANNESBURG (HEAD OFFICE) +2711 869 0566

sales@gr8industries.co.za
www.gr8industries.co.za