HOWARD MATERIAL HANDLING LTD

CATALOGUE

Wire Rope

LIFT IT
LOAD IT
TIE IT &
TENSION IT

GENERAL PURPOSE WIRE ROPE

Conventional wire ropes, such as those shown listed in the table below, are used in a wide range of applications which include lifting, hoisting, hauling, logging and drilling. Different constructions have different characteristics suitable for a variety of uses depending on design requirements of the strength fatigue resistance wear resistance, flexibility and abrasion resistance of the wire rope.

Wire ropes are available in self colour and galvanised for maritime applications.
6x19, 6x31, 6x36, 6x41

Diameter (mm)	Min. Breaking Load * (kN)		Weight (kg/m)	
	Fibre Core (FC)	Steel Core (IWRC)	Fibre Core (FC)	Steel Core (IWRC)
8.0	37.41	40.30	.230	.255
9.0	47.31	50.98	.293	.323
10.0	58.39	62.97	.361	.399
11.0	70.71	76.19	.437	.481
12.0	84.10	90.70	.521	.573
13.0	98.71	105.92	.611	.672
14.0	114.01	123.57	.707	.780
16.0	150.01	160.82	.924	1.03
18.0	189.01	203.97	1.17	1.28
19.0	211.03	226.54	1.31	1.44
20.0	233.90	252.00	1.44	1.59
22.0	283.02	304.99	1.74	1.94
24.0	336.00	362.84	2.09	2.29
26.0	395.01	425.60	2.44	2.69
28.0	458.00	494.25	2.83	3.11
32.0	598.03	644.31	3.89	4.07
35.0	715.90	771.77	4.42	4.87
36.0	757.07	816.90	4.69	5.17
38.0	843.04	910.04	5.22	5.76

* kN x 0.10197 = tonne

FIBRE CORE

Construction: 6x19 Seale + FC
Composition: 9 + 9 + 1

Construction: 6x31 Warrington-Seale + FC
Composition: 12 + 6/6 + 6 + 1

Construction: 6x36 Warrington-Seale + FC
Composition: 14 + 7/7 + 7 + 1

Construction: 6x41 Warrington-Seale + FC
Composition: 16 + 7/8 + 8 + 1

STEEL CORE

Construction: 6x19 Seale + IWRC
Composition: 9 + 9 + 1

Construction: 6x31 Warrington-Seale + IWRC
Composition: 12 + 6/6 + 6 +

Construction: 6x36 Warrington-Seale + FC
Composition: 14 + 7/7 + 7 + 1

Construction: 6x41 Warrington-Seale + IWRC
Composition: 16 + 8/8 + 8 + 1

MARINE ROPE

Marine ropes are galvanised to provide protection against corrosion. The ropes listed below are used in such applications as fishing, mooring, shipping, lashing and cargo handling operations.

Marine/Fishing Ropes - 6x19 Galvanised Small Cords and General Purpose

Diameter (mm)	Min. Breaking Load * (kN)		Weight (kg/m)	
	Fibre Core (FC)	Steel Core (IWRC)	Fibre Core (FC)	Steel Core (IWRC)
3.0	4.89	5.30	.0312	0.0343
4.0	8.68	9.41	.0553	0.0611
5.0	13.61	14.69	.0864	0.0952
6.0	19.61	21.21	.125	0.137
7.0	28.61	30.91	.176	0.196
8.0	33.12	39.38	0.23	0.24
9.0	41.90	43.03	0.28	0.31
10.0	53.89	56.88	0.37	0.41
11.0	65.87	67.66	0.45	0.48
12.0	77.44	80.60	0.52	0.57
13.0	87.41	94.62	0.62	0.67
14.0	101.78	109.82	0.71	0.78
16.0	132.74	143.19	0.91	1.02
18.0	167.65	192.77	1.16	1.27
19.0	186.60	202.01	1.30	1.38
20.0	206.57	224.56	1.44	1.58
22.0	250.48	269.43	1.75	1.93
24.0	297.37	333.44	2.07	2.28
26.0	349.26	377.20	2.44	2.69

Principal Use in Standard Rigging - 1x19

Diameter (mm)	Min. Breaking Load * (kN)	Weight (kg/m)
2.0	3.20	.195
2.5	500	.365
3.0	720	.439
4.0	1249	.781
5.0	2000	1.14
6.0	2.880	1.76
8.0	4.639	3.12

Marine/Yachting Ropes - Stainless Steel Grade 316

Diameter (mm)	Min. Breaking Load * (kN)	Weight (kg/m)
7x7		
1.5	1.30	.0097
2.0	2.51	.0171
2.5	3.5	.027
7x19		
3.0	5.21	0.39
4.0	9.31	0.68
5.0	14.58	1.04
6.0	21.01	1.46
7.0	28.7	.205
8.0	37.4	.257
9.0	47.3	.331
10.0	58.4	.406
12.0	70.9	.487
13.0	84.3	.578

VEROTOP ROPE

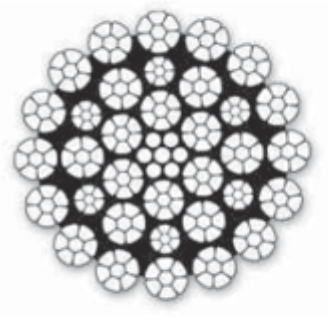
- is suitable for high lifting application
- is a rotation resistant rope made with outer and inner strands compacted
- has an extremely high breaking strength with very strong resistance to drum crushing
- is fully lubricated and made of both galvanised and ungalvanised wires
- should be used with a swivel

Discard Number of Wires

Length	Lang's Lay	
	6xd	30xd
Discard	5	10

Design Data

Total number of wires: 245
Number of outer strands: 112
Average fill factor: 0.74
Average spin factor (1960 grade): 0.81



Diameter (mm)	Min. Breaking Load * (kN)		Weight (kg/m)
	1960 Grade	2160 Grade	
10.0	91.42	97.55	0.510
12.0	131.6	140.5	0.735
12.7	147.5	157.3	0.823
13.0	154.5	164.9	0.862
14.0	179.2	191.2	1.000
15.0	205.7	219.5	1.148
16.0	234.0	249.7	1.306
17.0	264.2	281.9	1.475
18.0	296.2	316.1	1.653
19.0	330.0	352.2	1.842
20.0	365.7	390.2	2.041
21.0	403.2	430.2	2.250
22.0	442.5	472.2	2.470
22.4	458.7	489.5	2.561
23.0	483.6	516.1	2.700
24.0	526.6	561.9	2.939
25.0	571.4	609.7	3.189
25.4	589.8	629.4	3.292
26.0	618.0	659.5	3.450
27.0	666.5	711.2	3.720
28.0	716.7	764.8	4.001
28.6	747.8	797.9	4.174
29.0	768.8	820.4	4.292
30.0	822.8	878.0	4.593
31.0	878.6	937.5	4.904
32.0	936.1	998.9	5.226
33.0	995.6	1062.0	5.557
34.0	1057.0	1128.0	5.899
35.0	1120.0	1195.0	6.251
36.0	1185.0	1264.0	6.614
38.0	1320.0	1409.0	7.369
40.0	1463.0	1561.0	8.165

VEROPRO 8 ROPE

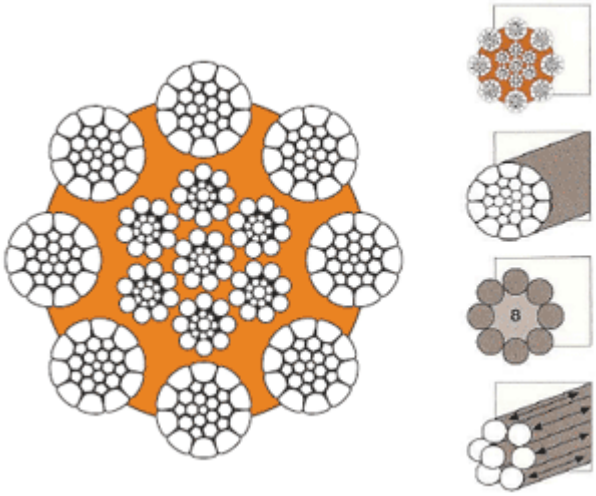
- has a plastic layer between the core and the compacted outer strand
- has a high breaking load and good structural reliability
- is fully lubricated and made of both galvanised and ungalvanised wires
- is suitable for multi-layer spooling
- has very good resistance to drum crushing
- is a non-rotation resistant rope and should not be used with a swivel

Discard Number of Wires

Length	Regular Lay		Lang's Lay	
	6xd	30xd	6xd	30xd
Discard	18	35	9	18

Design Data

Total number of wires: 327
Number of outer strands: 208
Average fill factor: 0.67
Average spin factor (1960 grade): 0.85



Diameter (mm)	Min. Breaking Load * (kN)		Weight (kg/m)
	1960 Grade	2160 Grade	
12.0	126.2	135.0	0.660
12.7	141.3	151.2	0.740
13.0	148.1	158.4	0.775
14.0	171.7	183.7	0.899
15.0	197.1	210.9	1.032
16.0	224.3	240.0	1.174
17.0	253.2	270.9	1.325
18.0	283.9	303.7	1.486
19.0	316.3	338.4	1.655
20.0	350.4	374.9	1.834
21.0	386.4	413.4	2.022
22.0	424.0	453.7	2.219
22.4	439.6	470.3	2.301
23.0	463.5	495.9	2.426
24.0	504.6	539.9	2.641
25.0	547.6	585.8	2.866
25.4	565.2	604.7	2.958
26.0	592.3	633.7	3.100
27.0	638.7	683.3	3.343
28.0	686.9	734.9	3.595
28.6	716.6	766.7	3.751
29.0	736.8	788.3	3.856
30.0	788.5	843.6	4.127
31.0	841.9	900.8	4.407
32.0	897.1	959.9	4.695
33.0	954.1	1021.0	4.994
34.0	1013.0	1084.0	5.301
35.0	1073.0	1148.0	5.617
36.0	1135.0	1215.0	5.943
38.0	1265.0	1354.0	6.621
40.0	1402.0	1500.0	7.337
41.3	1494.0	1599.0	7.821
42.0	1545.0	1653.0	8.089
44.0	1696.0	1815.0	8.877
45.0	1774.0	1898.0	9.285
46.0	1854.0	1983.0	9.703
47.5	1977.0	2115.0	10.35
48.0	2019.0	2160.0	10.56
50.0	2190.0	2343.0	11.46
52.0	2369.0	2535.0	12.40
54.0	2555.0	2733.0	13.37

COMMON ROPE END TERMINATIONS

Hand Spliced Eye

Pressed Thimble Eye

Pressed Solid Thimble Eye

Pressed Soft Eye

Wire Rope Clips

Spelter Socket

Split Wedge Ferrules

Flemish Eye