

## Vectrus

**Vectrus** is a single-braid rope of 100% Vectran™ LCP (Liquid Crystal Polymer) and is always treated with Yale's Maxijacket coating to increase abrasion resistance and enhance the fibers' UV resistance. LCP is more tolerant of tighter bending radii in terminations than other high-modulus fibers. Vectran LCP thrives at high loads and will sustain repeated loads more times than other high-strength, low-stretch fibers. LCP has no tendency to creep, making

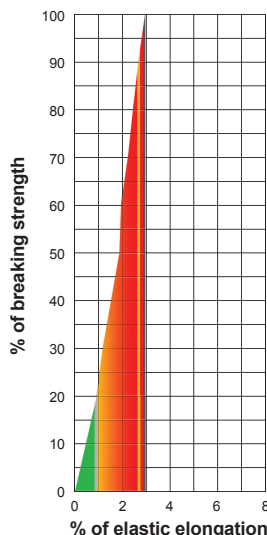
it a perfect solution for some critical applications where little or no dimensional tolerance is acceptable. In fact, Vectrus was one of the products selected to suspend the 40-ft.-diameter acrylic vessel filled with \$225 million of heavy water at the Sudbury Neutrino Observatory (sno.phy.queensu.ca) and has been in service over 10 years, without movement. The 620°F (325°C) melt point also allows this rope to be used in heat applications formerly left only to wire rope.

### Specifications

Diameter		Average Spliced Break Strength*		Minimum Spliced Break Strength*		Maximum** Working Load 5:1		Weight	
Inches	(mm)	Lbs	Kg	Lbs	Kg	Lbs	Kg	Lbs/100ft	Kg/100m
1/16	(2)	800	360	720	324	160	72	0.2	0.3
1/8	(3)	2,300	1,040	2,070	936	460	208	0.5	0.7
5/32	(4)	4,200	1,905	3,780	1,715	840	381	0.9	1.3
3/16	(5)	5,600	2,540	5,040	2,286	1,120	508	1.2	1.8
1/4	(6)	8,200	3,720	7,380	3,348	1,640	744	1.9	2.8
5/16	(8)	13,400	6,080	12,060	5,472	2,680	1,216	2.8	4.2
3/8	(10)	19,200	8,715	17,280	7,844	3,840	1,743	4.4	6.6
7/16	(11)	24,500	11,120	22,050	10,008	4,900	2,224	5.7	8.5
1/2	(13)	32,000	14,525	28,800	13,073	6,400	2,905	7.5	11.2
9/16	(14)	38,000	17,250	34,200	15,525	7,600	3,450	10.3	15.3
5/8	(16)	52,500	23,835	47,250	21,452	10,500	4,767	14.6	21.7
3/4	(19)	70,000	31,780	63,000	28,602	14,000	6,356	20.0	29.8
7/8	(22)	89,000	40,405	80,100	36,365	17,800	8,081	26.2	39.0
1	(25)	109,000	49,485	98,100	44,537	21,800	9,897	32.1	47.8
1-1/4	(32)	147,000	66,735	132,300	60,062	29,400	13,347	47.5	70.7
1-3/8	(35)	187,000	84,895	168,300	76,406	37,400	16,979	60.2	89.6
1-1/2	(38)	210,000	95,340	189,000	85,806	42,000	19,068	70.0	104.2
1-5/8	(41)	245,000	111,230	220,500	100,107	49,000	22,246	82.4	122.7

\* Knots and abrupt bends significantly reduce the strength of all ropes and lower maximum working load.

\*\* Working load is based on static or moderately dynamic lifting/pulling operations. Instantaneous changes in load, up or down, in excess of 10% of the rope's rated working load constitute hazardous shock load and would void the normal working-load recommendation. Consult Yale Cordage for guidelines for working loads and the safe use of rope.



#### Energy Absorption

The colored area under the curve represents the rope's ability to do "work" and is expressed in foot-pounds per pound of rope in tension.

- Green working 232 ft. lbs./lb.
- Red ultimate 4,446 ft. lbs./lb.

- Maximum Working Load
- Minimum Break Strength
- Average Break Strength

Specific Gravity: 1.40

**Dielectric Strength:** The maximum allowable leakage for clean, dry Vectrus is 100 micro-amperes when tested at 100kV per Yale Method 712-1701 Rev 1 "Routine Production Test". Absorbed and entrained moisture or impurities will increase rope's conductivity dramatically.

Approved Splice Technique:  
#10015109, #10018009.