

# Cat's Eye Ultrex



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**Cat's Eye Ultrex** is a specially designed product for underground mining. This rope keeps the high strength of Ultrex and adds a reflective component to allow it to be seen in the conditions unique to underground mining. The Honeywell Spectra® fiber has been demonstrated to have better abrasion resistance, and Yale's special construction techniques maximize those characteristics.

Ultrex is a 12-strand single braid of Spectra® fiber enhanced with Yale's Maxijacket High Performance coating, supplying superior abrasion resistance. Ultrex's braid angles and twist level are designed to optimize break strength and keep stretch low. Spectra® is the most forgiving high-modulus fiber, giving better sheave-cycling capabilities than other high-tech fibers. As is the case for most Yale ropes, the strengths shown in the charts are for spliced ropes.

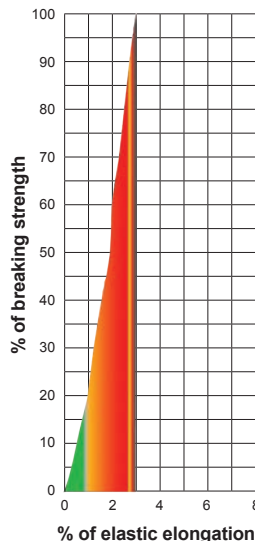
**Honeywell Spectra® Fiber**

### 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
1/2	(13)	37,400	16,975	33,660	15,278	7,480	3,395	6.2	9.2
9/16	(14)	45,000	20,430	40,500	18,387	9,000	4,086	7.5	11.2
5/8	(16)	53,000	24,060	47,700	21,654	10,600	4,812	9.0	13.4
3/4	(19)	75,000	34,050	67,500	30,645	15,000	6,810	12.2	18.2
7/8	(22)	98,000	44,490	88,200	40,041	19,600	8,898	17.6	26.2
1	(25)	120,000	54,480	108,000	49,032	24,000	10,896	21.2	31.6
1-1/8	(29)	148,000	67,190	133,200	60,471	29,600	13,438	28.7	42.7
1-1/4	(32)	172,000	78,085	154,800	70,277	34,400	15,617	36.1	53.8
1-5/16	(33)	184,000	83,535	165,600	75,182	36,800	16,707	41.8	62.2
1-1/2	(38)	230,000	104,420	207,000	93,978	46,000	20,884	57.0	84.9
1-5/8	(41)	285,000	129,390	256,500	116,451	57,000	25,878	65.0	96.8
1-3/4	(44)	330,000	149,820	297,000	134,838	66,000	29,964	78.0	116.2
2	(51)	390,000	177,060	351,000	159,354	78,000	35,412	92.0	137.0

\* 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 318 ft. lbs./lb.
- Red ultimate 8,300 ft. lbs./lb.

**Dielectric Strength:** The maximum allowable leakage for clean, dry Ultrex is 75 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.

- Maximum Working Load
  - Minimum Break Strength
  - Average Break Strength
- Specific Gravity: 0.97