

# OPTIMA™ 3

## Winch Line

OPTIMA™ is made of Ultra-High-Molecular-Weight-Polyethylene (UHMWPE) fibers and is the highest strength synthetic fiber rope available made by ROPERS.

OPTIMA™ 3 has many benefits, such as high strength, light weight, wear resistance, impact resistance, low temperature resistance and many more. It is an ideal rope for maritime and industrial markets.

With the same strength, OPTIMA™ 3 weighs only 1/8 as much as a steel wire rope. This rope already features high corrosion and aging resistance, thus no lubrication is required during use. Therefore the operation cost is greatly reduced and maintenance is easy. Our Optima 3 has been engineered to exhibit enhanced fatigue strength and a prolonged service life. We guarantee safety and reliability with this rope.



High wear resistance



Extremely high strength



UV resistance



Chemical resistance



Customizable in length and color



### Technical Information

**0.98**  
SPECIFIC GRAVITY

**1×12 / 12×12**  
CONSTRUCTION

**280°F (140°C)**  
MELTING POINT

**150°F (65°C)**  
CRITICAL TEMP

**3.2%**  
ELONGATION  
AT 30% BREAK

**0**  
WATER  
ABSORPTION

Remarks: The structure is 1×12, the color is single color, unless customers have special requirements.

Diameter	Weight	Minimum Breaking Strength	Minimum Strength ISO Unspliced Rope
inch	lbs/100ft	lbs	lbs
1×12			
3/16	0.9	5,500	6,200
1/4	1.7	8,600	9,600
5/16	2.5	13,200	14,700
3/8	3.6	18,700	20,800
7/16	4.0	21,600	24,000
1/2	5.6	31,500	35,000
9/16	7.0	38,100	42,300
5/8	10.3	51,700	57,400
3/4	13.5	68,500	76,100
7/8	18.8	96,800	107,500
1	22.8	109,800	122,000
1 1/16	26.8	130,000	144,400
1 1/8	31.5	145,200	161,300
1 1/4	35.5	165,000	183,300
1 5/16	41.6	195,800	217,600
1 1/2	50.3	222,200	246,900
12×12			
1 5/8	63.7	288,200	320,200
1 3/4	77.8	316,800	352,000
2	86.5	354,400	393,800

Diameter, weight and MBS are determined in accordance with CI1500-02. Custom size and length available by request.

