

TUFFLEX™ SINKING

Tufflex™ Sinking Ropes are crafted from a unique blend of high-strength polyester and copolymer fibers, offering a balanced combination of **durability, flexibility, and performance**. This specialized construction ensures excellent wear resistance, making the rope ideal for demanding marine and industrial applications where long service life is essential. Its sinking property adds functional value in environments where buoyant ropes are unsuitable, such as underwater applications: subsea, fishing and offshore applications.

Features & Benefits

- Sinking nature
- Excellent abrasion resistance
- Easy splicing

Applications

- Aquaculture
- Fishing industry
- Offshore and subsea operations
- Subsea rigging or anchoring
- Harbor and port use
- Dredging and marine construction
- Industrial marine applications
- Utility and general marine use

Technical Information

Specific gravity	1.2
Melting point	165°C (329°F)
Water absorption	0-1%
Elongation at break	14-20%
UV resistance	excellent
Abrasion resistance	excellent
Chemical resistance	excellent

* value based on data supplied by the fiber manufacturer for new, dry fiber

Nominal Diameter	Size (circ in.)	Approximate Weight		Minimum Tensile Strength Spliced Rope		Minimum Tensile Strength ISO Unspliced Rope	
		lbs/ 100 ft	kgs/ 100 m	lbs	MT (tonnes)	lbs	MT (tonnes)
		3-Strand					
8	15/16	3.09	4.60	2282	1.04	2535	1.2
10	1-1/8	4.10	6.10	3373	1.53	3748	1.7
12	1-1/2	6.11	9.10	4960	2.25	5512	2.5
14	1-3/4	9.21	13.70	6746	3.06	7496	3.4
16	2	11.29	16.80	8532	3.87	9480	4.3
18	2-1/4	14.31	21.30	10714	4.86	11905	5.4
20	2-1/2	17.40	25.89	13294	6.03	14771	6.7
22	2-3/4	22.04	32.80	15873	7.20	17637	8.0
24	3	25.53	38.00	18850	8.55	20944	9.5
28	3-1/2	34.81	51.80	25794	11.70	28660	13.0
32	4	46.10	68.60	32739	14.85	36376	16.5
36	4-1/2	54.98	81.82	43651	19.80	48502	22.0
40	5	67.81	100.91	63493	28.80	70548	32.0
44	5-1/2	71.78	106.82	79366	36.00	88185	40.0
48	6	86.13	128.18	93255	42.30	103617	47.0
52	6-1/2	100.18	149.09	109922	49.86	122136	55.4
56	7	115.46	171.82	127978	58.05	142198	64.5
64	8	178.07	265.00	186511	84.60	207234	94.0
72	9	225.11	335.00	225202	102.15	250224	113.5
80	10	276.73	411.82	277782	126.00	308647	140.0
		8-Strand					
24	3	25.53	38.00	18850	8.55	20944	9.5
28	3-1/2	34.82	51.82	25794	11.70	28660	13.0
32	4	46.12	68.64	32739	14.85	36376	16.5
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80	10	276.73	411.82	277782	126.00	308647	140.0
88	11	335.99	500.00	294251	133.47	326945	148.3
96	12	399.82	595.00	350204	158.85	389115	176.5
104	13	467.02	695.00	410721	186.30	456356	207.0
112	14	540.94	805.00	476198	216.00	529109	240.0
120	15	618.21	920.00	546636	247.95	607373	275.5

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Rope Specifications

Minimum Tensile Strength Minimum tensile strengths shown are for new (unused) rope and will decrease after use. All tests are performed in accordance with Cordage Institute Standard CI 1500-02. The rope strength will be reduced after use due to heat, abrasion, ultraviolet or chemical exposure. The tensile strengths may be further reduced by up to 50% as a result of knots or kinks. Minimum tensile strengths are defined as two standard deviations (typical about 10%) below the average.

Maximum Working Loads Maximum working loads are determined by dividing the tensile strength by the safety factor. The safety factor is a function of the physical properties of the rope, the age and history of the rope, the type of service it will be subjected to and the risks involved if failure occurs. For a rope manufacturer to give blanket working load recommendations would be like a car manufacturer giving the "safe driving speed" of their cars. Obviously the conditions of use far outweigh the design characteristics of the rope. Typically safety factors vary from 3:1 (for new rope used in applications with uniform loading and where failure would cause little or no risk to equipment or personnel) to 20:1 (for conditions involving moderate shock loading, possibility of snags or kinks or where failure could cause severe risk to equipment or personnel).

Rope Weights Rope weights shown are average and may vary plus or minus 5%.

Working Elongation Working elongation is shown from a preload tension of 200 times the diameter squared per the Cordage Institute Standard.

Special Requirements

Factory Splicing Various types are available for all of our ropes. Splices can be provided with various types of chafe protection or coatings.

Custom Lengths Special constructions are available on request.

Rope Terminations Cortland International can provide custom terminations such as thimbles, links, rings and custom hardware. Terminations are available in plastic, bronze, stainless steel and galvanized steel. Please call, or email your requirements to contact@cortlandinternational.com for a quotation.

Special Coatings Coatings such as polyurethane, polyethylene and vinylesters may be applied to any of the synthetic ropes to improve snag resistance, sunlight resistance or for color coding. Cortland can provide ropes with a variety of finishes to meet your needs.

Commercial and Military Specifications Certificates of compliance are supplied at no charge if requested when placing the order. Certified test reports can be provided at an additional charge when requested at the time of the order.