

## MAINLINES & PENDANTS

FOR SHIP ASSIST, TOWING,  
AND ESCORT JOBS



**When you're a tugboater, your entire operation depends on the strength and durability of your lines.** No matter if you specialize in offshore, harbor or river operations, we can engineer a rope solution to match the specific needs of each of your vessels.

Using high-performance UHMWPE fibers, including our exclusive Plasma® brand, we manufacture lines that are firm and flexible with excellent abrasion-resistance for long-term use in harsh marine environments. Our braided manufacturing process ensures a torque-free solution that mitigates twist and won't slow you down.

We offer a full range of high-performance synthetic rope and pendant combinations which are stronger, safer, lighter, and easier to handle than wire rope. These features translate into quicker make-up times, and higher productivity for your tug operation. And to simplify your work, our lines are easy to inspect and splice in the field.

With decades of experience in all aspects of the marine industry, our teams will work to understand your unique situation and solve problems with proven solutions. Our after-sale support is a 24/7 commitment, so lean on us for assistance with on-site splicing, inspections, maintenance, hardware recommendations, line installations, and training.

### Features

- Equal or greater strength vs. wire size-for-size
- Significantly lighter than wire, reducing handling weight
- High flex fatigue and abrasion resistance
- Easy to splice, inspect, and repair
- Neutrally buoyant in water
- Easier on the hands, increasing deckhand safety and comfort
- Long lengths available



# TUG AND SALVAGE LINES

## Plasma® 12x12

Nominal Diameter		Size (circ in.)	Approximate Weight		Minimum Tensile Strength Spliced Rope		Minimum Tensile Strength ISO Un-Spliced Rope	
inch	mm		lbs/100'	kg/100m	lbs	MT (tonnes)	lbs	MT (tonnes)
<b>ABS and DNV type approved sizes—up to 4" diameter (96mm)</b>								
1-5/8	40	5	66	98	291,000	132	323,300	147
1-3/4	44	5-1/2	78	117	314,000	142	348,900	158
2	48	6	91	136	355,000	161	392,450	178
2-1/8	52	6-1/2	109	162	428,000	194	475,600	216
2-1/4	56	7	122	182	481,000	218	534,400	242
2-1/2	60	7-1/2	148	220	530,000	240	588,900	267
2-5/8	64	8	167	249	596,000	270	662,200	300
2-3/4	68	8-1/2	187	278	660,000	299	733,300	333
3	72	9	214	319	780,000	354	866,700	393
3-1/8	76	9-1/2	235	350	850,000	386	944,400	428
3-1/4	80	10	261	388	940,000	426	1,045,400	474

**Size:** Diameter and circumference are nominal. A new unused rope in relaxed state will measure larger; loading and use compacts ropes, sets splices and lessens rope size. This is especially prevalent in sizes above 4" diameter.

**Weights:** Published weights of sizes 1 5/8"-4" diameter are calculated at linear density under stated preload (200d<sup>2</sup>) plus 4%.

**Tensile Strengths:** Tensile Strength determined in accordance with Cordage Institute 1500 Test Methods for Fiber Ropes and ISO 2307.

### Maximizing Performance, Safety and Efficiency

Cortland International offers a complete line of top quality, high-performance synthetic rope options and has supplied products to tugs all over the world for ship assist, towing, and escort jobs for many years. Our lightweight, technologically advanced products are all extremely flexible making them much easier and safer for the crew to lift and secure.

Durability is also an important factor of overall rope cost. With the addition of wear protection gear such as pendant and anti-chafe covers, you can significantly increase the life of your tow rope and create maximum cost efficiency with minimal maintenance. Cortland International offers a full range of rope and pendant combinations that can be customized to your needs with the help of our onboard technical service support experts.

Cortland International is a global designer, manufacturer, and supplier of technologically advanced ropes, slings, tethers, and strength members. With more than 40 years of application and design experience, we provide exceptional understanding and insight into the most difficult challenges our customers face. Our success is based on close and continued interaction with customers that continues long after the sale.