



Winch lines as strong as steel but 70% lighter

Today's miners need products and equipment that will help them do their job better, faster, and safer. Cortland manufactures a wide range of high performance synthetic fiber winch lines and bridles which are stronger, safer, lighter and easier to handle than wire cable. These features translate into less downtime and higher productivity at a mine.

Plasma® 12-Strand is the highest strength synthetic rope available. Manufactured from high performance Honeywell Spectra 900® Fiber, this unique product has been enhanced by Cortland's recrystallization process. Plasma 12-Strand braided into Cortland's 12x12 construction, creates a torque-free rope at unparalleled strength for its weight.

Plasma is equal or greater strength to wire size for size, yet is significantly lighter making handling much easier. Plasma lines offer superior flexibility and are easy to inspect; they will also not rust, corrode or fish-hook as wire rope can. Cortland's Plasma winch lines spool even, and pull off the drum easier than steel—strong, safe, and reliable every time.

Trust Cortland for proven rope performance to increase productivity, efficiency, and ultimately profitability in mining operations.

Features

- Equal or greater strength to wire
SIZE FOR SIZE
- Significantly lighter than wire, reducing handling weight
- Reduced risk of recoil if failures should occur
- Easier on the hands, increasing miner safety and comfort
- RFID capability

Benefits

- Increased productivity
- Increased efficiency
- Safer operations
- Ultimately, increased profitability



Winch Lines & Bridles

Plasma® Winch Lines

| Rope Size (diameter) | Minimum Tensile Strength (lbs.) | Working Load Limit (lbs. at 5:1 safety factor) | Weight per 100 feet (lbs.) |
|----------------------|---------------------------------|--|----------------------------|
| 1" | 110,000 | 22,000 | 23.4 |
| 1-1/8" | 147,000 | 29,400 | 31.9 |
| 1-1/4" | 165,000 | 33,000 | 36.2 |
| 1-5/16" | 196,000 | 39,200 | 41.7 |
| 1-1/2" | 221,000 | 44,200 | 51.7 |

Plasma® Bridles

| Rope Size (diameter) | Minimum Tensile Strength (lbs.) | Minimum Tensile Strength (kN) | Working Load Limit (lbs.) | Weight per 100 Feet (lbs.) |
|----------------------|---------------------------------|-------------------------------|---------------------------|----------------------------|
| 1" | 110,000 | 489.3 | 22,000 | 23.4 |
| 1-1/8" | 147,000 | 653.9 | 29,400 | 31.9 |
| 1-1/4" | 165,000 | 734.0 | 33,000 | 36.2 |
| 1-5/16" | 196,000 | 871.9 | 39,200 | 41.7 |
| 1-1/2" | 221,000 | 983.1 | 44,200 | 51.7 |

Endless Plasma® Bridles

| Rope Size (diameter) | Minimum Tensile Strength (lbs.) | Minimum Tensile Strength (kN) | Working Load Limit (lbs.) |
|----------------------|---------------------------------|-------------------------------|---------------------------|
| 1" | 176,000 | 782 | 35,200 |
| 1-1/8" | 235,200 | 1,046 | 47,000 |
| 1-1/4" | 264,000 | 1,174 | 52,800 |
| 1-5/16" | 313,600 | 1,394 | 62,700 |
| 1-1/2" | 353,600 | 1,572 | 70,700 |

Compared to Wire Rope

| Powerflex 6x36IWRC | | | | Blue Strand Wire Rope | | | |
|----------------------|------------------------------|--|----------------------------|-----------------------|------------------------------|--|----------------------------|
| Wire Size (diameter) | Nominal Breaking Load (lbs.) | Working Load Limit (lbs. at 5:1 safety factor) | Weight per 100 Feet (lbs.) | Wire Size (diameter) | Nominal Breaking Load (lbs.) | Working Load Limit (lbs. at 5:1 safety factor) | Weight per 100 Feet (lbs.) |
| 1" | 114,870 | 22,970 | 201 | 1" | 103,410 | 20,680 | 180 |
| 1-1/16" | 127,460 | 25,490 | 210 | 1-1/8" | 129,940 | 25,980 | 234 |
| 1-1/8" | 142,970 | 28,510 | 254 | 1-1/4" | 159,840 | 31,960 | 289 |
| 1-1/4" | 175,570 | 35,110 | 319 | 1-3/8" | 191,980 | 38,390 | 350 |
| | | | | 1-1/2" | 227,950 | 45,590 | 416 |