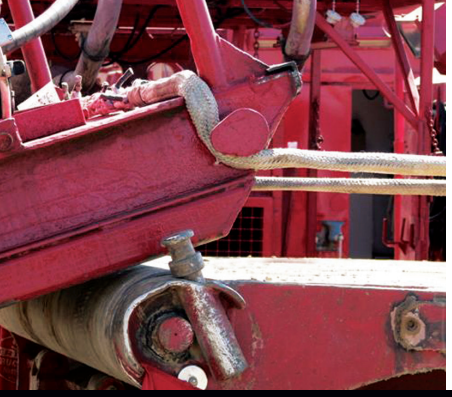

Winch lines as strong as steel

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

CORTLAND®

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

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
1-1/16"	127,460	25,490	210
1-1/8"	142,970	28,510	254
1-1/4"	175,570	35,110	319

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.)
1"	103,410	20,680	180
1-1/8"	129,940	25,980	234
1-1/4"	159,840	31,960	289
1-3/8"	191,980	38,390	350
1-1/2"	227,950	45,590	416