



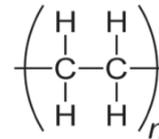
PRODUCT NAME

ROTOR LACE SUPER FIBER WIRE

FIBER'S PROPERTY

The **SUPER FIBER WIRE** it's realize using UHMWPE fiber , better know with brand name Dyneema or Spectra
 - **UHMWPE** it's an ultra high molecular weight polyethylene made with gel spinning process.

FIBER'S PROPERTY	UDM	CORE UHMWPE
Tenacity	g/d	>33
Specific gravity	gr/cm ³	0,974
Elongation at break	%	< 4
Tensile modulus	g/d	1140
Melt point	°C	147



BRAID'S CHARACTERISTIC

SUPER FIBER WIRE it's a super line study for work on rotor lace system . Thanks to special propriety of this fiber , comparing to standard inox wire the super fiber it's 3 time more sesitence to breack , 10 time lighter , 3 time more resistance to abrasion , 40% more fluency , can offer a range of 43 colors , and it's totaly without memory.

ROTOR LACE SUPER FIBER WIRE		code	DIAMETER	BREACKING LOAD	MODULO	TENACITY	FRICTION COEFFICIENT
			mm	daN	cN/dTex	cN/dTex	
CORE	UHMWPE	400.10.08.PE	0,7	70	1.140	35	0,06
		400.15.08.PE	0,9	80	1.140	35	0,06
COVER	ABSENT	400.20.08.PE	1,1	100	1.140	35	0,06
		400.25.08.PE	1,3	110	1.140	35	0,06
APPLIAZION	ROTOR LACE	400.30.08.PE	1,5	130	1.140	35	0,06

* Linear breaking load in according to DIN EN ISO 2307

COLOR'S RANGE

Colors available for all size

Colors available only for size ≥ 1,1 mm

	A	B	C	D	E	F	G
	solid color	white with colored mark	color with black mark	snake skin	black with colored mark	melange white / color	melange black / color
1	white solid color	white w/ black mark	white w/ black mark	snake white / black	black w/ white mark	melange white / black	melange black / white
2	yellow solid color	white w/ yellow mark	yellow w/ black mark	snake yellow / black	black w/ yellow mark	melange white / yellow	melange black / yellow
3	orange solid color	white w/ orange mark	orange w/ black mark	snake orange / black	black w/ orange mark	melange white / orange	melange black / orange
4	red solid color	white w/ red mark	red w/ black mark	snake red / black	black w/ red mark	melange white / red	melange black / red
5	green solid color	white w/ green mark	green w/ black mark	snake green / black	black w/ green mark	melange white / green	melange black / green
6	light blue solid color	white w/ blu mark	blu w/ black mark	snake blu / black	black w/ blu mark	melange white / blu	melange black / blu
7	black solid color						

The breaking load represents the nominal tenacity of the braid, calculated on the sum of the resistance of the fibers that compose it .

Breacking load it' s tested on a new braid, in laboratory , with controlled conditions of temperature, pressure and humidity.

Durring the use of product natuarals elements and many other factors can affect the mechanical properties; therefore we suggest a working load of 1:5 comparing to the breaking load , or , an higher ratio, in the case the product it's subjected to dynamic loads or high stress.

The product should be used properly spliced at both ends, in order to express maximum characteristics; knots or other different solutions can lead a significant loss of load .

For proper use of our items also recommend the following : periodically check the status of the rope, avoid contact with chemicals elements , clean it periodically to remove to remove salt residue or dirt and let it dry away from direct heat.

All the articles of our programm are dedicate to nautical use , recreational and sports and are not for lift use .



PHISICAL PROPERTIES



TENACITY

3 time more resistance than STANDARD INOX WIRE

UHMWPE fiber it's a new generation exotic super fiber , better know with brands name of Dyneema or Spectra , with fisichal property extremly higher than standard wire . Comparing the same size , **SUPER FIBER WIRE** can be consider 3 time more resistance than standard inox wire

exemple:

rotor lace SUPER FIBER WIRE	→	1 mm	→	100 daN
rotor lace STANDARD INOX WIRE	→	1 mm	→	35 daN

WEIGHT

10 time lighter than STANDARD INOX WIRE

The specific weight of UHMWPE fiber it's 0,97 kg/dm³ : comparing to **STANDARD INOX WIRE** , that it's 8/9 kg/dm³ it's **10 time lighter .**

The quantity of line use for this application it's limimted, about 50 cm for each shoe , and probably weight efficiency it's not so important , but for the filosofy connected to performance spots , lightness can be consider an important marketing key , and a property that need always research

ABRASION RESISTANCE

3 time more resistance than STANDARD INOX WIRE

We can consider abrasion like a localized micro break .

The abrasion resistance of fiber wire it's connected to the tenacity of all micro fibers , so in this case tenacity can be consider a good indicator of abrasion resistance .

Considering that the tenacity of UHMWPE is 3 times higher than STANDARD INOX WIRE , the abrasion resistance is decidedly superior.

FLUENCY

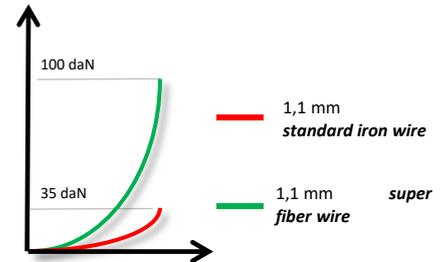
40% more fluency than STANDARD INOX WIRE

The fluency it's extremly importnt in this application. More the line it's fluency and with minimum friction , more the regulation will be perfect .

thanks to its particular molecular structure have very high fluency , 2 time more comparing **STANDARD INOX WIRE** .

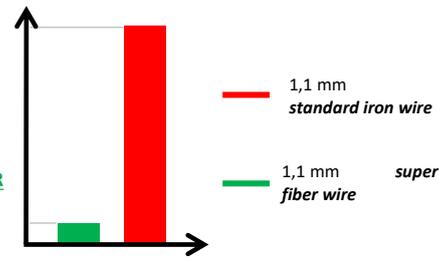
This property can be measured with a parameter named coefficient of friction . This value can measure the friction of the line around the circuit. **SUPER FIBER WIRE** has a sliding coefficient greater than 40% compared to the **STANDARD INOX WIRE**.

SUPER FIBER WIRE
3 time more resistance to break



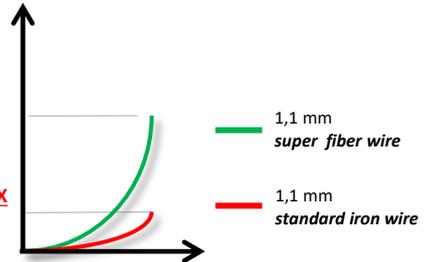
STANDARD INOX WIRE
3 time less resistance to break

STANDARD INOX WIRE
10 time more heavy



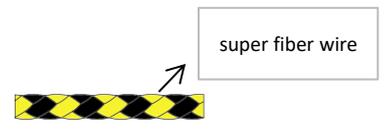
SUPER FIBER WIRE
10 time more light

SUPER FIBER WIRE
3 time more resistance to abrasions cycle

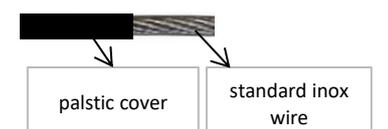


STANDARD INOX WIRE
3 time less resistance to

SUPER FIBER WIRE
40% MORE FLUENCY



STANDARD INOX WIRE
40% LESS FLUENCY





COLORS RANGE

200% more colors than STANDARD INOX WIRE

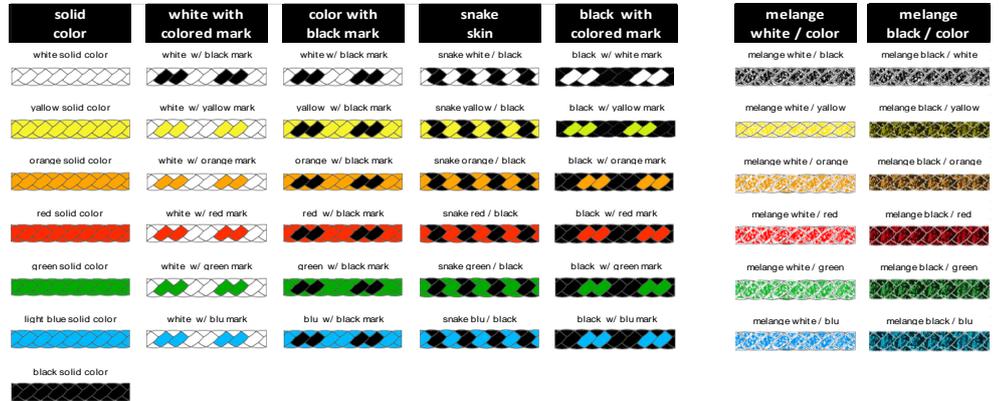
STANDARD INOX WIRE

1 COLOR



SUPER FIBER WIRE

43 COLORS



As it's possible to see from the simulation below, thanks to our wide range it is possible to create a large number of solutions allowing designers to explore solutions that were not possible before

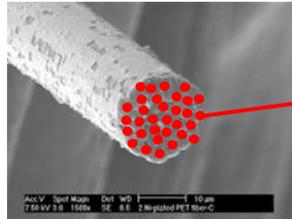


STABILITY OF THE COLOR

Paste-dyed yarn system



Thanks to special rainbow treatment , the pigment are inside fiber . This mean that the line don't dirt the shoes durring clos/open system . The color will be stable for all the life of the line , whitout lose tonality .



UHMWPE fiber at microscope

The pigment it's not attach to surface with poliurethane resin .

The pigment it's inside the fiber , put durring gel spinning process

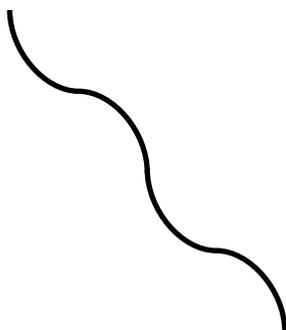
THIS MEANS NO COLOR LOSS FOR THE ENTIRE LIFE CYCLE

TOTAL ABSENCE OF MEMORY

0% memory than STANDARD INOX WIRE

Differnce from STANDARD INOX WIRE, , our SUPER FIBER WIRE it's without any memory. This is very important for this application , because the line run in a circuit full of tight curves , and memory can compromize the normal functioning .

STANDARD INOX WIRE
memory after few cycles



SUPER FIBER WIRE
memory after 1000 cycles

