Why **choose One**

The next generation of sails™

1. Exclusive technology

Since 2007 the OneSails design team have developed exclusive technologies to make one-piece continuous thread sails a reality for cruising and racing boats.

2. Performance

Features like weight, shape control and deformation resistance means better performance compared to traditional panelled sails.

3. Quality

4T FORTE™ membranes are exclusively made in Europe in our unique purpose built facilities ensuring that stringent manufacturing standards are maintained.

4. Design

The best sail shapes are the result of continuous analysis and experience. OneSails is at the forefront of the sailmaking industry, continually investing in research and development to ensure that the very best sail shapes are available. The success of this approach is confirmed by the vast array of racing trophies OneSails clients have won, competing at National, International and World Championship level.

5. Service

A core activity for every OneSails Loft is providing first class service, support and assistance. As part of our service commitment, each OneSails Loft has a team of experts on hand to ensure that we can deliver on our service pledge. In addition to a growing number of principle lofts, the OneSails Group has an extensive network of service centres strategically placed around Europe's coast line.

Exclusive features

The leading edge of sail technology.

REV.02.2022

OneSails 4T FORTE™ sails are simply the best sails available in the market in terms of quality, technology, shape holding and durability.

These sails carry as standard a number of exclusive features that significantly increase their performance, lightness and ease of use.

4T FORTE™ SAILS FEATURES

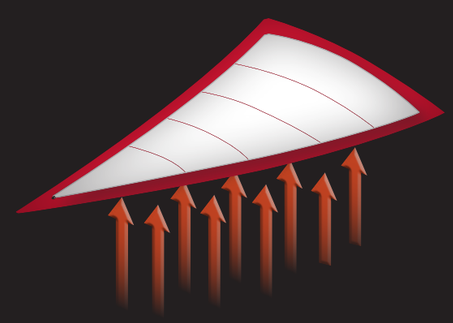
- Single piece sails without size limits
- Composite laminate made by multi micro MMS Technology (Pat. Pending) layers structure vacuum fused together in a cross linked polymerised matrix
- Continuous STR Solid Stripes™
- Soft corner finishing
- OneSD™ microchip
- Integrated reinforcements
- Luff customized to mast/boom or headstay system
- Integrated batten pockets
- RBS epoxy "E-glass" battens
- Batten pockets with easy V closure
- Integrated spreader patches
- Custom sailbag

3D Shape & Thermo Moulding Technology

(pat. pending).

The sail is shaped using a cross-cut base layer as a mould over which the composite layers are assembled. This process means that any designed sail shape can be accurately produced.

Unlike most of the membranes in the market that are built with the use of resins or glue, 4T FORTE™ membranes are made by a vacuum cured heat-activated cross polymerisation process. This ensures superior structural integrity with no extra weight added to the sail.
Furthermore the lighter specific weight of the micro layers compared to mylar film significantly decreases the overall weight by up to 25%.



"**Green** Sails"

4T FORTE™ are the first "green sails". Membranes and their assembly have been engineered for highest standards in terms of environmental impact and recyclable options. Glues, resins and solvents have been replaced by heat fusion and the base polymer is 100% recyclable in a standard waste separation process.

CSQA LIFE CYCLE ASSESSMENT ISO 14040 — CERT. n° 38249

OneSails 4T FORTE™ is the first ever "green" sailcloth, certified ISO 14040 Life Cycle Assessment.

THE NEXT GENERATION OF SAILS™

Go Filmless!

4T FORTE™ the first ever composite sail range

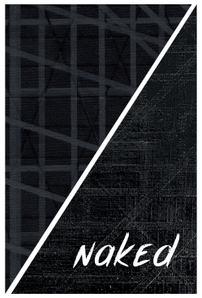
- Flexible Multi Micro Structure composite sails (pat. pending)
- Aero thermo moulded shape (pat. pending)
- 3D one piece STR Solid Stripes continuous fibre structure
- Exceptional shape holding and UV stability
- Integrated batten pockets, corner patches, and reinforcements
- Robust outer skin - no need for taffeta protection or reinforcement
- Up to 25% lighter than Mylar based sails
- 100% recyclable - glue, resin and solvent free
- 100% made in EU
- First ever sails certified to ISO 14040 CO^2 low emissions more than 50% less than any other sail

www.onesails.com

4TForte

Racing & Grand prix

FORTE	125R	225R	*Naked* 225N	REFERENCE: mylar membranes
STRUCTURAL YARNS	STR™ High Modulus	STR™ High Modulus	STR™ High Modulus	carbon
COLOUR	black	black	black	black
MAIN STRUCTURE MODULUS	210	245	245	210
UV STABILITY PROPORTION	1,6	1,9	1,7	1



Cruising & Performance Cruising

FORTE	120C	200E*	220C	REFERENCE: taffetà membranes
STRUCTURAL YARNS	STR™ High Modulus	STR™ High Modulus	STR™ High Modulus	carbon
COLOUR	light grey	light grey	dark grey	different colours
MAIN STRUCTURE MODULUS	210	190	245	210
UV STABILITY PROPORTION	1,5	1,5	1,5	1

* (200E suitable for boats up to 40')

STR yarn features

	STR Solid Stripes HM	CARBON high modulus	CARBON	DYNEEMA	TWARON high modulus	Black TECHNORA
SPECIFIC MODULUS (N/tex)	185	162	134	110	105	53
LOAD/WEIGHT RATIO	1	0,88	0,72	0,59	0,39	0,29
UV STABILITY	BEST	BEST	BEST	GOOD	POOR	POOR
TENACITY	BEST	POOR	POOR	BEST	BEST	BEST
FLEX LOSS	BEST	POOR	POOR	BEST	BEST	BEST
CREEP FREE	BEST	BEST	BEST	POOR	BEST	GOOD
MOISTURE RESISTANCE	BEST	GOOD	GOOD	BEST	POOR	POOR

No more film, no more glue!

Lightness or durability? No more compromises!

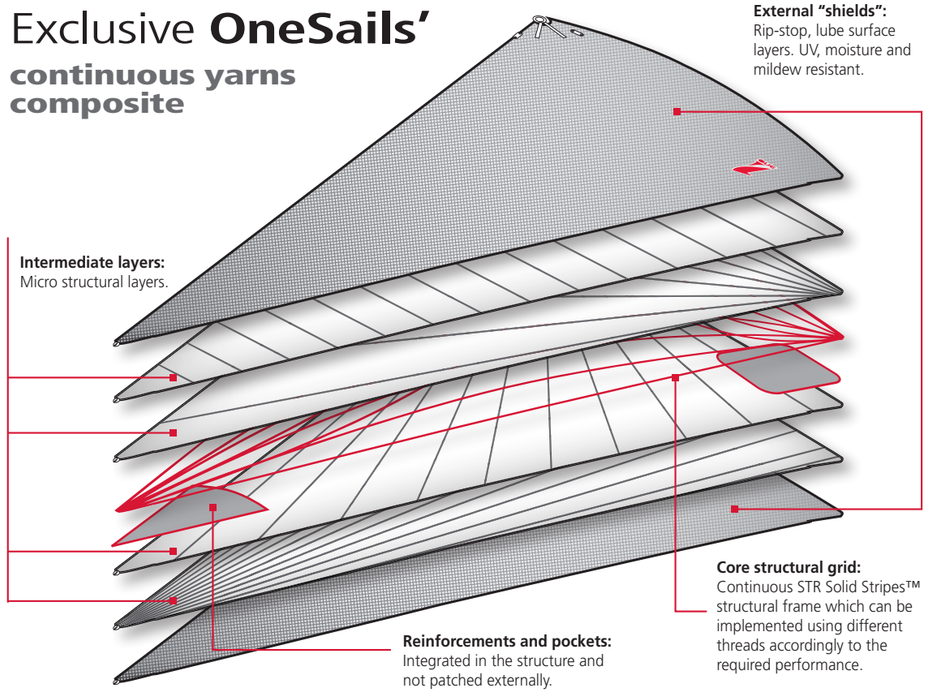
In 2007, OneSails introduced the first continuous fibre sails built without the use of resin or glue, eliminating delamination issues at a stroke. Now OneSails goes a step further, by introducing 4T FORTE™ membranes made from exclusive Multi Micro Structure (MMS™) technology (patent pending).

The 4T FORTE™ composite structure incorporates high modulus fibres such as STR™ Solid Stripes, a new low stretch component of MMS™ technology which eliminates both glue and the mylar film, so often the weak element of a laminate sail. Using a multi micro layered structure, elements of the membrane are fused together in a cross linked, polymerised matrix resulting in a stable, stretch resistant, and durable sail. By doing away with both glue and mylar film these sails are significantly lighter than conventional laminate sails.
Not only is 4T FORTE™ intrinsically lighter than alternatives, but weight saving is enhanced by the fact that a 4T FORTE™ membrane does not need to be covered with extra woven taffeta fabric to protect it from UV or improve durability.

A core structural grid, constructed from high modulus fibre takes care of the principal loads, whilst oriented micro layers provide strength in other secondary directions. The entire skin is encapsulated between ripstop "shields", which are UV, moisture, and mildew resistant. The whole skin, with its continuous fibres, is vacuum cured in a heat activated cross polymerisation process. which fuses the components together so that every single element in the structure contributes to shape holding. As a result, a 4T FORTE™ sail membrane not only exhibits superior structural integrity, but the use of more efficient components creates a sail up to 25% lighter than film based alternatives.

Exclusive **OneSails'**

continuous yarns composite



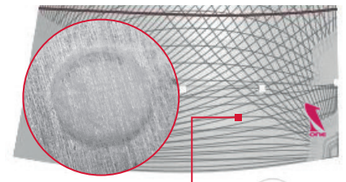
Smart Sails™

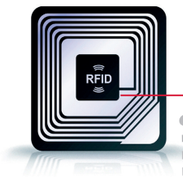
OneSD™ technology for sail data broadcast

Alongside the introduction of 4T FORTE™ sails, OneSails are the first sailmaker in the world to deliver sails with an electronic chip encapsulated in the membrane as standard.

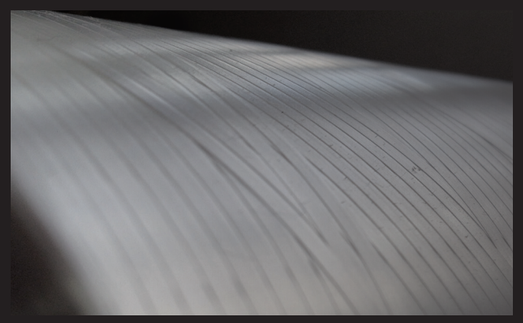
The OneSD™ microchip will carry data which will help the end user and the OneSails network identify and monitor the sail over the course of its life. Simply place a suitable smartphone next to the chip and read the recorded identifier and design data.

A PRO version of the OneSD™ chip will shortly be introduced which will allow real-time recording of the sail's activity when linked to onboard systems. There are many possibilities, from hours exposed to UV, to the number of tacks and gybes experienced - all recorded with the aim of improving sail performance and the ownership experience.





OneSD™ is developed in cooperation with IRIG by Weflex.



Replacing carbon and aramid yarns

After many years of carbon being the ultimate fibre in sailmaking, OneSails has introduced STR Solid Stripes™ with a better strength/weight ratio than carbon and a huge number of other advantages including being more robust, having higher tenacity and a full resistance to the harsh factors of the marine environment such as UV, temperature and moisture.

Composite vs mylar laminate

Composite structure stand-by shape

Composite structure working shape

Composite warp-oriented intermediate layers are able to hold the loads of the core solid stripes's frame and keep them in their original position resulting in perfect shape retention of the sail. The exclusive squared shape of STR Solid Stripes™ in MMS laminates increase the stability of the structure and results in a sail with a very smooth surface.

Mylar laminate stand-by shape

Mylar laminate working shape

The structural inconsistencies in a Mylar based sail result in distortions under load leading to reduced shape stability as the components bend and stretch.

Informations stored in the OneSD™

ACCESSIBILITY*	END USER	LOFT
Sail ID	✓	✓
Date and production loft	✓	✓
Sail code	✓	✓
Wind range	✓	✓
Official measurement	○	✓
Service and repair	○	✓
Design drawings	○	✓

*** Requires a NFC reader compatibile smartphone or device.**