High performance racing with Dyneema® SK90

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DSM Dyneema is once again pushing the boundaries of lightweight strength in performance sailing with the introduction of Dyneema® SK90, an even stronger grade of polyethylene fiber than the current grades used for running rigging. Research and development of Dyneema® SK90 was conducted and refined by rigorous testing and input from top-notch sailing teams aspiring to handle the best rope available made from technically advanced fibers. Some of the professional sailing teams which participated in the testing include the Dutch Olympic 470 team and Alinghi - winner of the 32nd America’s Cup.

“Dyneema® helps to save seconds”

João Cabeçadas, Rigger of Alinghi, defender of the 33rd America’s Cup
“The weight saving in the rope, by itself, was enough to claim 1 second... A big part of the weight saving is a consequence of introducing Dyneema® SK90. It has replaced the heavier PBO.”
João Cabeçadas, Rigger of Alinghi, defender of the 33rd America’s Cup

"The weight saving in the rope, by itself, was enough to claim 1 sec..."

While Dyneema® SK90 was designed for the highest level of performance, tested by the world’s leading manufacturers of yacht rigging and approved by top-notch sailing teams, this level of world-class performance is now also available to club racers and performance cruiser through partnerships with top rope and rigging manufacturers.

Proven in high performance racing.

In the automotive industry, new innovations such as anti-lock brakes have often emerged from Formula 1 Racing’s super-tough environments. Once a new product has successfully proven itself on the track, it moves into general production.

“Dyneema® offers peace-of-mind”

Lobke Berkhout, 4 times world champion and silver medal during 2008 Olympic Games in the 470 class

“DSM’s innovations helped us to get great results! Dyneema® SK90 offered peace-of-mind performance during the last Olympic games.”
João Cabeçadas, Rigger of Alinghi, defender of the 33rd America’s Cup

“The weight saving in the rope, by itself, was enough to claim 1 sec...”

In 2005, DSM Dyneema began taking this same approach with the development of high-performance fibers. Strategic partnerships were formed with world-class professional sailing teams to explore and push the limits of Dyneema® at the highest levels of competition.

As soon as ropes made with the prototype fiber, at that time known as “Dyneema® SKX”, were ready, sailing teams incorporated them into their training program. Both Alinghi and the Dutch Olympic 470 team felt so confident about the performance of the ropes made with this fiber that they decided to use them during the teams’ most important challenges.

Birth of Dyneema® SK90.

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“Tighter rigging leads to higher speeds”

Birth of Dyneema® SK90.
The results are well known: Alinghi managed to successfully defend the America’s Cup by just being faster than their adversary by one second and the Dutch sailors Marceline & Lobke won a medal in the Olympic 470 class.

Based on the success of “Dyneema® SKX”, this grade is now available under the name Dyneema® SK90 via a number of customers.

The new grade - even stronger and stiffer than previous Dyneema® grades - offers every sailor championship characteristics such as extreme light weight, high durability and easy of handling.

“Stronger and less stretch.”

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Ken Read, Skipper of the Puma Ocean Racing Team, 2nd in the Volvo Ocean Race 2008/2009

“In the extreme conditions of a Volvo Ocean Race small differences in material can really make a difference. The benefits of Dyneema® SK90 are obvious. For the next campaign we are convinced that many boats will be rigged with ropes based on this material.

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<table>
<thead>
<tr>
<th>Material</th>
<th>Specific Gravity (g/cm³)</th>
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<tbody>
<tr>
<td>Carbon fiber</td>
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</tr>
<tr>
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<td>~1.4</td>
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<tr>
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<td>~1.2</td>
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<td>PBO fiber</td>
<td>~0.8</td>
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<tr>
<td>Dyneema® fiber</td>
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</tbody>
</table>

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“The best rigging in extreme conditions”
Extreme performance.

Dyneema® SK90 features an even higher modulus (resistance to stretch) and strength when compared to other Dyneema® grades, while preserving existing attributes. Ropes designed with higher modulus fibers offer more direct control while sailing and less energy absorption so you experience more precise trim control.

In addition Dyneema® SK90’s lighter weight helps reduce the loads above the waterline, an overriding goal of every serious sailor.

Kévin Escoffier, Banque Populaire, holder of the North Atlantic sailing record
“We decided to not only replace an essential part of our running rigging but also our trampoline to Dyneema® SK90 for the Jules Verne record attempt. We just wanted the best available!”
For example, the Banque Populaire team decided to not only use rigging with Dyneema® SK90, during the Jules Verne record attempt but also re-fitted their trampoline with the lighter, stronger material.

For sailors who refuse to compromise, Dyneema® SK90 defines the new leading edge in high performance rigging. Even if you’re not measuring success in fractions of seconds, you and your crew will still appreciate the improved control and handling of sailings’ most advanced rigging material.

DSM Dyneema’s licensees, renowned as the world’s leading manufacturers of yacht rigging, have managed to incorporate the intrinsic benefits of Dyneema® SK90 and engineer the best possible ropes imaginable.

“Significant increase in performance”

Rene Mangold, Skipper and owner of Team Austria RC 44
“The there are a number of applications on a boat like this where the increase in strength and reduction of stretch offered by Dyneema® SK90 will make a very significant increase in performance.”

Don’t compromise.
In order to validate their engineering efforts, rope manufacturers have closely involved high profile racing teams such as:

- Alinghi, Defender of the 33rd America’s Cup
- Banque Populaire, Holder of the North Atlantic sailing record
- l’Hydroptère, Fastest sailing boat on the planet with a top speed of 55.5 knots
- ICAP Leopard 3, 2009 Rolex Fastnet and Rolex Middlesea Line Honours winner
- Ken Read, Of the Puma Ocean Racing Team, 2nd in the Volvo Ocean Race 2008/2009
- Lobke Berkhout, 4 times world champion and silver medal during 2008 Olympic Games in the 470 class
- Oman Sail’s Arabian 100 (A100) trimaran ‘Majan’
- Team Austria RC 44

Visit www.sailing.dyneema.com to explore the world of Dyneema®

“Dyneema® has made a big difference”

Mark Thomas, Mainsheet Trimmer and Rigger on ICAP Leopard 3
“We have many applications where the increase in break load or reduction in diameter will make a huge increase in performance and safety. We are running with Dyneema® SK90 on lock strops and tack lines where there is no room for failure.”

Rigorously tested.