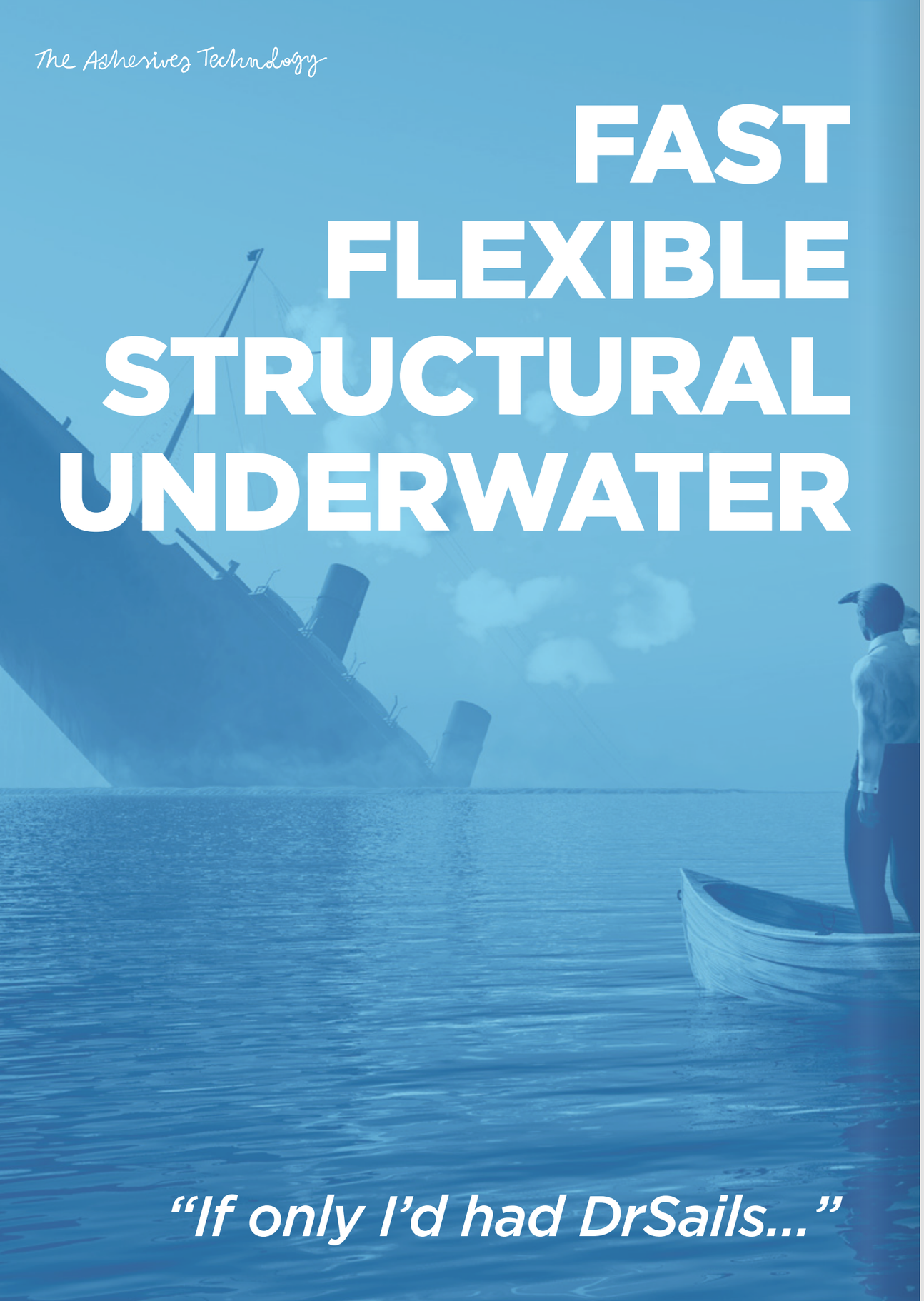

DR SAILS®
The Adhesives Technology
Log Book

The Adhesives Technology

FAST FLEXIBLE STRUCTURAL UNDERWATER



“If only I’d had DrSails...”

dr sails®

“DrSails[1] has saved my around-the-world race”

Pachi Rivero – Offshore skipper

[1] **DrSails** / dɒktə selz / N **1** Innovative two-component epoxy based adhesive ideal for fast and flexible aplications and even underwater curing. **2** A must in every sailor toolbox.

Developed @ the University

THE PROJECT

Enhance light racing sails reliability under extreme conditions. The Materials Research Group (GEMAT) of IQS University, Barcelona, and professional sailors came up with the idea of developing an adhesive capable to fix sailcloth and other spar craft under wet and underwater conditions.

THE CHALLENGE

There was no branded equivalent for this product combining fast, flexible, structural and underwater in the market. In addition, this project faced an R&D constrain since lab conditions could not match ocean conditions. Sailing Technologies R+D Group picked up the gauntlet and built up a team of chemists, sailors and entrepreneurs. The project lasted for almost three years until the team achieved the desired solution: **DrSails** - the ultimate emergency adhesive.

After three years testing...Eureka!

MAIN PROPERTIES

FAST: Cures in 22min @ water/air temperature (test temperature 25ºC).

FLEXIBLE: 4.5MPa Flexural Strength (ISO 178). Flexible as a PU, structural as an epoxy.

STRUCTURAL: It reaches over 200kg/cm2. Ideal for bonding a full range of materials: *metals*, *wood*, *composites*, *sailcloth*, *wetsuit* and *plastics*.

UNDERWATER: It bonds in the most extreme conditions including fresh, salty or even sparkling water. It can also bond under diesel or gasoline.

Be a Pro:
Hi-tech for every-one

2-COMPONENT ADHESIVE

Most advanced adhesive producers have been focusing on outperforming mechanical joints and bringing to the market light and strong solutions. 2-component adhesives have been playing a key role to reach those objectives and we are proud to make our contribution there too. While 2-component adhesives are complicate to use due to variable mixing ratios and multiple resins and accelerators alternatives, among others, **DrSails** is easy, really easy to use.

Do it yourself:
Easy to use

THE CONTAINERS

Two container models: a coaxial cartridge and two different sizes syringes. The result is three containers where the two components are dispensed in the same proportion.

DrSails can be found in various sizes: 10ml, 25ml and 265ml.

THE NOZZLES

It is very simple to set the kit; it basically consists on removing the cap and to replace it with the nozzle. Afterwards, it is just about pressing either the pusher or the trigger of the caulking gun, depending on the container model.

Note that the nozzles are for a single use application. We supply mixing nozzles for every format to make sure that you do not run out of fun.

#HelpMeDrSails: Sharing Experiences

AFTER SALES 2.0

We realized from the very first moment that we needed to be active on the social networks in order to enhance the communication between our final users and us. So we decided to introduce the twitter hash tag **#HelpMeDrSails**, the Sailing Technologies YouTube channel and the Facebook page where user opinions and our tutorials can be found.

The most interesting thing about it is that people from all around the world would call and send us emails telling us how they used **DrSails**. They would also request tutorials on how to apply **DrSails** under specific conditions. That only is already a reward!

SOCIAL MEDIA

DrSails' numbers: over 380 days around the world

TESTED AND CERTIFIED

- 3rd @ **Barcelona World Race 2010-2011** (IMOCA60)
- 2nd @ **Volvo Ocean Race 2011-2012** (VO70)
- 5th @ **Vendée Globe 2012-2013** (IMOCA60)
- 2nd @ **Transat Jacques Vabre 2013** (Class40)
- 5th @ **Minitransat 2013** (Mini6.50 Proto)

ON SALE

Over 100k nautical miles under extreme conditions

Case Study: Renault ZE mainsail

CHALLENGE

8meter tear on our mainsail at 1,875 nautical miles from the finish line due to a gybe in the middle of a storm.

There was no option to replace it nor get it fixed through outside assistance, since outside help would have disqualified us.

SOLUTION

We could only fix the mainsail with the sail care kit we had on board. We chucked the mainsail in and, over the deck, we proceed to fix it using **DrSails 265ml** and a regular cualking gun. After 20 min we were ready to sailing again!

DrSails ready-to-dispense kit, perfect balance between flexibility and structurability, fast curating time and easy application process were key factors to successfully solve this challenging situation.

RESULT

Thanks to **DrSails**, we could reach the finish line in third position without losing any position.

The mainsail supported up to 50km/h of sustained wind, its performance was not compromised and it never needed to be fixed again.

Case Study: Sterna Open85 hull

CHALLENGE

We refitted our Open85 Sterna to carry out the challenging 80ºN latitude sail plan during Artic Polar Summer. We did not realized the hull had been damaged during the reparation in the boatyard. Right after setting sails, a hull leak under waterline started pouring water into the boat at an alarming speed.

SOLUTION

Due to the thinness of the aluminium hull, it was not possible to use any welding system to fix the leak. **DrSails** structural, ready-to-use epoxy adhesive was the solution as it can cure underwater. Additionally, the **25ml** size allowed us to reach the leak and operate comfortably, reducing the time to fix this unexpected issue.

RESULT

Thanks to **DrSails**, despite the mid-bilge section being full of salty water, the aluminium-based patch perfectly plugged the leak. No more water came inside again for the rest of the journey, and the under waterline hull structure was reinforced to prevent further leaks.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