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less.” Dimitris Dimou, president of the J/70 Class Association, said: “It may even in the future, as laminate sail ply becomes cheaper and more durable.” There has been no rush to go to laminate construction, as the Dacron has served us well and continues to do so,” said Andrew Bailey of the Etchells class. “But there is a growing group looking into the material and durability for laminate options.” How much more expensive are high-tech membrane sails? Well that is a difficult question to answer because there are a great variety of cloth types and construction options with polyester, the high-tech membrane sail prices are considerably greater. “If you want to compare a very good quality woven polyester sail with the simplest laminates that use the least exotic yarns,” says North’s Tom Davis, “the laminate sail wouldn’t be that much more expensive. But it can go up from there and introduce more exotic yarn types and start to get into blends of carbon fibre and polyethylenes and Dyneemas – that starts to drive the prices up much higher.” Andrew Peters of Kemp Sails uses the example of a Sonata genoa which, he says, could be between £800 and £1,200 for a good-quality woven polyester sail, but a high-tech membrane sail (although it would be illegal on a Sonata) could be anything from £1,000 and £3,000. What of the relative longevity of woven polyester and high-tech membrane sails? Well, there are two ways of looking at this. While polyester sails will stay in one piece a lot longer than high-tech membrane sails, their performance will gradually deteriorate as they stretch and become floppy (a radial sail slightly less so than a cross cut), sometimes in a way that is easily perceptible to owners; and while a high-tech membrane sail will keep its shape throughout its serviceable life, at

some point it will literally start to fall to pieces. While the “performance durability” aspect of polyester may not suit some sailors, it can certainly benefit others. “A lot of high-budget teams are doing a lot of regattas each year and getting through a lot of sails,” said Graham Bailey of the Dragon Class. “This leads to a good end-of-season second-hand market of perfectly good sails for lower budget teams or local club sailors.” Whatever they are made of, headsails will not last as long as like-for-like mainsails, because they take much more punishment when tacking, especially overlapping headsails, which come into contact with the mast during the tacking process. Ian Gray of Lonton & Gray Sailmakers, sails Dragons on the Crouch, where frequent tacking is inevitable. He said: “The polyester mainsail can last up to three years, whereas the genoa will probably only be competitive for one year.” With this problem in mind, some different classes have taken two opposing points of view with regard

**Above**  
J/70s jibs are polyester

**Below**  
The Fireball Worlds – class rules permitted high-tech membrane sails in 2003 but some sailors found the jibs didn’t last, so now polyester sails are used

to the best material for headsails. Kerry Klingler, of Quantum Sails, won the J/80 World Championships in 2001 with a cross-cut polyester mainsail and a laminate polyester jib, which was all that was allowed by the class rules at the time. “But about five years later, the class realised that the polyester jibs were about the same cost as aramid laminated sails, which would have a much better performance,” he said. “So the class voted to change.” Mainsails are still polyester, however, because, as Royal Lymington YC Class Captain Jim White told me, changing those as well would involve high development costs. “So, we’ve got performance for jibs, and cheapness and longevity for mains,” he said. J/24s and J/105s have also adopted high-tech membrane jibs, but J/70s haven’t, supposedly for economic reasons, although Klingler thinks that is a false economy. “Amongst many top boats, the polyester jibs have to be replaced after every regatta, which is hardly cost effective,” he said. Meanwhile some dinghy classes – such as Fireballs, 505s, Merlin Rockets and Hornets – have gone the other way. After many years of experimentation, the Fireball Class Rules were changed to allow high-tech membrane sails in 2003, but the sailors soon found that the new jibs weren’t lasting. “The sail hinges where the clew corner patch ends and the body of the sail starts, and the film cracks quickly and only the threads are left,” said Dave Hall of the Fireball Class. So while the Fireball Class has kept almost universally to polyester jibs, Hall thinks that new developments in high-tech membrane sails might soon result in a jib that does work for Fireballs. “But it is going to be a brave crew that sets a different-colour jib on a start line of 50-plus boats,” he said. □



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