

BLANK EXPRESSION



Dr. Mayfield oversees the start of a solution to surfboard blanks' environmental complication.

THE ALGAE FORMULATION

Creating sustainable surfboard blanks from oceanic muck.

By Kitt Doucette

There's nothing in the commoditized surf experience that sings with imagined potential quite like the surfboard blank. Every uncut slab carries the possibility that a magic board may emerge from the foam. But just like a perfectly sculpted sandbar, headland, or reef pass, many variables must come together to create harmony, including the long-term impacts of the materials we choose. Today, over 95 percent of blanks are made using non-renewable fossil

fuels toxic to the environment and humans.

According to Stephen Mayfield, a surfer, a scientist, and the director of the California Center for Algae Biotechnology at UCSD, the dependence on polyurethane surfboards is a significant environmental conundrum. "As surfers, we're totally connected and immersed in the ocean environment," he says, "and yet our connection to that environment is through a piece of plastic made from fossil fuels.

That's just not right. And we all know it."

The problem for shapers and surfers is, despite advancements in environmentally conscious materials, there's a reason surfboards have been made using polyurethane for 60-plus years. Relatively cheap, easy to shape, strong, lightweight, and consistent in performance, PU has traditionally worked and ridden better for nearly everyone—from World Tour surfers to beginners.

Three years ago, however, Mayfield and his students became convinced there was a more environmentally conscious way. They teamed up with Arctic Foam (a San Diego-based blank manufacturer) and Solazyme (a commercial algae oil producer from Northern California) with the goal of producing a blank using algae oil instead of petroleum. The result is a far more sustainable, totally biodegradable surfboard blank that shapes and surfs identically to petroleum based polyurethane without creating all the toxic byproducts and greenhouse gases of petroleum compounds. The price? "About the same as our PU blanks," says Marty Gilchrist of Arctic Foam.

"Once you understand that petroleum is just fossilized algae," explains Mayfield, "you can recognize that with the correct chemistry, the oil made in the lab can be used in any product made from petroleum. This includes surfboards."

Because the refined algae oil is clear, the blanks are a brilliant white. Gilchrist also quickly points out that even excess algae foam gets put to use. One such product utilizes algae foam to clean up oil spills and toxic leaks. Recently approved by the EPA, the algae sorbent repels water but absorbs toxins with no seepage.

Rumor has it Channel Islands, ...Lost, and others will be using algae foam in some of their boards. "If I can use algae foam that's renewable, recyclable, less damaging to the environment, not made with fossil fuels, and that performs at the same level for close to the cost as the foam I'm using now," says John Pyzel, "I'll make 100 percent of my boards that way in the future." ●