

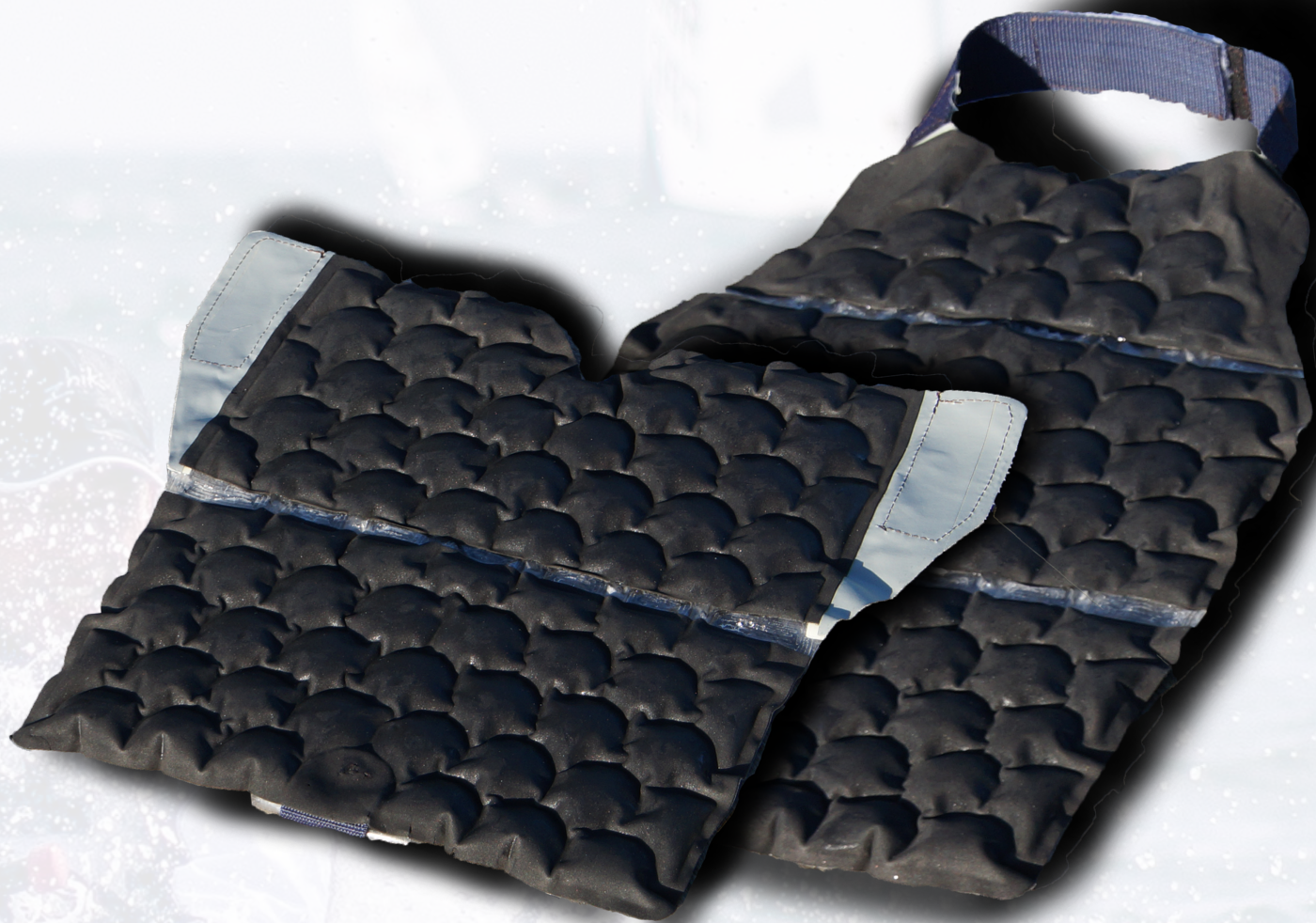


A Cooling Vest for Olympic Sailors

Extremely hot and humid weather conditions are expected during the 2020 Olympics in Tokyo. This will effect exercise performance. Sailors are prone to the heat. They are not sheltered from the sun, and they are obliged to wear a thick insulating flotation aid. A cooling solution in the form of a vest can help sailors to achieve better results in a hot and humid environment.

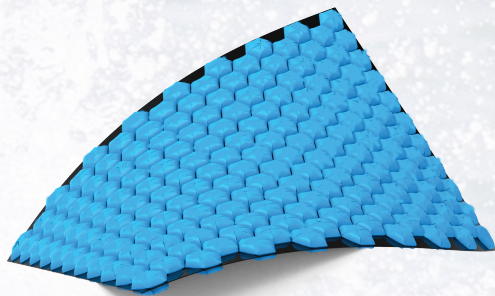
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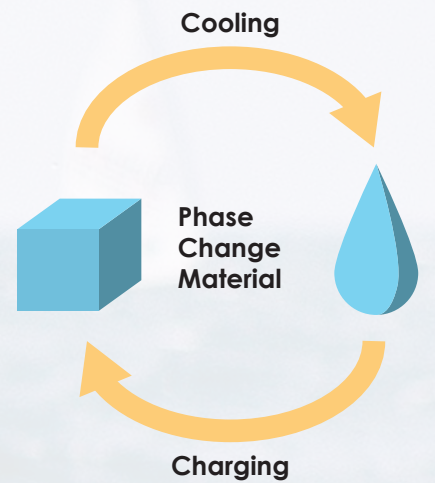
95 Watt for 45 minutes

This is the estimated cooling power the vest can provide. This estimation was made by evaluating multiple PCMs during lab and exercise tests.



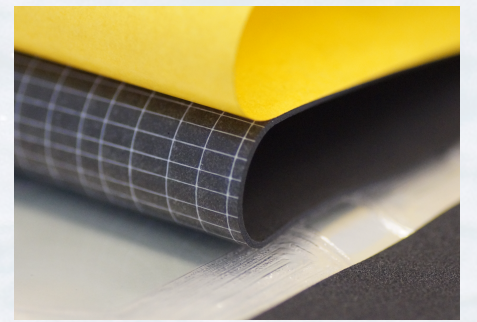
Hexagon lattice

A hexagon lattice made from TPU foil contains the PCM. It offers flexibility while the vest is frozen.



Cooling by PCM

When phase change material changes phase from solid to liquid it absorbs a lot of energy. The most common example of a PCM is water.



Neoprene layer

Ice is too cold when applied directly on skin. A thin Neoprene layer attenuates the cooling power.

Easy to put on: 1 Coach pulls vest under flotation aid

2 Sailor shoves in front part

3 Handle is re-attached to fixate the vest

