

SURVIVAL

NOT MERE COMPLIANCE



THE MOST ADVANCED COLD-WATER SURVIVAL SUIT AVAILABLE

The New Arctic 10+ Immersion Suit is all about survival, not simply compliance. It far exceeds all regulatory requirements for an Immersion Suit, even in Polar Regions, and demonstrates to those entrusted to your care that you have their safety firmly at heart.

Excellent buoyancy allows users to float on the water (not in it) and a built-in "Splash Tent" protects them from the wind and waves. The Arctic 10+ Immersion Suit can be a personal life raft in the water, and a personal habitat on land, protecting users against the elements for a minimum of 5 days as mandated by the Polar Code. It is suitable for any vessel operating in extreme conditions or in cold water.

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An informative Q&A with the CEO of White Glacier

What is your background and how did you develop the Arctic 10+?

Since 1988 our core team at White Glacier has been US military contractors. We are highly experienced in mass production of highly complex, labour-intensive items under strict government specifications. Our 30+ years of manufacturing for the US government has included critical life support items such as chemical protective suits, fragmentation vests, and uniforms and others. As a result of our experience we have, on occasion, recommend amendments to the specification in order to improve the design and performance of specified items.

What makes the Arctic 10+ design so innovative and better than standard Immersion suits?

The Arctic 10+ is our latest design. The thermal insulation layer is extremely efficient with a very high CLO factor, as well as excellent buoyancy. CLO is the measurement for thermal insulation of garments. A CLO factor of zero is the equivalent to a naked body, a CLO factor of 1.0 is equivalent to a three piece suit, and a CLO factor of 4.0 is equivalent to an Eskimo Ensemble. Our Arctic 10+ has a CLO factor of 4.87. When combined with the excellent buoyancy, this allows the user to float above the water (not in it), in a very warm suit.

temperature falls and be fully protected from hypothermia.

What about deploying the suit in an emergency?

During an emergency someone can don an Arctic 10+ suit in as little as 1 minute. Our Arctic 10+ also offers greater fire protection, so users can go farther through flames to get to safety. It is also impact tested in case users need to jump from heights greater than the required regulation of 4.5m, allowing users to jump to the water from a higher deck to get to safety. The suits come standard with rescue harnesses, buddy lines, lights, reflective tape and special Vibram Soles that do not freeze in the cold or melt in high heat.

The Arctic 10+ is extremely comfortable for the user too. Comments from many of the test subjects were that "it feels like being on a water-bed inside of a sleeping bag". This is also important for survivability because if the user is panicking, uncomfortable, and cold, their survivability will be challenged.

Is the Arctic 10+ and Immersion suit or a Polar Survival suit?

The short answer is: it is both. The Arctic 10+ is certified with US Coast Guard, Transport Canada, and MED as a regulation immersion suit. It is the most advanced cold-water suit available today for cold-water regions such as Canada, Alaska, both coasts of the USA, northern Europe, South America, the Southern Ocean and Antarctica.

Currently, the Polar Code requires all passengers and crew to have "adequate thermal protection" for a minimum of five days, which is the expected rescue time in the Polar region. A regular immersion suit, one that is adequate for other cold water environments where rescue times are less than six hours, is not adequate for the polar regions. To be protected from hypothermia in these environments, one needs a thermal protective suit which has a high CLO factor; a suit that is specially designed for continued use on an ice flow or land. Our suit was proven by Ponant at the North Pole and in Greenland.

Is the Arctic 10+ available in other sizes besides the adult universal?

Yes, The Arctic 10+ is available in Jumbo, Adult Small, Children, and Infant sizes.

Where are these suits manufactured?

These suits are manufactured in the United States.



The Arctic 10+ splash tent

In early 2019 we were called on by Ponant to submit our Arctic 25 Immersion suit for consideration with a view to carrying it on their new-build, luxury ice-breaker *Le Commandant Charcot*. They were impressed by the suit's thermal protection capability and buoyancy but requested that we reduce the volume and the weight. We modified the suit accordingly, made it more "clothing-like", they loved it, asking us not to change a thing, and purchased this new design called the Arctic 10+ Immersion suit.

"it feels like being on a water-bed inside of a sleeping bag"

To comply with their delivery requirements, it was necessary for us to begin production on the suits at the same time as we began the certification process with UL for the US Coast Guard, Transport Canada, and MED. This was complicated because it coincided with the pandemic, delaying the testing and production processes. However, we were able to complete production and the certification process just in time for the launch of the vessel.

The 'batwing' configuration of the suit allows users to remove their hands from within the suit in order to open up the front zipper from within and enables them to use their bare hands for eating, drinking, and first aid. This is only possible because of the configuration of the suit - with excellent buoyancy and exceptional thermal insulation.

What is the clear cover we see over the head and face?

We have built in a deployable **SPLASH TENT**, a clear plastic film that comes out from behind the head to the abdomen and protects users from wind, waves, and rain. This provides the user with a personal habitat, as well as allowing the user to comfortably sleep recovering their strength for additional survivability.

The Splash Tent can also be used to control the temperature inside of the suit. In a regular, neoprene Immersion suit, in temperate waters or in the midday sun, the only way to cool off is to flush the suit with water. However, when the sun goes down, or it gets colder, the user is wet and runs the risk of hypothermia. In our Arctic 10+ suit, they can open up the suit and refresh themselves in a controlled manner then seal up the suit when the