Aerogel Jackets and Insoles Keep Climbers Warm in Severe Weather Conditions on Mont Blanc

“We are both extremely surprised by the sensation of comfort at these severe external conditions. Without any doubt, this technology is a step change for apparel and equipment.”

Pierre Mielcarek and Philippe Remeniéras, who summited Mount Blanc on August 10, 2006

Summary

- Mont Blanc (4,808 m / 15,774 ft), located in the Alps, is the highest peak in Western Europe.
- In August 2006, Pierre Mielcarek and Philippe Remeniéras summited Mont Blanc wearing jackets and DeCLERMONT insoles made with Aspen Aerogels insulation.
- During the climb, they experienced -20°C (4°F) temperatures with a wind chill of -35°C (-31°F). At the summit, wind blew 70 to 80 km/h (43 to 50 mph).
- Both climbers reported surprise at their comfort even at the summit. The difficult conditions caused many other climbers to abort their attempts.
- This climb proved in real extreme conditions the effectiveness of aerogel insulation in jackets and insoles.

Benefits of Aerogel in Outdoor Apparel

- High insulating performance.
- Minimum weight and thickness - so less material required.
- Thin profile to enable more fashion and design options.
- Durability in normal wash dry cycle.
- Maintains performance under load, no loft required.
- Strong and flexible for demanding outdoor conditions.

Fabrication Partner

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Product Used

Pyrogel® 2250
Pierre Mielcarek and Philippe Remeniéras took the Three-Mont-Blanc route on this climb, which follows Mont Blanc du Tacul (4,248 m / 13,937 ft), Mont Maudit (4,455 m / 14,616 ft), and Mont Blanc (4,808 m / 15,774 ft).

One objective was to test Pyrogel 2250 aerogel insulation incorporated into jackets and insoles by DeCLERMONT.

“Our Aspen Aerogels jackets were too warm during the first hours as we climbed the Mont Blanc du Tacul. Their insulation performance was so high that we could not stand it during our effort at this time of the day. As soon as we started to wear the jackets, the heat and comfort sensation was immediate and allowed us to save our energy.”

“We arrive at the top of the Mont Blanc. The wind is extremely violent coming from the north, and the cold intensifies to -20°C (4°F) to -25°C (-13°F) with wind at 70 to 80 km/h (43 to 50 mph).

The protection given by our aerogel jackets is surprising: no cold sensation at this level in comparison with our Gore-Tex and extreme cold underwear. We are both extremely surprised by the sensation of comfort at these severe external conditions.

Philippe, wearing aerogel insoles, feels no cold sensation at his feet. Pierre's toes feel cold without aerogel insoles.

We cannot stay more than a few minutes considering the weather conditions. But we are alone at the top!”