

FAQ – Extraordinary Jacket with HeiQ XReflex

1. What is HeiQ XReflex?

HeiQ XReflex is an innovative radiant barrier technology that reflects heat back to the body maintaining the same level of warmth with less insulation material. This revolutionary technology has been jointly developed by Xefco and HeiQ.

2. Who is Xefco?

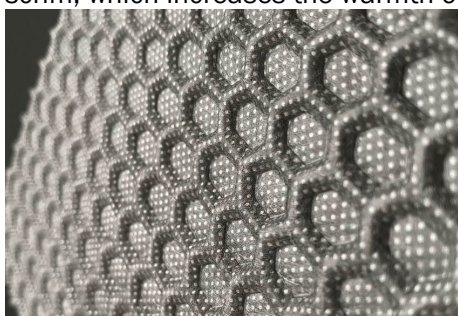
Xefco™ was born as a spin-off in 2018 from the performance fabric division of sailing brand Zhik™. Partnering with leading Australian research institutes, Xefco develops and implements advanced manufacturing technologies that provide proven functional benefits to enhance performance, comfort and protection while reducing impact on the environment.

3. How does HeiQ XReflex work?

HeiQ XReflex is an ultra-thin heat reflective surface added to one side of the fabric or to a thin nonwoven scrim by high-tech air vapor deposition. HeiQ have partnered with Nespresso to use aluminium, used in capsules, to reflect your bodies far infra red rays.

4. How is the HeiQ XReflex technology applied to the Extraordinary Jacket?

The jackets are assembled with a thin and light, HeiQ XReflex 3D embossed non-woven scrim, which increases the warmth of the jacket.



(HeiQ XReflex 3D embossed non-woven scrim)

5. How much recycled aluminum has been used to produce these jackets?

Less than 0.14 g/m² of aluminum has been used on these jackets.

6. Is HeiQ XReflex a patented technology?

Yes.

7. Where can HeiQ XReflex generally be used?

This technology is the perfect solution for fashion and outdoor jackets, pants, skirts, gloves, sleeping bags, duvets and blankets.

8. How can the heat retention performance of HeiQ XReflex be measured?

This technology can be tested by measuring the Thermal resistance (with a “Sweating Guarded Hot Plate”) according to the ISO according to the ISO 11092 testing standard.

9. Is it usual to use metals in synthetic textiles?

- Yes, metals are commonly found in textiles.
- Conventional synthetic yarns such as polyester typically contain:
 - o Titanium: in form of titania particles for optical dulling. Typically 2 – 8 g/kg fabric¹
 - o Antimony: catalyst used in the production of polyester. Typically 0.2 – 0.3 g/kg fabric²
- Aluminum
 - o Aluminum is widely used in everyday applications such as food and beverages
 - o HeiQ XReflex fabric contains approx. 2g aluminum per kg of fabric and is therefore in the same range as Titanium concentrations in typical polyester yarns
 - o A puffer jacket incorporating HeiQ XReflex uses less than 1 gram of aluminum.

10. Is the aluminum layer durable for laundry?

Yes, more than 20 laundry cycles using liquid detergent.

11. Does HeiQ XReflex impact breathability?

No. The HeiQ XReflex radiant barrier film is applied only to the exposed surface of yarns. The aluminum film does not cover the gaps between yarns and filaments. Air permeability and breathability of the fabric are perfectly maintained or improved.

12. Does the aluminum crack or weaken or break down in the flex points of a garment?

No. The aluminum film is robust to tensile stretching, bending and flexing of the fabric. The film coats individual yarns and is extremely thin giving it a high flexibility. The aluminum film easily withstands the stresses created by stretching, bending and flexing the fabric at joints and elbows.

Footnotes:

1. Windler, L., et al. "Release of titanium dioxide from textiles during washing." Environmental science & technology 46.15 (2012): 8181-8188)
2. Wu, Xue. "Estimation of Average Chemical Content in Textile Products-The case of polyester and polyamide." (2012)