



**If you're running
into a fire,
you better be sure.**

A firefighter's last line of defense is their protective clothing. So, when it comes to turnout gear or wildland apparel, performance is non-negotiable. No ifs, no buts, no maybes.

Protecting the protectors

The right clothing and equipment save lives. And they prevent injuries. That's why, when it comes to developing fire protection solutions, we will never compromise. For more than 30 years, we've been leading the way with our high-performance

materials and technology – helping to deliver protective apparel with essential qualities that can mean the difference between life and death. But it's not just about keeping the fire out. To truly protect and enable the wearer, fire protection clothing must allow the wearer to move, react, work, and perform to their maximum. It requires lightness, it requires comfort and it requires breathability. Drawing on our deep technical expertise, in collaboration with our partners and end-users, Teijin Aramid has developed an innovative solution: a high-performance, lightweight functional lining for turnout gear and wildland apparel. With our innovative Tecwave lining, we are helping firefighters around the world to survive, and perform, in some of the most challenging environments imaginable – from city streets to forests and hillsides.



Key benefits of Tecwave thermal insulation layer:



Excellent breathability



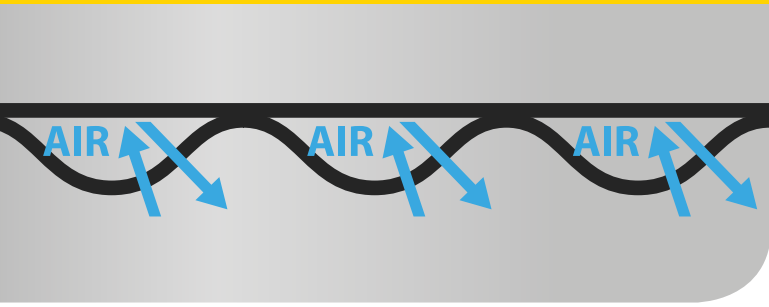
3D structure, decreasing thermal bridge and increasing bulkiness



Optimum weight-protection ratio

Teijinconex[®]

The new **TECWAVE lining** is based on an innovative technology which enables very good insulation through an air gap system.



Protection and comfort. Without compromise

The inner lining of the garment is not always the first element people think about when considering fire protection clothing. But it's one of the most important. As the layer closest to the body, it's literally the last line of defense; the final barrier between skin and flame. This base layer plays a crucial role – preventing heat from reaching the body and reducing the risk of burning and heat stress. Meanwhile, it must allow the wearer the mobility, speed and comfort they need to save lives. Finally, the layer must be durable – delivering excellent protection and performance throughout the lifespan of the garment.

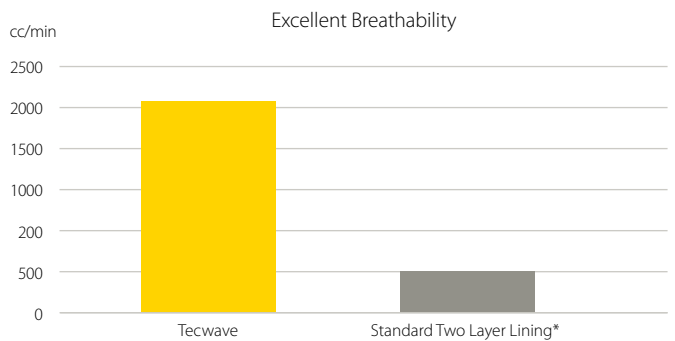
“It must allow the wearer the mobility, speed and comfort they need to save lives.”

Delivering heat protection – layer by layer

A key feature of Tecwave is its unique 3D structure. Fire protection clothing comprises several layers, and the air gap between each of these layers creates a thermal insulation effect that prevents ambient heat from reaching the skin. One of the main causes of burn injuries is layers being compressed, and the air gap disappearing. When this phenomenon – known as thermal bridge – occurs, heat from the surroundings is able to transfer quickly to the firefighter's skin, causing burning. Tecwave lining minimizes heat transfer via an innovative, lightweight layer and bulkiness. The layer's unique 3D weaving structure traps air between its ridges, retaining the essential insulation and preventing thermal bridge. Every time.

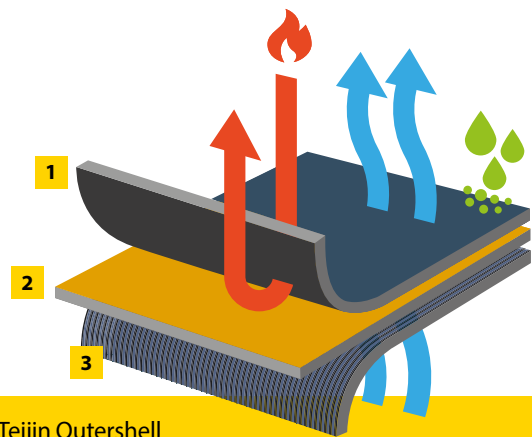
Breathable, light, flexible

Preventing heat entry is one just of the requirements of turnout gear or wildland apparel. When the heat is on, protective clothing must provide 'room to breathe', while also maximizing comfort for the wearer. Tecwave's unique air gap system lets the skin breath by allowing moisture on the skin to evaporate. Tecwave's unique 3D structure have high breathability and 50% less contact with the skin which increase comfort during use. What's more, due to the high-performance characteristics of our solution, clothing applications developed with Tecwave have just three layers rather than four as standard – reducing weight.



* Standard lining quilted with nonwoven thermal barrier 230gsm

What it adds up to is an optimum weight-to-protection ratio – one that meets Level 2 EN469 performance standards. Moreover, it means maximum agility and mobility for the wearer, giving them the assuredness and composure needed to perform when it matters most. In any environment.



- 1 Teijin Outershell
- 2 Moisture and Thermal barrier with Twaron
- 3 Teijin Tecwave

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