

# ULTIMATE PROTECTION TO MANAGE MOISTURE AND HEAT STRESS



**GORE® PARALLON® System is a revolutionary solution that extends the boundaries of firefighter protection to new levels, removing the compromise between comfort and protection.**

GORE® PARALLON® System is breathable and waterproof, delivering effective thermal protection in firefighter Personal Protective Equipment (PPE). It reduces the risk of burn injuries and heat stress in wet and dry conditions, creating consistent protection with high levels of comfort and freedom of movement.

Although lighter than similar traditional assemblies, GORE® PARALLON® System achieves greater thermal protection.

Available in two variants which are both EN 469 compliant, GORE® PARALLON® System offers the flexibility of choice to meet the needs of varying operational profiles.

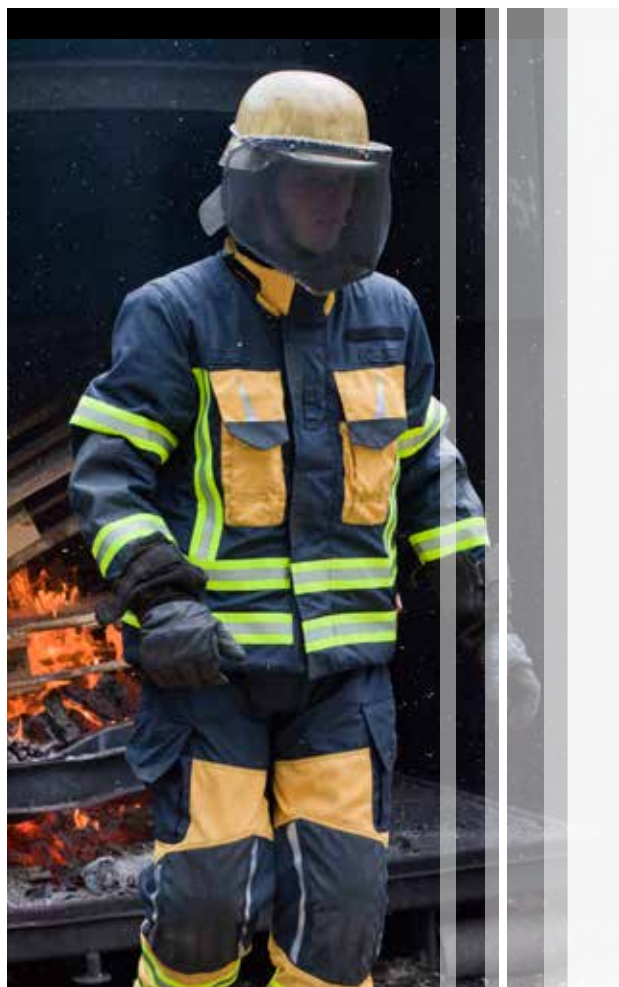
**GORE® PARALLON® System 600** is designed to deliver the highest thermal protection combined with the highest breathability. This results in consistently high levels of thermal protection in wet and dry conditions that exceed the EN 469 standard.

**GORE® PARALLON® System 500** is lighter and improves wearer comfort but does not compromise protection. It is designed for structural firefighting in warmer, more humid climates and for firefighters who undertake technical rescue work wearing structural garments.

Today's PPE provides excellent thermal protection from heat and flame, however firefighters have historically still been at risk from steam burns that can occur in sub flashover conditions wearing wet gear. It is the type of injury that is caused by a build up of thermal energy and moisture inside the layers of a garment. This can result in a burn in sub flash over conditions and also by compression from crouching or kneeling, or from a breathing apparatus harness and other belts and straps.

The GORE® PARALLON® System has been developed to specifically combat the risks associated with moisture and heat stress by introducing a solution that incorporates a highly breathable Gore thermal barrier combined with GORE-TEX moisture barrier with GORE® CROSSTECH® product technology.

This is a unique use of two membranes encapsulating a layer of thermal protection that maintains breathability while wicking moisture away from the skin and out through the suit, simultaneously preventing liquid penetration from the outside.

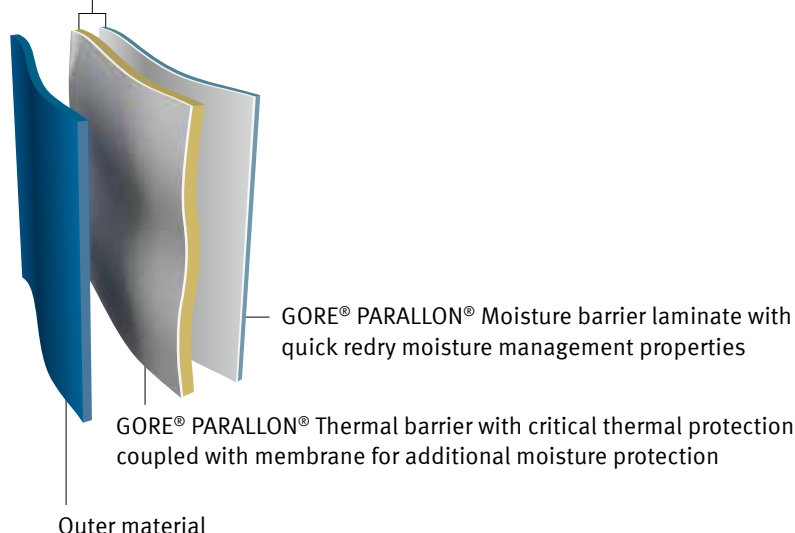


## **GORE-TEX Moisture Barrier with GORE® CROSSTECH® Product Technology GORE® PARALLON® System**

The GORE® PARALLON® System breaks the normally accepted trade-off between protection and comfort by:

- delivering enhanced thermal protection with moisture management
- maintaining thermal protection in wet conditions
- reducing heat stress while optimising thermal protection in hazardous heat exposure conditions

**thus creating a new benchmark for structural fire fighting garments**



Internal moisture is efficiently moved through the layers, keeping the thermal protective fabric dry and reducing the risk of steam or wet compression burns. Breathability is high, reducing the risk of heat stress and keeping the wearer cooler for longer.

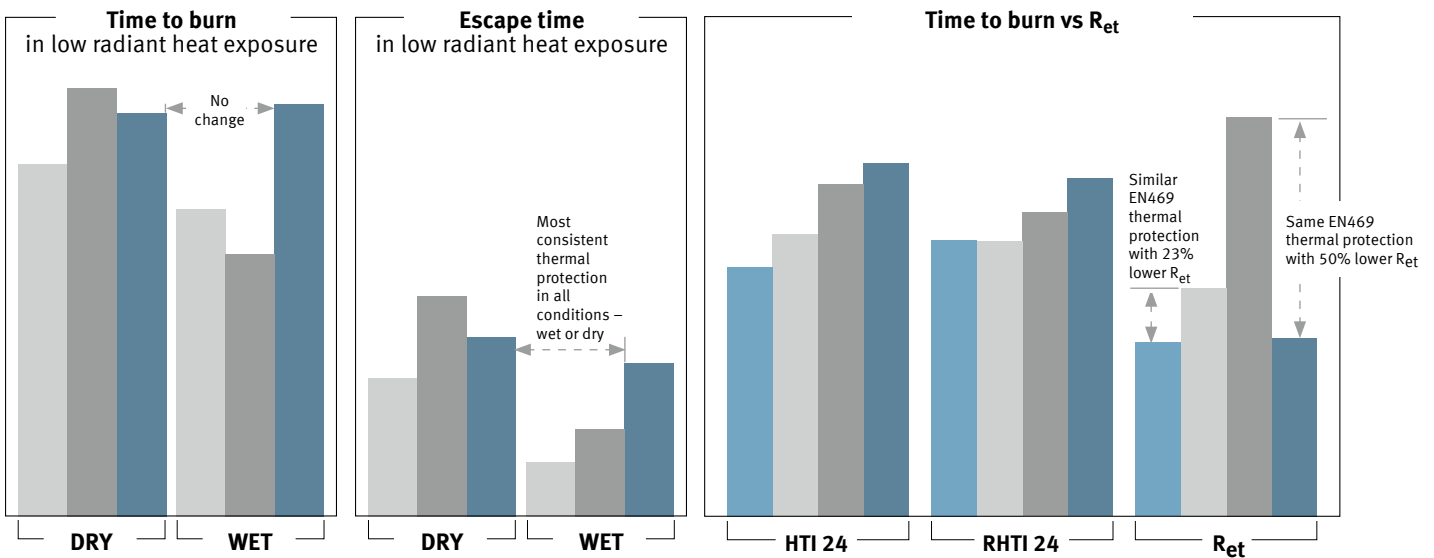
The GORE® PARALLON® System delivers extremely high protection from radiant and convective heat, with significantly increased breathability.

Wet fabric transmits heat 23 times faster than dry, so when a fire suit becomes wet inside, whether from water or heavy sweating, protection levels normally drop. This decreases time to burn and reduces time for escape. In tests undertaken in wet conditions, the GORE® PARALLON® System consistently maintained thermal protection, allowing more time to escape and reducing the risk of burns.

**Firefighters wearing the GORE® PARALLON® System enjoy peace of mind that comes with:**

- Consistently high protection in all conditions – wet or dry
- Protection from radiant heat burns in wet conditions
- High levels of comfort, breathability and freedom of movement
- Reduced risk of heat stress compared to solutions with the same level of protection.
- Weight of garment does not increase significantly in wet conditions (low water pick up)

**Tests show GORE® PARALLON® System delivers extremely high levels of protection from radiant heat with significantly increased breathability compared to other fabrics.**



- GORE® PARALLON® System 500
- GORE-TEX Heat & Flame Garments with GORE® AIRLOCK® Spacer Technology, membrane oriented towards skin
- GORE-TEX Heat & Flame Garments Fireblocker Laminate, membrane oriented towards outer shell
- GORE® PARALLON® System 600

Typical assembly performances using GORE® products  
Source: W. L. Gore & Associates Lab – unwashed samples



The GORE® PARALLON® System has been extensively tested in wearer trials with impressive results.

Michael Wittmeier Professional Trainer at FEUREX, Fireman at the Fire Brigade Neuburg a. d. Donau said:

*“The first thing I noticed was the comfort. It was comfortable to wear and easy to move in. Even when it got really hot you only felt the heat very gradually.*

*As soon as you got away from the heat it felt cooler.*

*The cooling effect was immediate. That’s a great feature.”*

**The GORE® PARALLON® System revolutionises firefighter protection, achieving more consistent levels of protection and comfort in wet and dry conditions while reducing heat stress and the risk of burns.**

For more information about the GORE® PARALLON® System contact **W. L. Gore & Associates**  
[gore-workwear.com](http://gore-workwear.com)

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