

# STEDAIR®

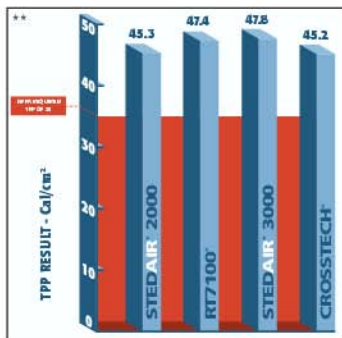
MOISTURE BARRIERS

## TECHNICAL BULLETIN

### THE FACTS You Need To Know About TPP and THL To SET THE RECORD STRAIGHT!

What is **THERMAL PROTECTIVE PERFORMANCE (TPP)** and what does it mean to you?

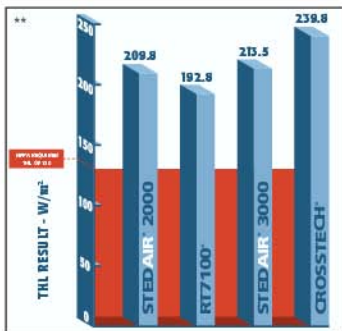
Thermal Protective Performance (TPP) is a test that indicates the amount of protection a material or material system provides against both convective and radiant heat. To determine actual time to burn, the TPP score is divided in half and the resulting number is the time, in seconds, that human tissue reaches second degree burn in a flash over situation. The NFPA 1971 (2000 edition) standard requires a TPP of 35, which is the equivalent of 17.5 seconds to second degree burn.



\*\* Result data was generated by Underwriters Laboratories based on an average of 45 widely used composites January 2004.

What is **TOTAL HEAT LOSS (THL)** and what does it mean to you?

Total Heat Loss (THL) measures the heat stress reduction capability — or breathability — of firefighter turnout gear. The more heat that gets trapped inside a firefighter's turnout gear, the more likely an individual will experience dangerously elevated skin and core temperatures, as well as an increased heart rate. Material systems that provide a higher THL number will benefit the firefighter in the form of more breathable turnout gear. The NFPA 1971 (2000 edition) standard requires a THL of 130.



#### FAST FACT

Since 1930, Stedfast has been serving the material-to-specification needs of the military, medical, industrial, marine and protective clothing fields. From extreme environmental conditions faced by the military, to the reliability and durability required by firefighters, Stedfast's specially formulated barrier fabrics — Stedair® — guarantee high tech protection.

## NFPA STANDARDS

### Going Above And Beyond

Requirements of the NFPA 1971 (2000 edition) determine minimum safety standards for protective clothing for structural firefighting. These standards are a great starting point when choosing the best gear for individual needs. However, from an overall performance and durability perspective, it's important to take notice of the numbers and the manufacturers that are committed to exceeding the minimum requirements.

The NFPA 1971 standard requires a minimum THL rating of 130 and TPP rating of 35.

- **STEDAIR 2000** averaged a THL rating of 209.8 and a TPP rating of 45.3.
- **STEDAIR 3000** averaged a THL rating of 213.5 and a TPP rating of 47.8.

## TPP/THL - BEST VALUE

### Finding the balance between performance and cost effective pricing



Finding the balance between **TPP**, **THL** and **PRICE** is a difficult challenge for the firefighting industry. The Research and Development team at Stedfast, Inc. is committed to working with its customers to develop the best products possible at an **AFFORDABLE PRICE**. Stedair Moisture Barriers are a testament to this commitment as they are extremely durable, have exceptional TPP and THL performance ratings and are offered at an affordable price.

#### FAST FACT

*Critical in the lamination process, a Class 100,000 IBM certified "clean room" ensures that every Stedair® Moisture Barrier is assembled in an environment where all variables are controlled, from design to final inspection.*