



# Best Overall Protection and Value with Exceptional THL and TPP

Engineered for Safety, Performance and Durability.  
Stedair® 4000 delivers combined THL & TPP results that  
outperform all other barriers in the industry.

**Woven aramid substrate laminated to  
a breathable ePTFE membrane.**

**GREAT BALANCE of high TPP & THL  
numbers in many popular composites.**

- Exceptional Breathability
- Unmatched Durability and Abrasion
- ePTFE Bi-Component Technology
- 5 Year Full Warranty

**A PRODUCT SO GOOD  
WE STAND BEHIND IT**



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**StedAIR®**  
MOISTURE BARRIERS  
BY STEDFAST



# Transforming Science Into Protection

## What is Thermal Protective Performance 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 (2018 edition) standard requires a TPP of 35 Cal/cm<sup>2</sup>, which is the equivalent of 17.5 seconds to second degree burn.

## What is Total Heat Loss 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 (2018 edition) standard requires a THL of 205 W/m<sup>2</sup>.



THL is the ONLY measure that allows for condensing sweat and more closely measures the 'TRUE' performance of NFPA 1971 gear. The addition of THL to the NFPA 1971 Standard has been proven to reduce heat stress for firefighters and reduce the incidence of sudden cardiac deaths due to heat stress.

*\*Fahy, RF, LeBlanc PR et al. "FIREFIGHTER FATALITIES IN THE UNITED STATES - 2014". National Fire Protection Association of Fire Analysis and Research Division. June 2015, pg 5.*



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