



# Reliability You Can Trust. Durability When You Need It Most.

*Stedair® 3000 provides the **best value** with proven long term protection. Price, Performance and & Unmatched Durability.*

The battery of tests that the moisture barrier must endure illustrates the importance of this component. Engineered to exceed the NFPA 1971 (2018ed.) standard, our moisture barriers provide the ultimate in protection.

Non-woven spunlace substrate laminated to a breathable ePTFE membrane.

**The moisture barrier is the component that is subject to the most tests as per NFPA 1971**

NFPA 1971-2018 TEST REQUIREMENTS	MOISTURE BARRIER	THERMAL LINING	OUTER SHELL
Flame Resistance	+	+	+
Heat/Thermal Resistance	+	+	+
Tear Resistance	+	+	+
Cleaning/Shrinking Resistance	+	+	+
Water Penetration Resistance	+		
Water Absorption Resistance			+
Breaking Strength			+
Liquid Penetration Resistance	+		
Viral Penetration Resistance	+		
Light Degradation Resistance (UV)	+		



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# 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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