



PBI Matrix: Technical Data / Weight: 205 gr/sqm / Construction: Plain Weave

EN 469:2005 Safety Requirements
Composition: PBI Matrix Outer Shell 205 gr/sqm / Goretex Fireblocker 140 gr/sqm / Lining Meta-Aramid Felt 210 gr/sqm

No.	Property	Test	Performance Level Required	Performance Level Attained	Pass To EN 469:2005
6.1	Flame Spread [Outer Fabric]	EN ISO 15025:2002 EN 533	No Holing/No Flaming Debris Afterflame ≤ 2 s Afterglow ≤ 2 s	No Holing/No Flaming Debris No Afterflame No Afterglow	●
6.2	Heat Transfer [Flame]	EN 367:1992	HTI24 ≥ 13,0 HTI24 - HTI12 ≥ 4	HTI24 = 19,1 HTI24 - HTI12 = 6,0	●
6.3	Heat Transfer [Radiation]	EN ISO 6942:2002 40 kW / m2	RHTI24 ≥ 18,0 RHTI24 - RHTI12 ≥ 4,0	RHTI24 = 26,5 RHTI24 - RHTI12 = 8,5	●
6.4	Residual Strength	EN ISO 6942:2002 10 kW / m2	Tensile strength (ISO 13934-1:1999) of outermost material ≥ 450 N	warp: > 1880 N weft: > 1885 N	●
6.5	Heat Resistance	ISO 17493:2000	No Ignition, Melting or Dripping Shrinkage ≤ 5,0 %	warp: -1,3% weft: -0,7%	●
6.6	Tensile Strength [Outer Material]	EN ISO 13934-1	≥ 450 N	warp: > 2200 N weft: > 2200 N	●
6.8	Surface Wetting	EN 24920:1992	Grading ≥ 4	Passed	●
6.9	Dimensional Change	ISO 5077:1984	Not to exceed ± 3,0 % (- = shrinkage)	Passed	●
6.10	Resistance to Penetration by Liquid Chemicals	EN ISO 6530 a) 40% NaOH / b) 36% HCL c) 30% H ₂ SO ₄ / d) 100% oxylene	> 80% run off No penetration to the innermost surface	Passed	●
6.11	Resistance to Water Penetration	EN 20811:1992	≥ 20 kPA = Level 2 for garments with moisture barrier	Passed	●
6.12	Water Vapour Resistance	EN 31092:1993	Level 1 > 30 m ² Pa/W, but ≤ 45 m ² Pa/W Level 2 ≤ 30 m ² Pa/W	Passed	●
6.15	Whole Garment Testing [optional Mannequin Burn]	EN ISO 13506:2008	84 kW/m ² 8 s	Garment Does NOT Breakopen and Retains Integrity!	●

We do not undertake any liability for the results of the usage of these products. The technical data in this brochure reflects our best knowledge at the time of publication. The brochure is subject to changes pursuant to new developments and findings. A similar reservation applies to the properties of the products described. The above data represents the average performance of European PBI Matrix outer shells available to the market.



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PBI Matrix[®]... The Power Grid

"We'd like to reinforce something we brought up earlier. We've raised the bar...again."

Step Into A New Era Of Personal Protection.

Firefighting today is tougher than ever. In a constantly changing world, the nature of fighting fire is always changing too...new threats, new materials, new technologies. At PBI Performance Products, Inc., we're in touch with firefighters every day, all around the world. We listen to what you say, and work tirelessly to respond to your needs. Providing you with better protection drives our motivation.

The introduction of PBI Gold during the early 1980's set a new standard in high performance, lightweight thermal protection for firefighters. Since that time, others have tried to imitate its "look" and premium performance, but failed. Now, PBI Performance Products, Inc., the company that produces the innovative PBI fiber, has successfully raised the bar again with the introduction of PBI Matrix®.



The Best Made Better

How does the power grid in PBI Matrix make it better? Simple. A durable matrix of high-strength aramid filaments has been woven into the PBI Gold fabric to enhance and reinforce its resistance to wear and tear while retaining its superior flame and heat protection. The result increased abrasion resistance up to 40% and improved tensile strength by 40-60%.



Since outer shell protection is the firefighter's first line of defense, there is no room for compromise. This exclusive fabric blend takes PBI's proven protective characteristics to a whole new level by combining unmatched flame and thermal protection with unsurpassed strength and durability. Revolutionary PBI Matrix is also lightweight, flexible and fast drying. It provides superior comfort and reliability. In short, it gives you the power to get the job done day after day, and still remain service worthy.

The Power of Performance

The measure of any outershell fabric is ultimately determined by its performance. PBI Matrix is no exception. Tested in labs, fire schools, and in real-world fires in North America and Europe, PBI Matrix stands up to aggressive use under some of the most demanding applications. After repeated use and exposure to the rigors of multiple fire scenes, turnout gear made with PBI Matrix remains strong and ready to answer the call.



PBI Matrix is a major technological advance. It resists dangerous chemicals and acids. It will not shrink or become brittle after thermal exposure. It remains pliable and strong, affording safe, comfortable mobility to get the job done and get out quickly. Lightweight, yet incredibly strong, PBI Matrix provides maximum protection and maximum comfort at a minimum weight. More than just premium protection, it's a valuable asset in your firefighting arsenal. With the power of PBI Gold Matrix, the switch is always on.

Connect to the Power Grid in PBI Matrix

The power grid in PBI Matrix can energize the effectiveness of fire departments of any size in any setting. Its superior thermal protection, comfort and robust on-duty performance can significantly contribute to a safe and successful result in battling a house fire, an industrial blaze, or the raging inferno of a high-rise. Regardless of your department's size or the nature of the fires you fight, the enhanced durability and protective powers of this inventive super fabric put the power of maximum value in your personal protective equipment budget. Connect to the power grid of PBI Matrix and plug into better performance, better comfort and greater value.



PBI Matrix® The Power Grid

