

SAATI Protection

Performance Fabrics & Hybrid Technologies
for Personal Protection and Vehicle Armouring

FOR THE MANY, BY THE FEW

—SAATI



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Connect with SAATI



Company Information

Innovative Action for Over 40 Years

SAATI is focused on the production of fabrics, panels/spall liners and laminated materials based on aramid fiber with unique resin finishing processes, for multi-threat protection, both for personal protection and light armouring systems.

We bring insight gained from over 40 years of providing technology and support to markets around the globe. Our offerings include PFAS-free water repellent treatments, hot melt and solvent resin coatings (including epoxy and phenolic options), as well as thermoplastic and rubberized.

Additionally, we're proud to introduce SAATIcombatex, a new line of technical textiles designed for clothing and tactical gear, tailored for armed forces worldwide, encompassing the army, navy, paramilitary forces, and air force.

Whatever your protection needs, SAATI can provide the right solution.



Customer Focus

SAATI serves as a dynamic partner, adept at navigating the ever-evolving landscape of challenges. Our focus extends beyond safeguarding against increasingly sophisticated threats to encompass considerations of productivity, availability, reliability, safety, and cost-effectiveness. Thanks to our long-standing expertise in the field, we approach each challenge with versatility, offering multiple and hybrid solutions that meet rigorous performance standards.

Our commitment lies in developing innovative and dependable systems capable of protecting military and law enforcement personnel from a diverse array of threats spanning bullets, knives, spikes, fragments, and blunt impacts. With a keen eye on user comfort and practicality, our personal protection products boast attributes such as lightness and flexibility, enhancing wearability while streamlining production processes and minimizing waste.



Improving Safety

As a leading supplier of products for the protection sector, SAATI is at the forefront of technology. We strive to develop innovative and reliable systems that are able to protect the military and law forces against the different threats. Not only protection against bullets, but also protection against knives, spikes, fragments and blunt impacts. SAATI is the partner able to find solutions to the continuously evolving challenges, first of all in terms of protection to the more and more sophisticated threats, and also challenges in terms of productivity, availability, reliability, safety, costs.

For each threat, we are able to develop different solutions, several options that can all give an answer to the required performances, with a different approach. SAATI develops products which offer advantages for customers and final users such as lightness and flexibility in order to reach a greater comfort & wearability, improvement of production process and reduction of scraps. SAATI aims to develop products minimizing ever more the impact on the environment.



Production & Fabrication Capabilities

SAATI is among the few companies in the world who can fulfill the most demanding requests from police forces, ministries of defense and companies specialized in products for the protection of persons and vehicles. The know-how which has been developed over many years

of experience working in world markets goes hand in hand with the continuous commitment in research and development. This gives us the expertise needed to give qualified answers to the protection sector, and to be up-to-date with the most advanced technologies.

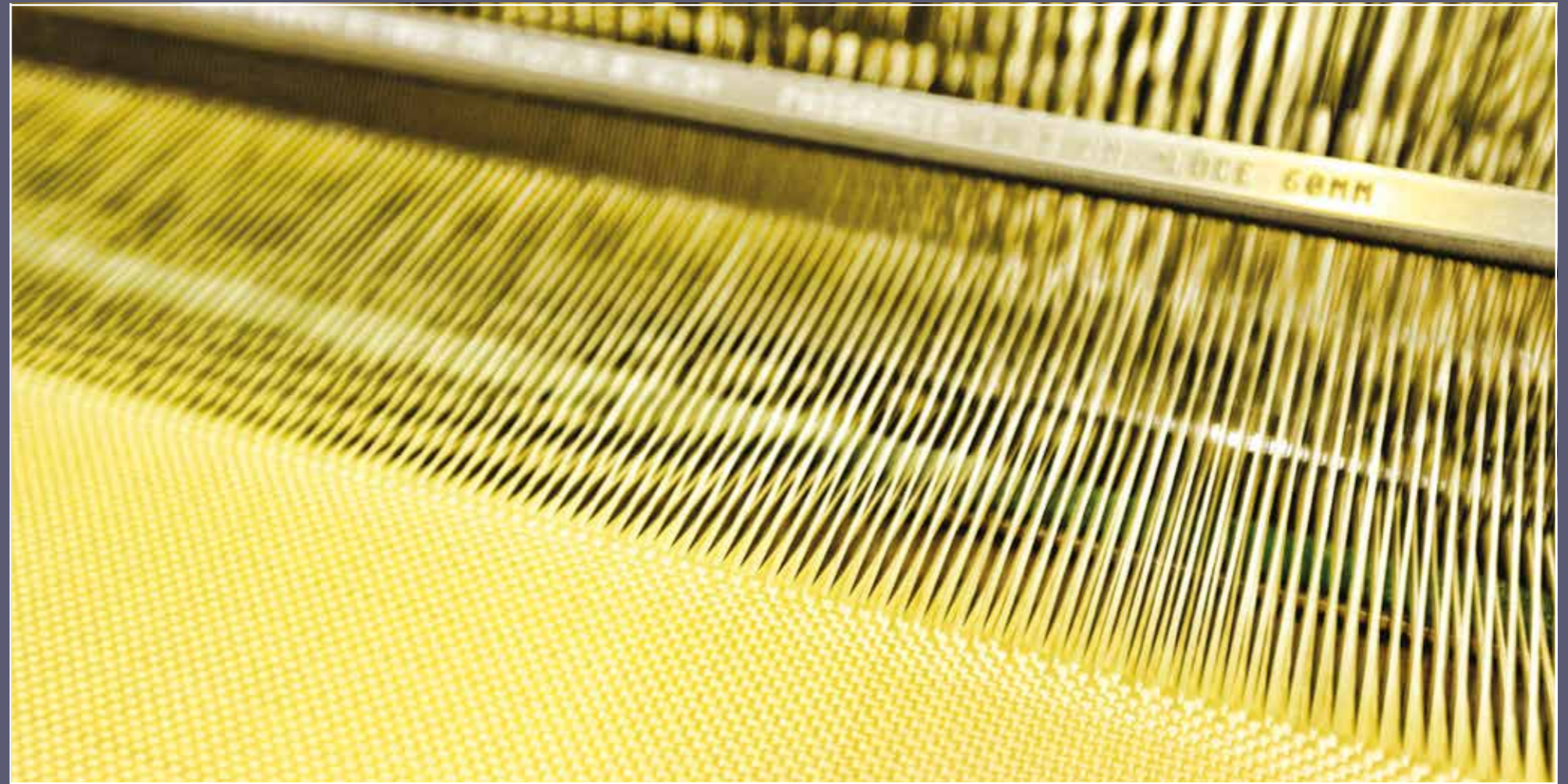


Production
Stage



Warping

Production
Stage



Weaving

**Production
Stage**



Finishing

Production Stage



Pre-Preg

Production
Stage



Lamination

**Production
Stage**



Molding

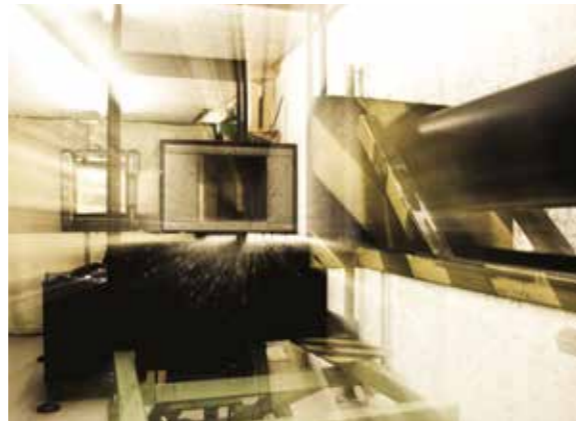
SAATI Lab

SAATI offers comprehensive laboratory capabilities; our skilled Quality Control and R&D teams are supported by the most state of the art quality control devices and equipment, and are able to make in house all the tests which are required by the industry. We constantly innovate to

raise performance and open up new possibilities to develop customized solutions according to worldwide standards in order to meet customers' requirements. Some of our laboratory testing capabilities include:



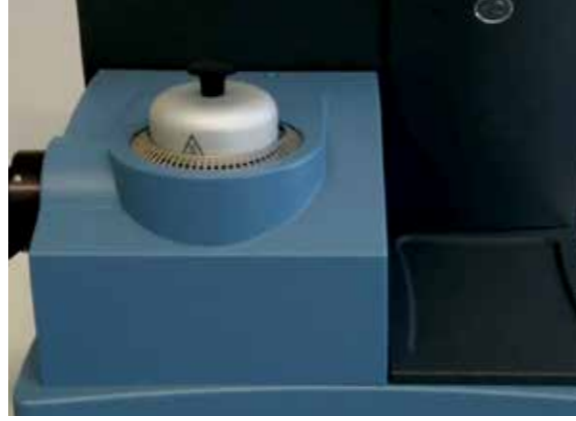
Physical – Yarn, Fabric



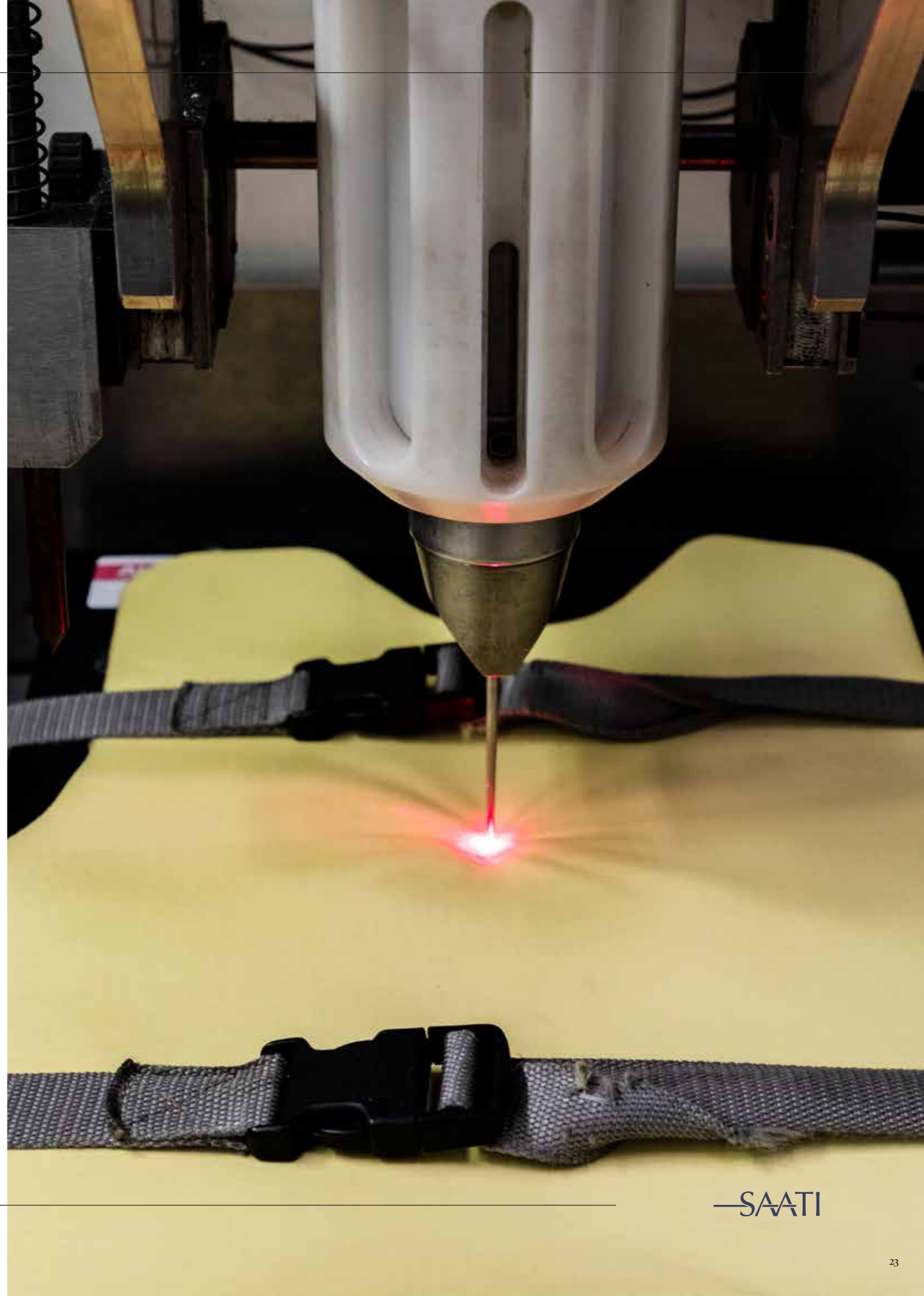
Ballistic



Stab/Spike



Thermal – DSC



The Products

SAATI is a global manufacturer of fabrics, pre-pregs, Multi-threat Protection (MTP) systems, backing and spall liners for law enforcements, military, corrections & private security applications, both for personal protection and armoring.

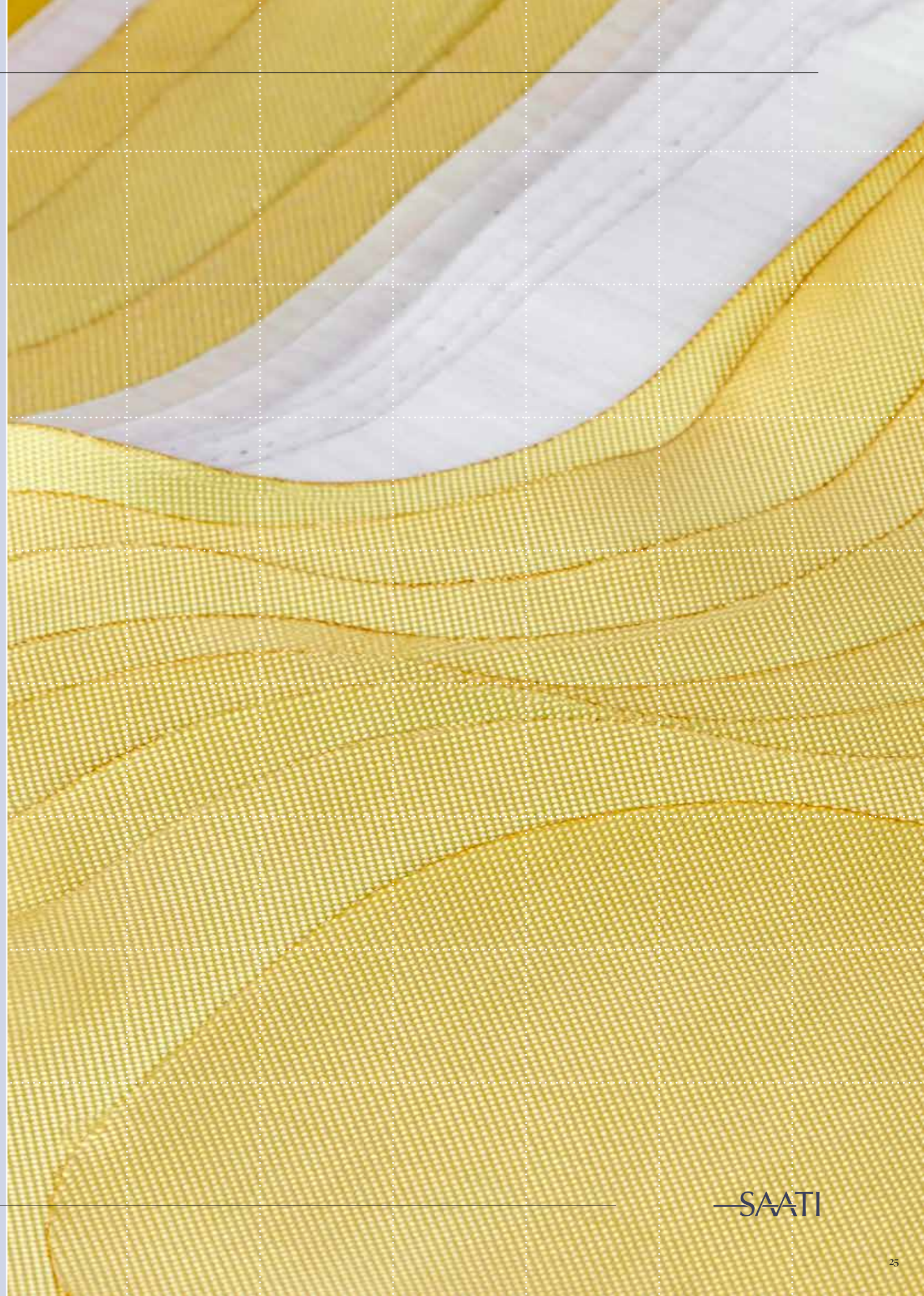
Aramid Fabrics

Coated Aramid Fabrics

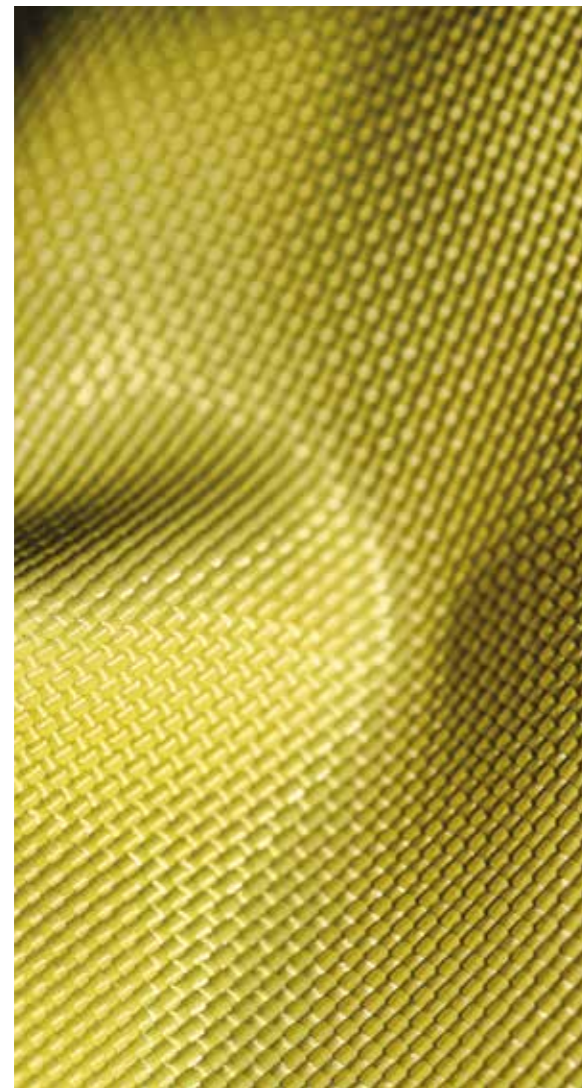
Multi-Threat Protection (MTP) Systems

Backings and Spall Liners

CoreMatrix™



Aramid Fabrics



Our wide range of the most advanced fabrics available in the market covers the various civil, law enforcement and military applications for personal protection. A leadership obtained through the development and manufacturing of fabrics in para-aramidic and other fibres, consolidated through an ongoing process of product innovation and exclusive finishing procedures. We offer a wide range of fabrics with an areal density from 110 g/sqm to 625 g/sqm using aramid fibers from 220 to 3300 dtex.

Features



Main Application Areas



Product Range

Item	Weave	Threads x cm		Title Count		Thicknes (mm)	Weight (g/m²)	Warp (DaN/cm)	Weft (DaN/cm)	
		Warp (n°/cm)	Weft (n°/cm)	Warp (dtex)	Weft (dtex)					
270	plain	27,5	27,5	Kevlar 159 220	Kevlar 159 220	0,20	125	80	100	●
372	plain	23,2	23,2	Kevlar 159 330	Kevlar 159 330	0,22	158	100	100	●
310	plain	14,0	14,0	Kevlar KM2+440	Kevlar KM2+ 440	0,17	125	100	100	
431	plain	12,2	12,2	Kevlar KM2+440	Kevlar KM2+ 440	0,13	110	90	90	
6402	plain	10,7	10,7	Kevlar KM2+670	Kevlar KM2+ 670	0,20	145	130	130	
6602	plain	12,2	12,2	Kevlar KM2+670	Kevlar KM2+670	0,25	165	135	135	
3631	plain	10,7	10,7	Kevlar KM2+940	Kevlar KM2+940	0,31	200	140	140	
3651	plain	11,7	11,7	Kevlar KM2+940	Kevlar KM2+ 940	0,32	220	150	150	
802	plain	8,5	8,5	Kevlar KM2+1100	Kevlar KM2+ 1100	0,26	190	150	150	
812	plain	12,2	12,2	Kevlar KM2+1100	Kevlar KM2+ 1100	0,38	280	220	220	
863	plain	9,3	9,3	Kevlar KM2+1100	Kevlar KM2+ 1100	0,33	205	140	140	
865	plain	10,0	10,0	Kevlar KM2+1100	Kevlar KM2+1100	0,27	220	170	170	
258	plain	6,4	6,4	Kevlar 129 3140	Kevlar 129 3140	0,62	410	320	350	
300	plain	4,5	4,5	Kevlar 29 3300	Kevlar 29 3300	0,40	300	190	190	
101	plain	6,7	6,7	Kevlar 29 3300	Kevlar 29 3300	0,63	460	280	280	
103	twill 4/4	9,3	9,3	Kevlar 29 3300	Kevlar 29 3300	0,91	635	320	320	

● for spike protection

All items can be provided with water repellency, scoured or heatset treatment.

Coated Aramid Fabrics for Helmets and Shields



Our coated and laminated products are manufactured both with traditional fabrics, using phenolic, epoxy, thermoplastic and rubber resin system. The properties of the resins, combined with the properties of the fibres, meet the most high demanding requirements in the sector of ballistic protection (helmets, armouring).

The last generation of products provides for the use of preservable matrices at room temperature, long shelf life, mold at low temperature and therefore compatible with thermoplastic systems.

Features



Main Application Areas



Product Range

Phenolic Systems - (Shelf life 12 months at -18°C or 6 weeks at 23°C)

Item	Weave	Resin content (%)	Prepreg Weight (g/m ²)	Curing Cycle		
				(°C)	(bar)	(min)
Style 258 PHLF - single side coated	Plain	12	455	165	30	15
Style 101 PHLF - single side coated	Plain	16	525	165	30	15
Style 258 PHLF - double side coated	Plain	25	535	165	30	15
Style 350 PHLF - single side coated	Basket 3/3	9	374	165	30	15
Style 3651 PHLFD Black finished (dipping)	Plain	18	262	165	30	15

Epoxy Systems - (Shelf life 12 months at -18°C or 45 days at 23°C)

Item	Weave	Resin content (%)	Prepreg Weight (g/m ²)	Curing Cycle		
				(°C)	(bar)	(min)
Style 258 ER221	Plain	26	540	125	2 - 7	15

Thermoplastic Systems - (Shelf life 12 months at 23°C)

Item	Weave	Resin content (%)	Prepreg Weight (g/m ²)	Curing Cycle		
				(°C)	(bar)	(min)
Style 258 PCK	Plain	12	455	135	30	30
Style 350 PCK	Basket 3/3	9	374	135	30	30
Style 6402 PCK	Plain	20	175	135	30	30
Style 802 PCK	Plain	18	226	135	30	30

Coated Aramid Fabrics for Vehicle Armouring

Main Application Areas



Threats



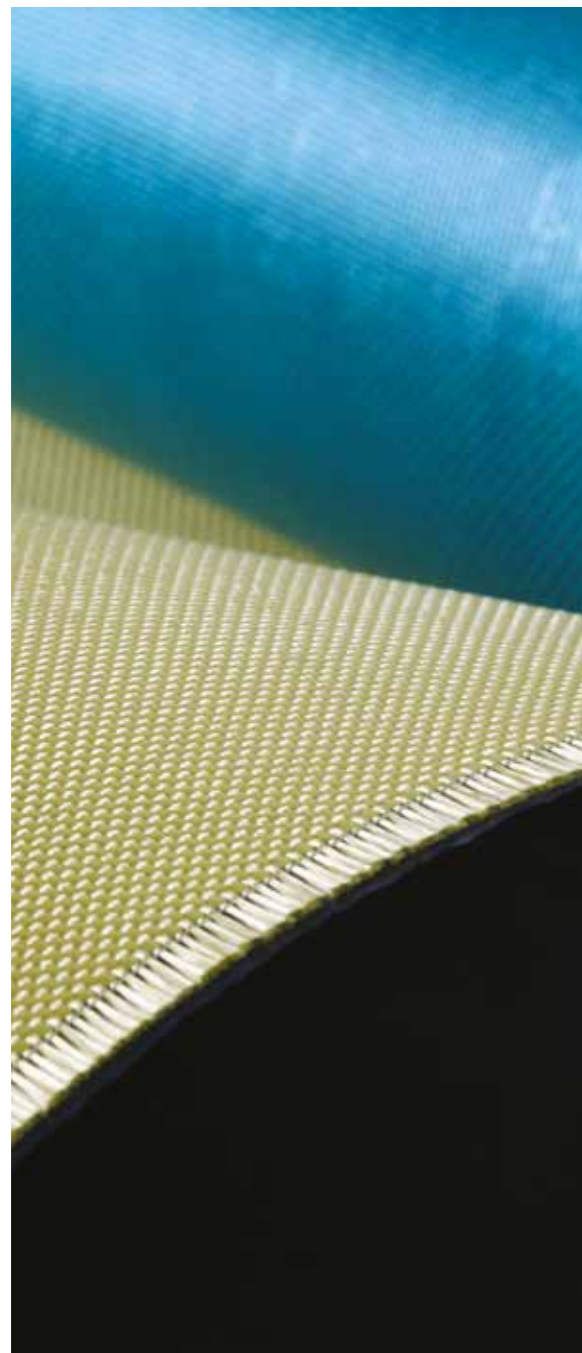
Phenolic Systems

Item	Weave	Resin content	Prepreg Weight	Curing Cycle		
		(%)	(g/m ²)	(°C)	(bar)	(min)
Style 258 PHLF - single side coated	Plain	12	455	165	30	*
Style 101 PHLF - single side coated	Plain	16	525	165	30	*
Style 258 PHLF - double side coated	Plain	25	535	165	30	*
Style 350 PHLF - single side coated	Basket 3/3	9	374	165	30	*

Rubberized Systems

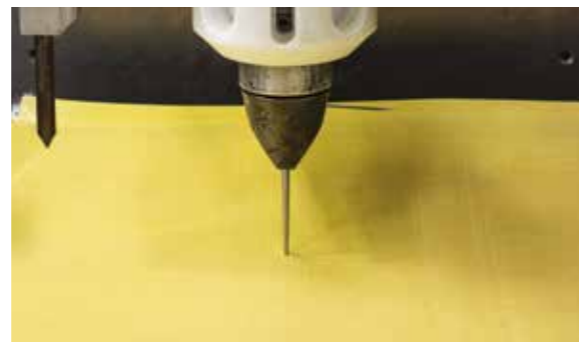
Item	Weave	Resin content	Prepreg Weight	Curing Cycle		
		(%)	(g/m ²)	(°C)	(bar)	(min)
Style 101 GRCD PLUS - double side coated	Plain	18	580	175	10 - 50	*
Style 101 GHY - single side coated	Plain	15	515	185	10 - 50	*

Multi-Threat Protection (MTP) Systems



SAATI MTP systems are designed to protect against threats of different origins: bullets, knives and spikes. To face these kinds of threats we offer a wide range of products as multi-threat protection "MTP" (trauma reduction systems, stab and spike protection systems).

According to technical specifications, SAATI is able to offer products in sheets and in rolls in order to reach the required target: lightness, flexibility and reduction of scraps during the fabrication.



Features



Main Application Areas



Stab and Spike Protection Systems

Item	Thickness (mm)	Weight (g/m ²)	Format (mm)
AS 299	0,13	165	Sheet Dim: 2130 x 1270
MTS310	0,35	310	Roll Width: from 1200 up to 1600

Trauma Reduction Systems

Item	Thickness (mm)	Weight (g/m ²)	Format (mm)
AT2	0,50	510	Sheet - Dim: 2130 x 1300
TRS295	0,38	295	Roll - Width: 1600

Multi Threat Protection (MTP) Systems

Item	Thickness (mm)	Weight (g/m ²)	Format (mm)
AS401S	0,22	235	Sheet - Dim: 2000 x 1200
AS401D	0,23	280	Sheet - Dim: 2000 x 1200
TRS380	0,33	372	Sheet - Dim: 2000 x 1300
MTP235T	0,25	235	Roll - Width: 1360

Backings and Spall Liners

SAATI product range for the military protection is completed with the engineering and manufacturing of backings and spall liners for military vehicles. The product range includes special laminates and panels which are developed according to the latest requirements of the protection sector's regulatory framework.

Threats



Main Application Areas



Product Range

Item	Standard Dimensions (mm x mm)	Thickness (mm)	Weight (g/m ²)	Resin Matrix
PVB 14/19	1200 x 2000	8,3	8,7	Thermoset
L60/14	1200 x 2000	6	7	Thermoplastic
L60/16	1200 x 2000	7	8	Thermoplastic
L60/25	1200 x 2000	11	12,5	Thermoplastic
L60/10 H-2	1220 x 2000	5,8	5	Thermoplastic/Rubberized
L60/15 H-2	1220 x 2000	8,3	6,8	Thermoplastic/Rubberized
L60/20 H-2	1220 x 2000	10,8	9	Thermoplastic/Rubberized
GRC 19/15-2	1950 x 1360	7	8,4	Rubberized
GRC 19/7-2	1950 x 1360	4,8	3,9	Rubberized

CoreMatrix™



The combination of SAATI fabrics and Du Pont Technology creates a unique monolithic fabric: CoreMatrix patented Technology is a product of needle felting expertise by infusing Z-directional staple-length fibers directly into the fabric stack structure. It can significantly reduce backface trauma while increasing ballistic and fragmentation performances. This unique engineering also reduces the need for layer counting, quilting, lamination and it's compatible with all major ballistic materials.



Threats



Main Application Areas



Product Range

Item	Construction		Weight g/m ²	Standard Width cm
	Layer 1	Layer 2		
9354	PES felt	Aramid fabric	1238	160
9354-24	PES felt	Aramid fabric	1324	160
9757	PES felt	Aramid fabric	913	160
9757-24	PES felt	Aramid fabric	849	160
9325	Aramid felt	Aramid fabric	271	160

Legenda



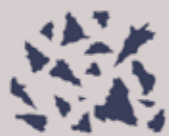
Bullets



Blades



Spikes



Fragments



Trauma
Reduction



Impact
Resistant

**SAATI S.p.A. -
World Headquarters**

Via Milano 14
22070 Appiano Gentile
Italy

Phone: +39 031 9711

info.it@saati.com

SAATI Americas CO

201 Fairview Street Ext.-
Fountain Inn – South Carolina
29644 - USA

Phone: +1 (864) 601-8300

info.us@saati.com

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