



TORSKIN[®]
PROTECTIVE SKIN



OPTIMUM PROTECTION AGAINST CUT AND SLASH ATTACKS





TORSKIN, YOUR PROTECTIVE SECOND SKIN

Torskin is a brand new collection of innovative slash, cut and stab resistant shirts and polos. We develop products of the highest quality with a strong focus on comfort and weight reduction. Torskin feels like a second skin, offering optimal protection. With the development of our Torskin range, we can now offer our customers complete and full protection.

DISCRETE AND COMFORTABLE PROTECTION

Why wearing highly protective, but extremely annoying clothes that are heavy and feel clammy after a couple of hours? Will you be able to do your job properly?

The slash, cut and stab resistant polos and shirts of Torskin offer you optimal protection, but also care for the person who's wearing it for multiple hours. The combination of the high quality protection and usability defines the strength of Torskin and of the S.A.T. range in general. Thanks to the modular character of our garments, you can adapt your outfit to every situation.

Our Torskin T-shirts and polos are based on the feedback of people who are in the 'field' on daily basis. We identified four keywords that returned frequently:

- » Reliable, high quality protection
- » Need for comfort
- » Upgradable protection
- » Moving along

COMFORT

The Torskin design combines an answer to those needs. The protection takes the form of T-shirts and polos, which makes the protection extremely light. Torskin moves along with your movements and doesn't annoy you while doing your job. The clothing looks like a normal T-shirt/polo and can be worn discretely. Combined with a high degree of breathability, the garments are very comfortable. You can wear them all day long. Just try it, after a couple of minutes, you'll be forgotten that you're wearing it.

"Torskin offers you optimal protection and cares for the person who's wearing it."

HIGHEST PROTECTION

Wearing Torskin might save your life. It strongly reduces the risks that your vital organs get injured. Highly skilled surgeons advised us in the identification of these body zones. The Torskin garments that protect those zones are equipped with a double anti-slash layer. We also offer the possibility to protect those zones with anti-stab panels. The level of protection is the most critical point. That is why the garments are thoroughly tested. This way, they comply with the highest and most recent norms, like EN ISO 13997 (1999), EN 388-6.2 (2003) and ASTM F1790 (2005). Torskin offers you protection you can trust.

MODULAR PROTECTION

Every situation demands a different kind of protection. Modular and versatile clothing is therefore necessary. Our standard anti-slash/-cut polos and shirts, protect the vital zones of the body. With our stab resistant panels, you can enhance your level of protection even more. We also offer single and double neck protection. Whatever threats you will be confronted with, we have a solution ready.



ALL ORGANS

All vital and non-vital organs are protected with a single layer of anti-slash fabric.

front



back



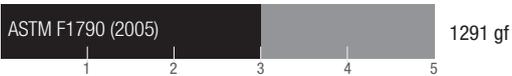
front

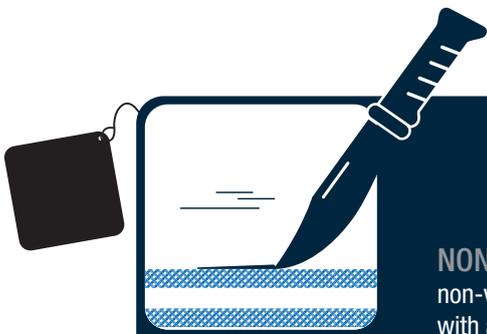


back



PERFORMANCE





NON-VITAL ORGANS

non-vital organs are protected with a single layer of anti-slash fabric.

VITAL ORGANS

vital organs are protected with two layers of anti-slash fabric.

front



back



front



back



PERFORMANCE





NON-VITAL ORGANS
non-vital organs are protected with a single layer of anti-slash fabric.

VITAL ORGANS
vital organs can be protected with anti-stab panels.

front



back



front



back



ANTI-STAB PERFORMANCE

SAT OFFERS 2 SOLUTIONS:

SAT-KR-AS CER **36 Joule** following test protocol
HOSDB 2007 P1B blade
Max. 20 mm knife penetration

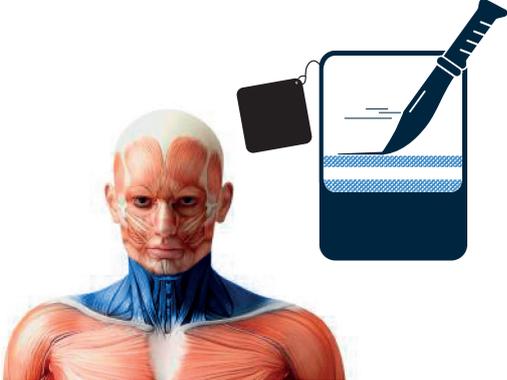
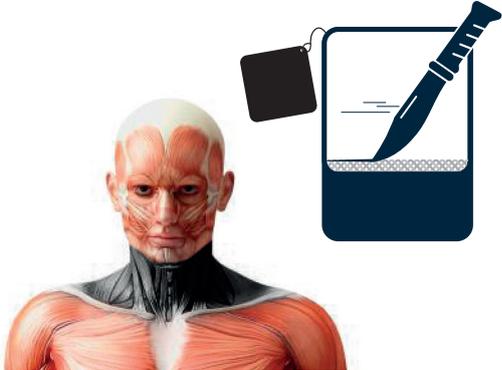
SAT-KR-AS 6 **15 Joule** following test protocol
HOSDB 2007 P1B blade
Max. 20 mm knife penetration

SAT-KR-AS 6 **20 Joule** following test protocol
NIJ 0115.00 S1/blade
Max. 20 mm knife penetration

SLASH-/CUT- RESISTANT

NECK PROTECTION - ISO 13997 (1999):

The collar can be protected with a single (15,31N cutting force) or double layer (44,4N cutting force) of anti-slash fabric.

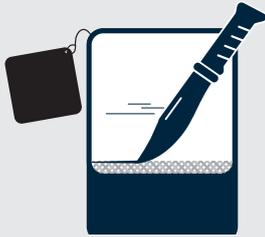


SLEEVES - ISO 13997 (1999):

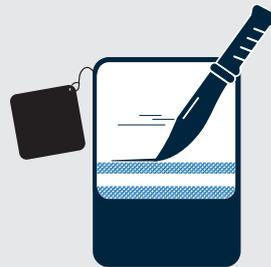
The sleeves are protected with a single (15,43N cutting force) layer of anti-slash fabric.



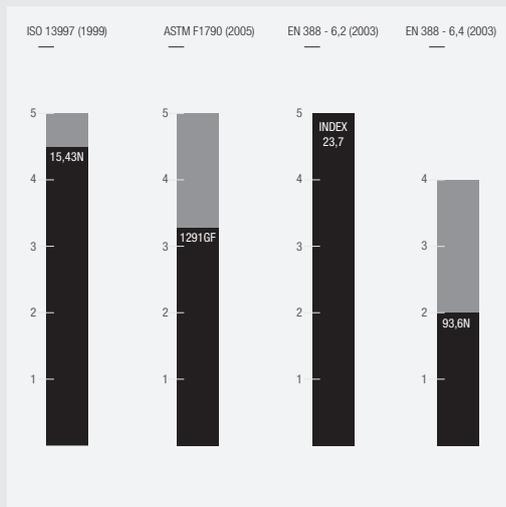
SUMMARY



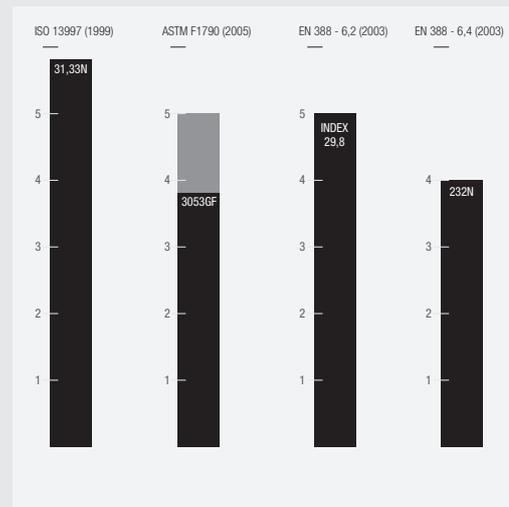
SINGLE LAYER PROTECTION



DOUBLE LAYER PROTECTION



*Unwashed Torskin



*Unwashed Torskin



SAT OFFERS 2 SOLUTIONS

	SAT-KR-AS CER	SAT-KR-AS 6
Flexibility	++	+
Weight (total panels L)	1,0 kg	0,6 kg
Cost efficiency	+	++
Knife penetration below 20 mm at the energy level of:	36 Joule following test protocol HOSDB 2007 P1B blade	15 Joule following test protocol HOSDB 2007 P1B blade
		20 Joule following test protocol NIJ 0115.00 S1/Blade



EXTRA TESTS

1. Tested in practice against dog bites
2. Cytotoxicity test: (ISO 10993-5 (2009) and ISO 10993-12 (2012)): no cytotoxic effect
3. pH value test: ((ISO 13688 (2013) and ISO 3071 (2005)): 6,6 (neutral)



S.A.T Torskin – Torskin with K9 dog : <https://www.youtube.com/watch?v=LC2d0XhBUyU&feature=youtu.be>

PROTECTION IS OUR DNA

Torskin is a product range of S.A.T., a brand which specializes in state-of-the-art body armour systems. As part of the Sioen Group, we have the necessary experience and know-how to equip you with the protection that suits your needs perfectly.

S.A.T., ARMoured FOR THE FIELD

S.A.T. (Sioen Armour Technology) specializes in the development of outstanding modular armour systems. The focus on offering the highest protection possible, combined with the urge of making our protection as light and comfortable as possible, is the reason behind the strong growth of S.A.T. .

PART OF SIOEN, APPAREL SOLUTION PROVIDER

S.A.T. (Sioen Armour Technology) is part of Sioen Apparel, Europe's number one developer and provider of personal protective clothing. Sioen offers garments for any working condition. They protect against the harshest weather conditions, fire, chemicals, electric arc, and extreme cold. Our products are worn by firefighters, police, people who work with chemicals, personnel of oil rigs, fishermen, foresters, etc.

We understand what these people need and what problems they have to face day after day. Our specialized R&D department, the core of our organisation, knows the possibilities of the fabrics we work with and masters the norms and regulations in vigour for all technical apparel. By elaborating new products and combining fabrics, we develop the solutions our customers are looking for.

TORSKIN, THE NEXT CHAPTER

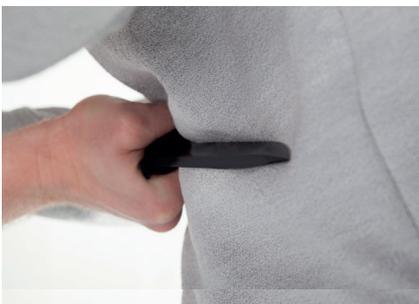
S.A.T. focused in the first place on bulletproof vests, offering protection against all kinds of guns and riffles. The elaboration of our 'Torskin' range is the next chapter in the S.A.T. story. Torskin is a collection of innovative cut-, slash- and stab-resistant clothing. Just like our vests, the focus is on the wearer's comfort. That's why we develop lightweight and comfortable clothing that offers optimal protection.

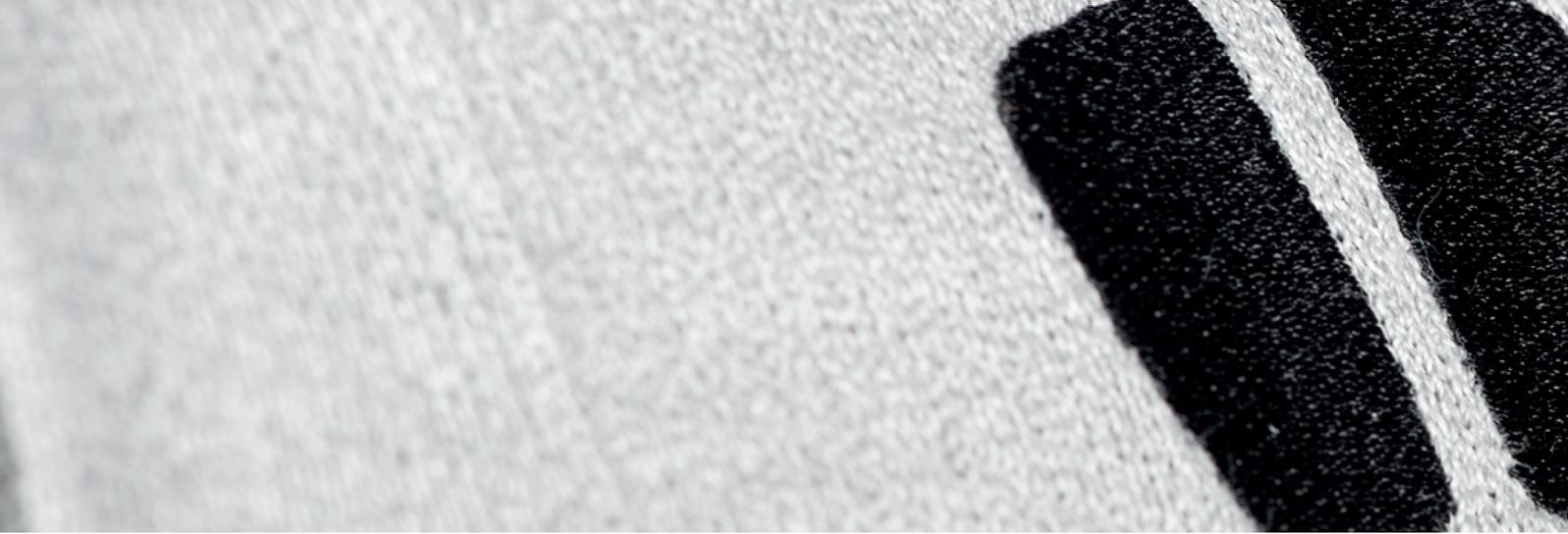
"We guarantee the perfect quality of our products. We'd bet our lives on it"

By adding Torskin to the S.A.T. collection, we can now fully protect our customers. How dangerous your job might be and whatever the risk you might run into while executing your job, we will keep you safe.



 S.A.T. Torskin – Torskin demonstration : <https://www.youtube.com/watch?v=89JhQVjGHs>





PRODUCT OVERVIEW



T-shirt Long sleeves	T-shirt Short sleeves	Polo Long sleeves	UBAC Long sleeves	Collars	
001K	002K	003K	005K	010K	015K

PROTECTED AREAS						
Single = The construction is cut/slash resistant with 1 layer of textile						
Double = The construction is cut/slash resistant with 2 layers of textile						

Arm	Single	Single	Single	Single	-	-
Forearm	Double	-	Single	Double	-	-
Front	Single	Single	Single	Coolmax [®] (3)	-	-
Back	Single	Single	Single	Coolmax [®] (3)	-	-
Vital organs	Double	Double	Single	Coolmax [®] (3)	-	-
Stab resistant	Yes	Yes	No	No	No	No
Neck	-	-	-	-	Single	Double
Thumb loop	Yes	-	Yes	Yes	-	-
Size	XS-4XL	XS-4XL	XS-4XL	XS-4XL	T1 ⁽¹⁾ - T2 ⁽²⁾	T1 ⁽¹⁾ - T2 ⁽²⁾

⁽¹⁾ T1 = XS - L

⁽²⁾ T2 = XL - 3XL

⁽³⁾ Coolmax[®] yarn is a brand name for a very soft and wicking PES fibre. Coolmax[®] fibres are not round but have a lobbed structure. Through the channels of the lobbed structure, the moisture can be easily transported.



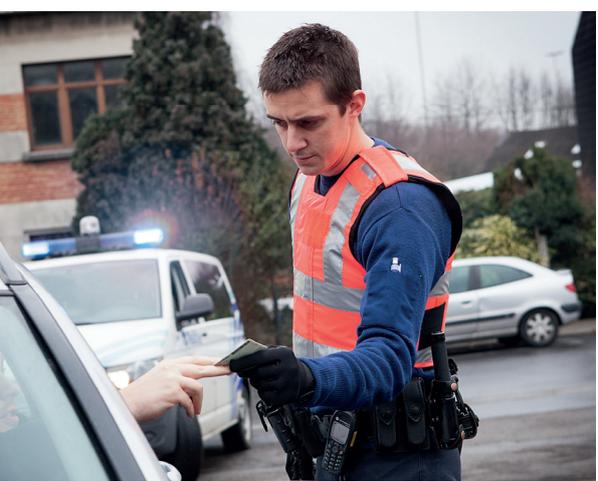
Ambulance vest	Sleeves	High col long sleeves	Sio-Cool® Shirt	Shirt Long sleeves
050K	080K	090K	092K	100K

	PROTECTED AREAS				
Arm	Single	-	Double	Single	Double
Forearm	Single	Single	Double	Double	Double
Front	Single	-	Single	Sio-Cool® ⁽⁴⁾	Double
Back	Single	-	Single	Sio-Cool® ⁽⁴⁾	Single
Vital organs	Single	-	Single	Sio-Cool® ⁽⁴⁾	Single (Back) Double (Front)
Thumb loop	-	Yes	Yes	Yes	Yes
Size	XS-4XL	T1-T2-T3	XS-4XL	XS-4XL	XS-4XL

⁽⁴⁾ Sio-Cool® is a textile (100% PES), very good wicking and drying capabilities (common for sportswear).

SAT

SIOEN ARMOUR TECHNOLOGY®



SIOEN ARMOUR TECHNOLOGY - BELGIUM
+32 (0) 51 74 15 26 - info@sioenarmour.com
www.torskin.com | www.sioenarmour.com