



With over 10 years of experience dealing with ultra sharp objects SAE Systems has developed the new and unique **Razorpro brand of PPE**



The lowest cost **Class 4 Puncture resistant full length arm protection** available on the Market

RAZORPRO

GAUNTLETS

£54.99
ex vat per pair

SLEEVES

£52.99
ex vat per pair

APRON

£74.99
ex vat

CHAPS

£72.99
ex vat



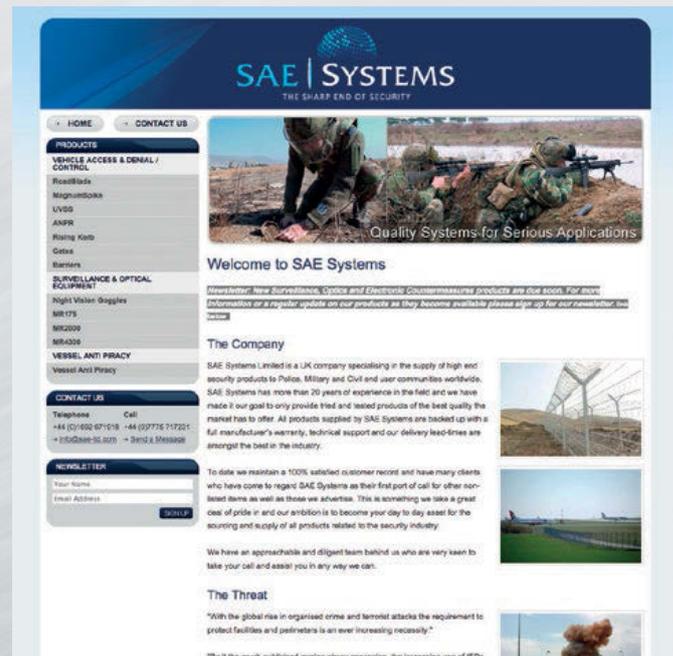
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ABOUT SAE SYSTEMS

SAE Systems has established itself as a leading UK manufacturer and supplier of bespoke Security products worldwide, incorporating several subsidiary elements as part of the parent company such as Razorwireuk, RoadBlade, Magnumspike and S-COMM UVSS.

Our clients include many blue chip and Government organisations including the UK Home Office, UK Police, Ministry of Defence, BT Openreach, Shell Petroleum as well as a large UK domestic and overseas client base.

With over 10 years of experience dealing with ultra sharp objects SAE Systems has developed the new and unique Razorpro brand of PPE.



BUILT FOR PURPOSE

The Razorpro range of PPE was designed by SAE Systems especially to address the industry requirement for an affordable and durable Class 4 puncture resistant PPE.

To date the only comparable products are considerably more expensive and far less durable. The principal reason for this is that the CE EN 388 Level 4 "puncture resistance" rating is difficult to attain utilising traditional fabrics whilst keeping the product affordable and comfortable to wear.

CUT OR PUNCTURE?

Whilst there are many products offering a high level of cut resistance (EN388 Class 5), before selecting care should be taken to consider the puncture resistance first, the highest level of cut resistance according to EN388 is Class 5 and the highest level of puncture resistance permissible within the EN388 standards is Class 4, **Razorpro achieves both!**

UNIQUE COMPOSITE TECHNOLOGY

In partnership with Rostaing a worldwide renowned manufacturer of PPE, SAE Systems has created the Razorpro product range utilising a unique concept of combining Stainless Steel "Inox" and High Tenacity Polyethylene "Dyneema" with High Quality Leather outer. The product retains its comfort, dexterity and grip qualities, in addition to its inherent water and oil repellence qualities whilst at the same time delivering the highest Level of puncture resistance.

APPLICATIONS

Razorpro PPE was designed initially for use with Razorwire and Barbed Wire to augment our own Razor wire business, we have since found that Razorpro with its high performance levels, unique design, durability and wear-ability has crossed over into several other applications and industry areas including animal welfare and arboricultural use.

RAZORWIRE

The importance of using the correct PPE when handling razor wire is imperative and the biggest mistake often made by installers is to select PPE based on cut resistance whereas the emphasis should be placed on puncture resistance which is the most likely form of injury to the person handling razor wire. Additionally snagging of the PPE on clothing can create problems particularly when installing in difficult and hard to access situations.



The next important factor in selecting PPE for use with razor wire is ensuring all exposed areas of the body are adequately protected from contact with the Razorwire. Because installers and de-installers often have to reach inside the razor wire coils when fitting or removing, the wrist, inner arm and armpit are often exposed, its important these areas are well protected from the sharp barbs encountered with razor wire.



FENCING

In addition to Razorwire installation and removals, barbed wire and normal wire handling are often associated with lacerations and puncture wounds. The outdoor properties of Razorpro combined with its durability mean companies can equip its employees with PPE that will out last traditional outdoor work PPE.

VETERINARY AND ANIMAL WELFARE

Whilst there are numerous gloves in the same puncture protection class as Razorpro the unique combination of gauntlet and sleeve that attach to each other means that now there is a solution that protects those involved in the day to day handling of animals, raptors and reptiles from animal bites and claws for the full length of the arm, something any vet will understand when faced with removing an aggressive cat for instance from a basket.

The flexible leather outer element also helps prevent claws snagging or hooking into the fabric, which can rapidly escalate the stress on the animal that is being handled. Whilst Level 4 Puncture resistance isn't a guarantee against a puncture wound from a cat or snake for instance, it is an additional line of defence and greatly reduces the risk of injury to the handler.



BUILDING AND MAINTENANCE - GLASS REMOVAL

Gaining access through holes in wire fencing or removing broken glass from its frame can be a hazardous task particularly with glass particles which are prone to coming loose and falling onto the person involved, with just hand protection the risk of serious laceration is extremely high, with the Razorpro gauntlet and sleeve combination this risk is greatly reduced.

AGRICULTURAL AND TREE SURGERY

This often involves wire and sharp object handling as well as clearing dense thorn and bush where the operative is required to expose areas of the arm that may not be adequately protected. With Razorpro PPE this problem is resolved. The feedback from our customers in the arboricultural and hedge laying industry has been fantastic.



RAZORPRO PRODUCT RANGE

WORLD CLASS PUNCTURE PROTECTION



GAUNTLETS **£54.99** *ex vat per pair*



SLEEVES **£52.99** *ex vat per pair*



APRON/BODY PROTECTION **£74.99** *ex vat*



CHAPS/LEG PROTECTION **£72.99** *ex vat*
(includes heavy duty canvass belt)

TESTING

Manufactured to CE standards EN 420 1994 and EN 388 1994 the Razorpro PPE are tested and rated according following test criteria and methods.



CE EN 388 MECHANICAL HAZARDS

1. ABRASION TESTING (MAXIMUM RATING =4)

Used to measure the abrasion resistance, the test involves rubbing samples cut from the product against a standard glass paper until a hole is worn through. The number of abrasion cycles carried out before a hole is formed determines the performance rating below.

2. CUT TESTING (MAXIMUM RATING =5)

This test is designed to measure the resistance to cutting by selecting samples from the product and placing in a frame which enables a circular counter rotating blade to repeatedly slice into the material. The number of cycles required to achieve this determines the class of cut resistance. Additionally an alternative test as required by EN ISO13997 which measures the applied force required to make a cut in a sample 20mm long.

3. TEAR RESISTANCE TESTING (MAXIMUM RATING =4)

Using a Tensometer samples are mechanically pulled apart to test the resistance provided by the material. The force of which measured in Newtons provides the level of resistance the product achieves.

4. PUNCTURE RESISTANCE TESTING (MAXIMUM RATING =4)

Also using a Tensometer puncture resistance is measured by the force also in Newtons that is required to break through the material with a specified pointed object (similar to a sharp nail).

TESTING

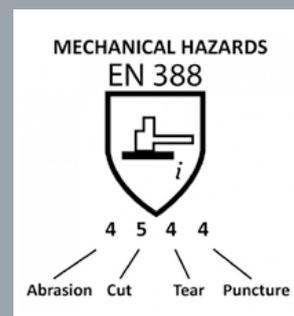
CLASSIFICATION BANDS

Performance Level	1	2	3	4	5
Abrasion Cycles	100	500	2000	8000	N/A
Cutting Index	1.2	2.5	5	10	20
Tear Force (N)	10	25	50	75	N/A
Puncture Force (N)	20	60	100	150	N/A
ISO Cut Load (N)				>_13	>_22

The CE EN 388 test results below show that Razorpro Gloves and Sleeves either outperform or match the competition, yet are available at a much lower price point!

PRICE COMPARISON

GAUNTLETS	ABRASION	CUT	TEAR	PUNCTURE	£GBP/PAIR
SAE Systems-RAZORPRO Gauntlets	4	5	4	4	£54.99
(Competitor) - Hexarmor 400R6E	4	5	3	3	£150.00
(Competitor) - SteelLeather VIII 5038	4	5	4	4	£ 119.95
SLEEVES	ABRASION	CUT	TEAR	PUNCTURE	£GBP/PAIR
SAE Systems-RAZORPRO Sleeves	4	5	4	4	£52.99
(Competitor) - Hexarmor AS019S	4	5	3	3	£115.00



In addition to achieving the **CE EN 388 4544** Classification Razorpro also achieved a high **ISO 13997** rating as well

ISO 13997

61.4N

6065.43g

To find out more about the RazorPro range or to make an order please email or call us using the contact details opposite:

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