



**-learning**

# PUNCTURE & NEEDLE RESISTANCE

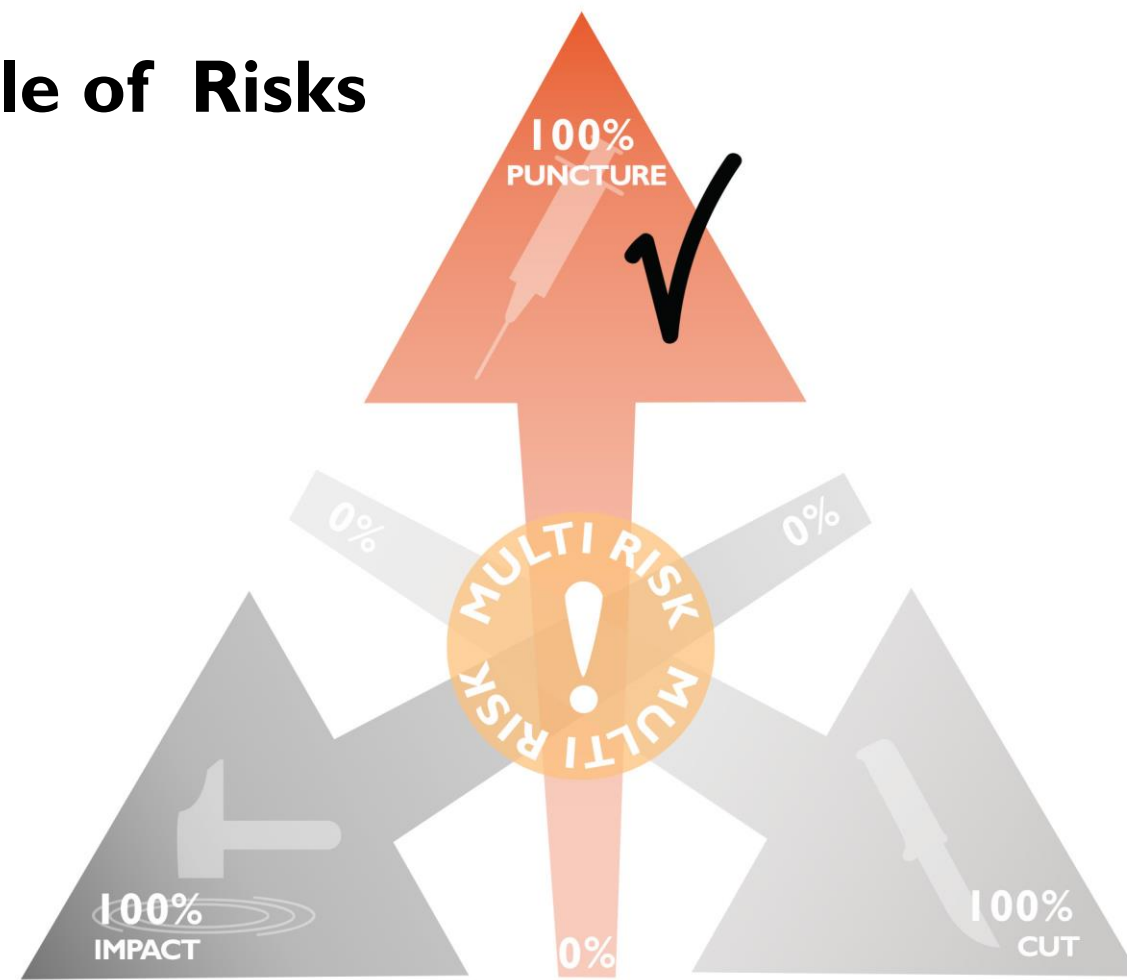
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# PUNCTURE & NEEDLE RESISTANCE

## Triangle of Risks



# PUNCTURE BASICS & TECHNOLOGIES AVAILABLE

## Composition of the Puncture threat

- High Force cause material to burst!
- Fine threat cause split and/or cut!

= Materials must be strong and stiff/dense to stop needles!

## Technical solutions

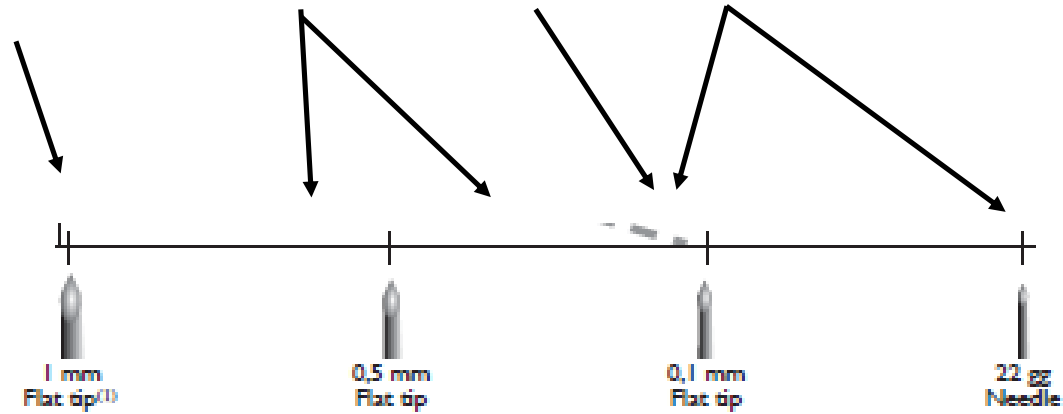
- Super dense fabrics – "Eureka SupraBlock SOFT"
- Super dense strong fabrics with ceramic coating – "Eureka SupraBlock STOP"
- Ceramic tiles – "Hex armor"
- Steel mesh- "Allycore"

= Each solution has its "Pros and Cons"

# THREATS AND INDUSTRIES EXPOSED

## Examples of different threats and threat diameters

Ball pen, Nails, Wood splinters, Steel wire, Thorns, Hypodermic needles



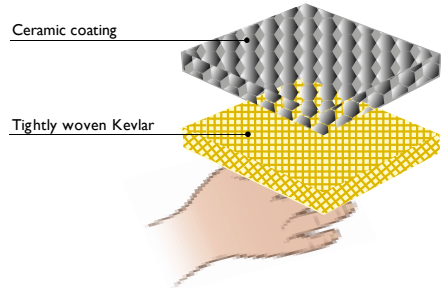
(1) EN 388 standard

## Industries & users

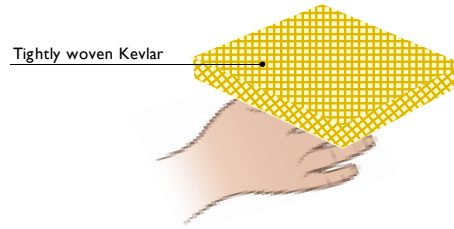
- Waste Collection
  - Waste recycling
  - Electronic recycling
  - Barb wire handling
  - Extraction
  - Industrial applications
  - Steel wire handling
  - Wood handling
- Cleaning such as:**
- Hospitals
  - Public transport
  - Cleaning of parks and public spaces
- Security services such as:**
- Customs
  - Police
  - Security guards
  - Rescue services

# THE SOLUTION TO PUNCTURE & NEEDLE RISKS

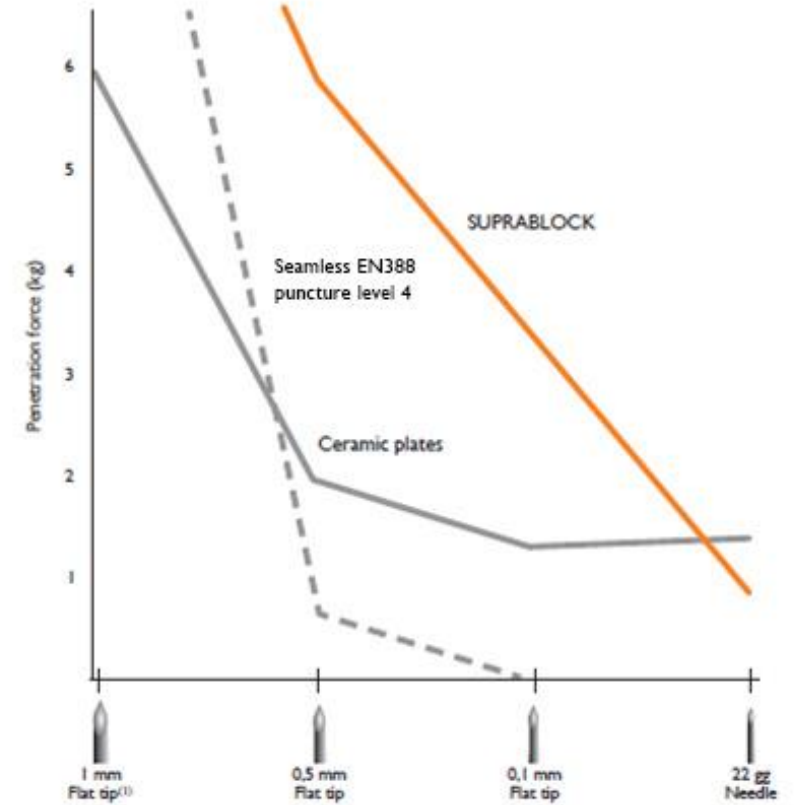
## SupraBlock Stop



## SupraBlock Soft



	Eureka SupraBlock STOP	Eureka SupraBlock SOFT
PUNCTURE 1mm probe (EN 388)	~147N	~118N
Fine PUNCTURE (0,1 mm)	~29N	~24N
NEEDLE (25gge)	9 -11N	5- 6N
Other	Initial Hardness, Waterproof	Soft, Breathable
Cut	EN 388 level 5F ISO 13997 33N	EN 388 level 3



(1) EN 388 standard

(Based on in house tests)



# EUREKAS PUNCTURE AND NEEDLE PRODUCTS

## Puncture Assembly Red

Very high puncture, needle and cut resistance



- *SupraBlock Stop* puncture resistant fabric
- Inside of palm and finger tips are protected
- Can be used under other gloves
- Breathable fabric in back of hand
- Hypodermic needle resistance
- **Cutlevel F (33N)**

## Puncture Assembly Black

Very high puncture, needle and cut resistance



- *SupraBlock Stop* puncture resistant fabric
- Inside of palm and finger tips are protected
- Black nitrile dots in palm
- Breathable fabric in back of hand
- Hypodermic needle resistance
- **Cutlevel F (33N)**

## Puncture Assembly Leather

Designed for high needle and puncture resistance



- *SupraBlock Stop* puncture resistant fabric
- Inside of palm and finger tips are protected
- Black goat leather with heat print logo
- Hypodermic needle resistance

## I5-4 Puncture Soft

Designed for dexterity, cut and needle resistance



- *SupraBlock Soft* puncture resistant fabric
- Para-aramid liner provides cut **EN388:5, F (34N)**
- Reduced flammability
- Antistatic / Dissipative textile
- Hypodermic needle resistance according to ASTM2878 : 25gg needle = **5,6 N** (28gg: 2,2N)

## Impact Xtreme HD

Very high cut, puncture and impact protection

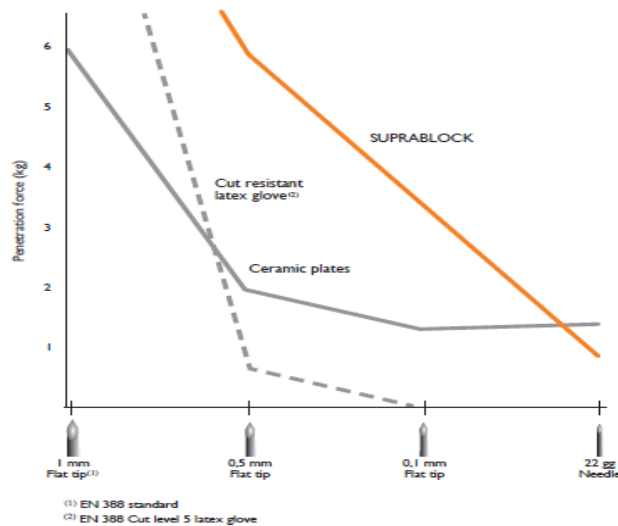


- *SupraBlock Stop* material in palm and fingers
- PVC dots in palm for improved grip in dirty/muddy conditions
- Hypodermic needle resistance according to **ASTM 2878- 25 gg. needle = 9 N** (28gg needle: 4,75N)
- **EN388 cut level 5:F (49N)**

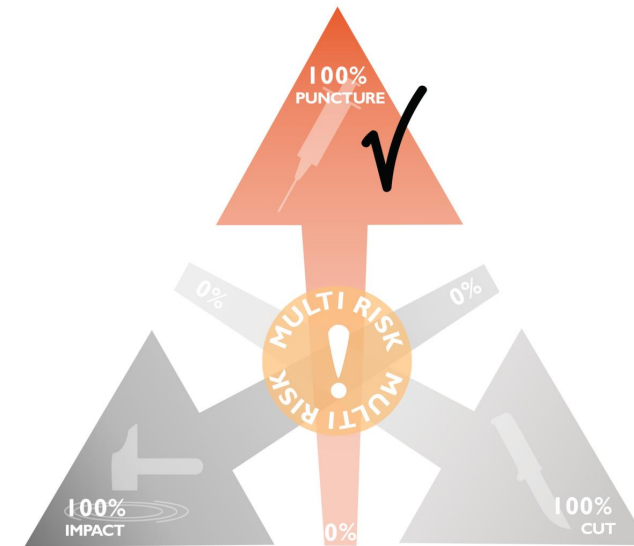
# CONCLUSIONS & 2 THINGS TO REMEMBER

1. A good rating for EN388 (1,0mm) puncture DOES NOT imply good fine needle threat resistance!
2. Eureka has two levels of needle resistant products!

Eureka Protection Graph



Triangle of Violence





# FOR MORE INFORMATION

[www.eurekasaftey.se](http://www.eurekasaftey.se)

The screenshot shows the Eureka website interface. At the top right, there are links for 'Downloads', 'FAQ', and 'Customers page' with flags for the UK and Germany. The main navigation menu includes 'Home', 'Products', 'Technology', 'About us', 'News', and 'Contact'. The Eureka logo is on the left. The main banner features a red work glove with 'PUNCTURE RESISTANCE' written on it, set against a background of wood chips. The text 'PUNCTURE RESISTANCE' is prominently displayed in white, with a sub-headline below it: '» Industry, law enforcement waste handling application'. At the bottom of the banner are five small white dots. Below the banner are three grey rectangular buttons labeled 'Company', 'Technology', and 'Products'.