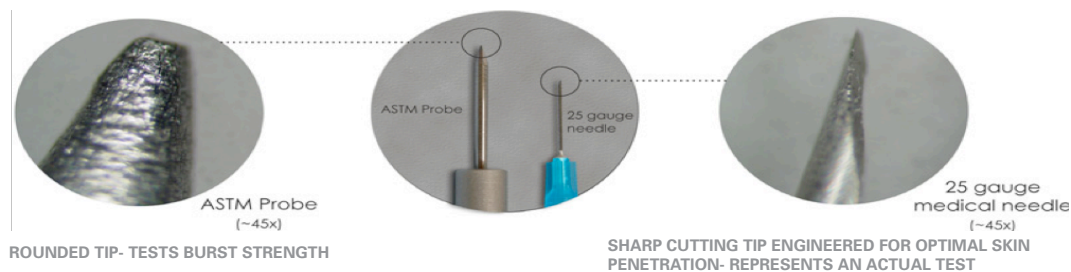




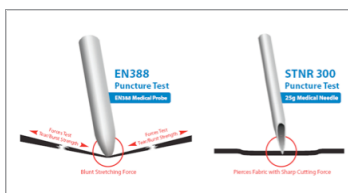
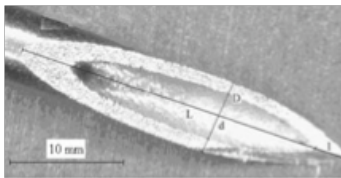
THE PROBLEM WITH INDUSTRY NEEDLE TESTS

HexArmor® products are tested against competitors using a modified EN388/ASTM 1342 with a medical needle substituted for the standard probe. This simulates real world situations with needle risks.

An article published in the Journal of ASTM international (Journal of ASTM International, Vol. 5, No. 1, Paper ID JAI101364) stated: ***"It has been shown that the protection level of protective gloves measured using the current puncture resistance standards is not relevant when dealing with medical needles."*** This finding highlights the difference in measuring needle resistance with a probe that has very different design. The picture below shows the different probe design for the ASTM/EN388 and a standard .25 gauge needle.



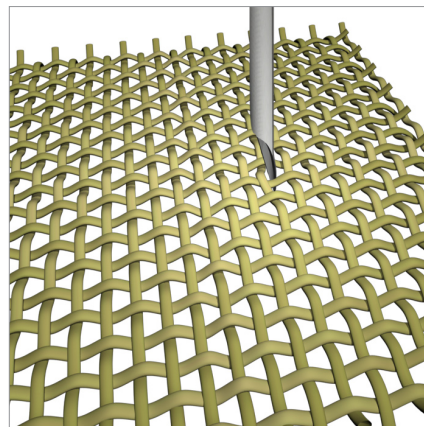
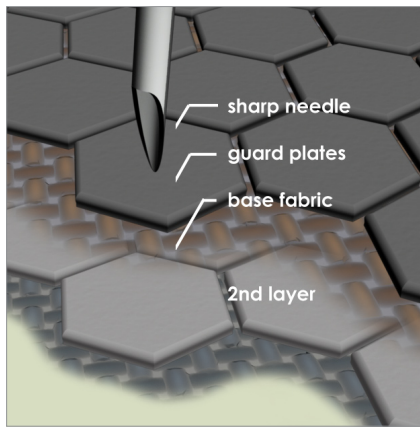
THE REAL STORY



- Needles are sharp, beveled cutting instruments designed to pierce the skin. To stop them you need to stop the cutting action by putting something hard in front of them, such as the protective guard plates found in **SuperFabric®** brand materials.
- ASTM/EN388 test probes are rounded *and* tear fabric instead of cutting as it penetrates. This rounded ASTM/EN388 tip functions more to test burst strength whereas the .25G medical needle tests true needle resistance.
- One well known notified body, SATRA has realized the deficiency and designed a new test M18 which is a similar testing procedure used at HexArmor.
- Various testing bodies throughout the world have acknowledged this deficiency and are adapting standards to meet this. Two examples are the Canadian research organization IRRST and the ASTM F23 Standards committee, who are working together to design a standard that uses the same test procedures as tested herein.

THE HEXARMOR DIFFERENCE

HexArmor needle resistant products work by layering **SuperFabric®** materials over each other. **SuperFabric®** guardplates block and deflect needle hazards, or trap and arrest them in the small gaps between guard plates. Multiple aligned layers of fabric provide extra resistance against needle hazards.



HEXARMOR NEEDLE PROTECTION ADVANTAGE

- Layered guardplates maximize resistance to all gauges of needles, providing highest needlestick resistance available by the layering of **SuperFabric®** brand material.
- Tested using actual 25 gauge needles (modified ASTM 1342-05 test)
- Highest level of cut-resistance on enhanced areas- Exceeds ISEA/CE Level 5 at 5900 Grams/59 Newtons.

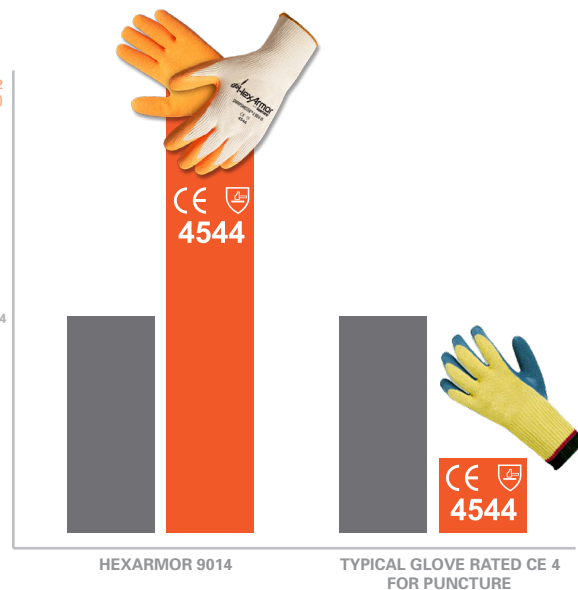
WHAT THIS MEANS

HexArmor products are tested in real world applications and are proven to reduce needlestick injuries. Using the correct test will ensure you have the right glove to protect your employees. In the example on the right, both gloves have a CE puncture rating of 4 (maximum), but resistance to .25 gauge medical needles is very different between the two.

Be cautious of gloves that rate CE 4 for puncture, they may not provide suitable needle protection.

MODIFIED ASTM 1342
(KG REQUIRED TO PUNCTURE)

CE PUNCTURE 4



*ASTM Paper Titled "Influence of Medical Needle Characteristics on the Resistance to Puncture of Protective Glove Materials," Journal of ASTM International, Vol. 5, No. 1, Paper ID JAI101364, Available online at astm.org

Call **1-877-MY ARMOR** or visit hexarmor.com

HexArmor products are cut and puncture resistant, NOT CUT AND PUNCTURE PROOF. Do not use with moving or serrated blades or tools. User shall be exclusively responsible to assess the suitability of the product as specified for any individual application or use. Protection zones are to be used as a general guide. Actual product protection zones may differ.

US Patents: 5853863, 5906873, 6159590, and foreign patents. Additional patents are pending.

