

SAFETY + REDEFINED.®



uvex

HexArmor®

We started this journey more than a decade ago. A group of hardworking people with a new technology that no one had ever seen. One that had the potential to change the way people viewed safety gloves. One that could change the lives of workers across the world.

We started with one industry and one glove. We changed, altered, tested, and trialed until we successfully eliminated all hand injuries for a large waste and recycling company. Eliminated – as in zero – none. That's when we were changing the landscape of safety forever.

# HexArmor® + uvex

We grew and expanded from hand protection to arm, leg, and body protection solving century-old safety problems. We did this by working side-by-side with our customers, creating solutions where others couldn't. When our customers started asking how we could solve other safety problems, we began to seek an innovative partner who shares our values, leads the market globally, and has changed the safety industry in the same way we changed hand, arm, and body protection.

Today, we're proud to say we've achieved just that. With the help of an innovative German PPE partner - uvex safety group – a global leader with over 90 years' experience.

This joint venture since 2016 has allowed us to combine resources and address unsolved issues in the PPE market through manufacturing, engineering, design, and technical expertise, creating the most advanced line of PPE in the industry.

The significant synergies between the two companies create tangible value added for our customers: together, uvex and HexArmor® stand for trust, safety and protecting people.

Because in the end, we aren't just PPE. We're the confidence, safety, and livelihood of those we protect.



Two brands with one global mission:  
**PROTECTING PEOPLE**

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# Hand & Body



At HexArmor,<sup>®</sup> we're continuously striving to find ways to redefine the standards of safety. Our breakthroughs in materials, design and functionality are due to workers, like you, who've helped us develop, test and refine our products directly in the field. These innovative developments have changed the way people view hand, arm and body PPE.

Our award-winning gloves and body protection feature top-level cut, puncture and abrasion resistance –all purpose-built for a wide variety of hazards and applications. No matter the job (or the weather) we have the applicable grips, fabrics, and materials that exceed the required standards and help keep you safe. These patented innovations are what make us today's trusted advisor in the safety industry – a job we take seriously.

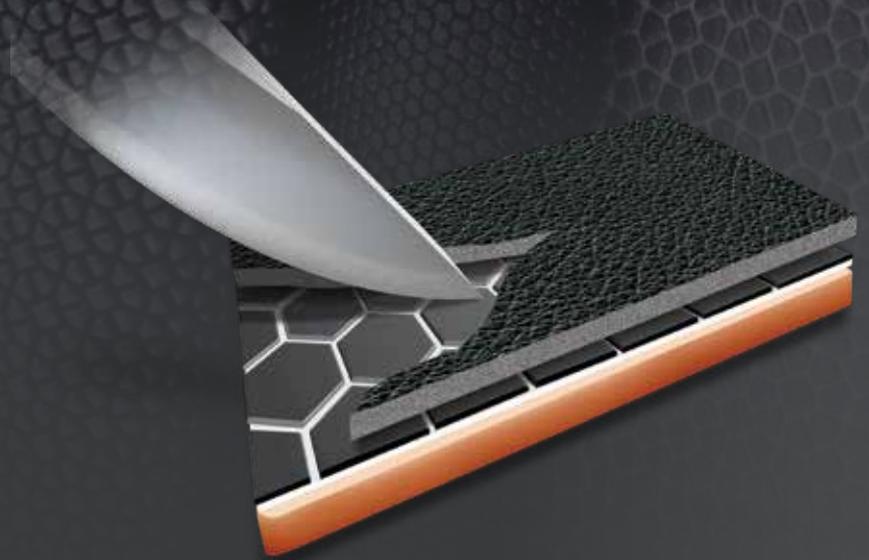
High quality products that workers feel good wearing means increased compliance, which in turn means less injuries and reduced costs. Companies all over the world are saving thousands of dollars on injury costs and missed work days by switching to HexArmor<sup>®</sup> products. We're excited and honored to help you do the same.





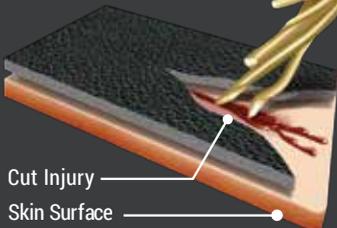
## A Cut Above

HexArmor® is an exclusive licensee of SuperFabric®\* brand material in the industrial PPE market. HexArmor® products with SuperFabric® brand material have a secret weapon against cut hazards that no other glove can boast. SuperFabric® technology is designed to prevent lacerations and slashes from reaching the skin. Performance is enhanced through the configuration of tiny guard plates.



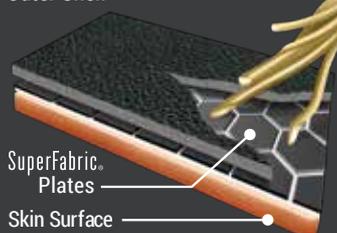
### Standard Synthetic Leather Gloves

Outer Shell



### HexArmor Elite® Synthetic Leather Gloves

Outer Shell



## Puncture Resistance

A glove with excellent cut protection often lacks adequate puncture protection, which is the number one cause of cuts. In fact, almost all lacerations begin with a puncture. Sharp hazards such as wood splinters and metal wires poke through the glove, then drag across the hand and rip through the material and the skin.

Common cut resistant materials such as Dyneema® or Kevlar® provide some protection from straight-edged hazards, but they can be easily pierced because of the knit properties of the material. HexArmor® puncture-resistant technology relies on patented SuperFabric® guard plates to stop hazards and prevent injuries. All puncture-resistant HexArmor® gloves are put to the test in the lab and in the field.

\*SuperFabric is a registered trademark of HDM, Inc.

# TECHNOLOGY

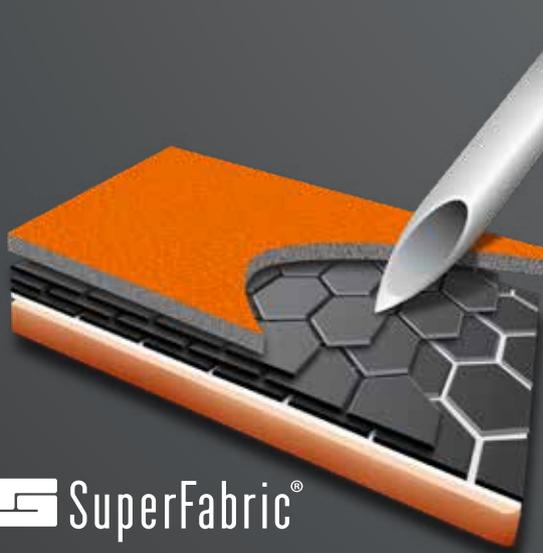
## Abrasion Resistance

HexArmor® builds superior abrasion resistance into our products. Our licensed SuperFabric® is designed for cut and puncture resistance, but it naturally delivers incredible abrasion resistance as well. In addition, we offer various highly-durable palm materials and the highest quality construction. Our innovative designs protect against the areas most exposed to friction and excessive wearing, such as the fingertips and the area between the thumb and forefinger. This keeps workers safer, while extending the glove life.

## Needlestick Resistance

Needles are sharp, beveled cutting instruments designed to pierce the skin. HexArmor® needle-resistant products work by layering SuperFabric® brand materials over each other. SuperFabric® brand material guard plates block and deflect needle hazards or trap and arrest them in the small gaps found between guard plates. Multiple aligned layers of fabric provide extra resistance against needle hazards.

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. As always, we recommend proper field testing to validate the appropriate level of protection necessary for your application.



 SuperFabric®



# TECHNOLOGY

## Impact Resistance

Impacts come in all forms, shapes and sizes on the jobsite, but have one thing in common: unpredictability. Workers must always be prepared and protected from impact and pinch points, and the patented IR-X Impact Exoskeleton™ by HexArmor® is proven to reduce the number of injuries.

HexArmor® impact protection is designed to absorb and redistribute the energy away from the hand and finger bones during an impact. Our Thermal Plastic Rubber (TPR) has the optimal durometer and height for impact dissipation. While there is no current EN 388 or ANSI/ISEA impact test yet, HexArmor® uses multiple tests to analyze the effectiveness of our own PPE materials as well as the leading competitive brands. Through these tests, HexArmor® has proven that our IR-X® Impact Exoskeleton™ helps lessen the force of an impact up to 80%, which is a greater degree than other products on the market.



## Chemical Handling

When working with chemicals, oils and other fluids, it's imperative to keep your skin protected. When exposed to hazardous liquids, workers face the risk of skin irritation, dermatitis, infections and chemical burns. In addition, there is growing concern about the unknown long-term effects of oil-based muds, commonly used in the oil & gas industry. The HexArmor Ugly Mudder® series provides protection against chemicals and liquids with a premium PVC-Nitrile coating that is cured at a high temperature which ensures optimized plasticizing and cross-linking. In addition, the coating provides superior grip and abrasion resistance, making them ideal for working on an oil rig, in a mine, or just doing some dirty jobs.

## Cold Weather

Most HexArmor® cold weather gloves combine our H2X® waterproof liner with a Thinsulate™ liner, creating a two-layer barrier from wind, water, and chill. HexArmor® believes that safety should never be sacrificed for relief from cold conditions. That's why most HexArmor® cold weather gloves provide excellent impact protection as well as various levels of cut, puncture and abrasion resistance.



## Warm Weather

HexArmor® Oasis gloves are made with HexVent® technology, which creates a breathable heat-release system, keeping hands cool and comfortable in high temperature environments. HexArmor® Oasis products still provide excellent impact protection and a variety of palm materials that provide cut, puncture and abrasion resistance.

## A Grip for Every Task

When you're on the job site, you often encounter a variety of liquids, oils, muds, and other unidentified substances. Our products offer a wide variety of grip options to provide users with the appropriate grip for the task at hand. From traditional rubber dipped and leather to more advanced synthetic leathers and TP-X®, there is an optimal grip that will help get the job done.





HexArmor® never stops innovating for worker safety. This includes the many conditions and materials that workers are required to handle on a daily basis. To this end, HexArmor® offers a wide variety of grips to optimize your PPE in any situation.

## TP-X®

TP-X® palm material excels in oils and fluids because it does not absorb liquids. This makes it ideal for maintaining grip in oily or wet conditions, when lesser gloves would fail.

## TP-X+®

This advanced material features grooves in the surface that enhance grip over time. A more robust, heavy-duty alternative to TP-X®, the TP-X+® palm provides increased cut, puncture and abrasion resistance, and may provide heat resistance as well.

## HexArmor Mud Grip®

Synthetic leather palm with PVC dots provides a solid overall grip, especially in wet conditions. The PVC dots channel away lubricants, create friction and improve grip on saturated tools.





## Leather Grip

Leather palm provides an excellent all-around grip in a variety of conditions. In addition to providing an outstanding grip, leather also naturally provides resistance to abrasions, punctures, and contact heat.



## Gator Grip Technology®

SuperFabric® brand material palm with PVC dots provides industry-leading cut resistance. SuperFabric® guard plates bite through and channel away lubricants, creating a “snow tire” effect that provides improved grip for slippery parts and tools.



## Synthetic Leather with PVC Pattern

Synthetic leather palm with larger PVC pattern that create friction and improve grip on metal tools. Good all-around grip for general tasks.



## Silicone Grip

Durable synthetic leather palm with heat-resistant hi-vis silicone pattern delivers maximum grip and dexterity.

# PALM COATING DIPS

Beyond the materials that make up our palm grips, HexArmor® also provides further grip options using a variety of dip formulas. From water repelling PVC grips to rough grain and FR compliant dips, HexArmor® has you covered for any working condition. And we're constantly researching and testing new formulas and application methods to maximize grip and function. Helping workers redefine safety at their worksite.

## PVC/Nitrile Grip

Premium PVC nitrile blend is often used in gloves designed for liquid and certain chemical resistance. It is an effective barrier against water and most watery solutions, such as detergents or diluted acids. Because PVC is 100% synthetic, it contains no latex proteins and is

## PVC/Nitrile Particle Grip

Premium PVC nitrile blend is often used in gloves designed for liquid and certain chemical resistance. It is an effective barrier against water and most watery solutions, such as detergents or diluted acids. Because PVC is 100% synthetic, it contains no latex proteins and is

## Wrinkle Rubber Latex

Wrinkle rubber latex is a flexible, non-porous palm coating that provides excellent dry grip. It offers good wet grip, but is not recommended for use with hydrocarbon and organic solvents such as gasoline as these can cause premature degradation. This polymer may cause allergic reactions in some people. When wrinkle rubber gets wet, it can turn a powdery grey; however, this does not affect

## Polyurethane

Polyurethane (PU) provides excellent dry grip that offers a balance between being tacky but not too sticky. It's a lightweight coating, helping gloves maintain a high level of dexterity and tactile sensitivity. As such, PU is good for





## Sandy Nitrile

Sandy nitrile provides a good dry and wet grip. It is lightweight, providing excellent dexterity, and it also adds a high level of abrasion resistance. A good choice for incidental contact with unknown substances such as solvents,

## Foam Nitrile

Foam nitrile excels in wet conditions, and it offers excellent oil grip because of its porous properties. Oils are channeled away from the surface of a tool, allowing for more contact with the surface area, which substantially improves grip.

## Micro Nitrile

Micro nitrile offers good dry and oil grip because of its porous properties. Formulated to be thinner and less permeable than nitrile foam coating. Microfoam coatings can

## Extra Grip (XG) Nitrile

Extra Grip nitrile is a solvent-free and derma safe nitrile coating that offers excellent grip and dexterity.

## FR-Compliant Coating

Our FR-compliant palm coating increases snag and abrasion resistance and offers exceptional dry and light oil grip. Paired with a flame-resistant knit shell of 13-gauge Kevlar® and wool, it can provide hazard risk category HRC level 1 arc flash protection: ATPV 7.7 cal/cm<sup>2</sup>, as per ASTM F2675/F2675M-13, determining arc flash rating of hand protection devices, and contact heat protection up to 100°C (212°F).

# CHROME SERIES®



## The Safest Mechanic's Style Glove on the Market

HexArmor® Chrome Series® gloves are built for a wide array of applications. Each product in the series was crafted to fit a hand with a specific purpose. With over 8 styles and various features such as impact protection, an abrasion-resistant knuckle patch, or a PVC printed palm, you can be certain that the Chrome Series® will keep your hands protected in any hazardous condition.



ANSI/ISEA CUT GRAM SCORE CE   
**A6 3941 4X22F**



## 4018 Mechanic's+

- SuperFabric® brand material palm provides industry-leading cut resistance (interior layer)
  - Cut and abrasion-resistant SuperFabric® knuckle patch
  - Synthetic leather palm
  - Reflective tape on back-of-hand
  - Neoprene cuff with pull tab and Velcro® closure
- Available in sizes 5/XXS through 12/3XL



ANSI/ISEA CUT GRAM SCORE CE   
**A8 5654 4X21FP**

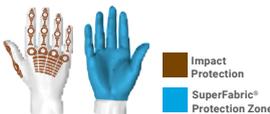


## 4024 Chrome Series®

- SuperFabric® brand material palm provides industry-leading cut resistance (interior layer)
  - Back-of-hand impact guards
  - Padded palm reduces vibration damage while returning a higher level of comfort
  - Synthetic leather palm with PVC print
  - Elastic cuff with pull tab and Velcro® closure
- Available in sizes 7/S through 11/XXL



ANSI/ISEA CUT GRAM SCORE CE   
**A8 5486 4X21FP**



## 4026 Chrome Series®

- SuperFabric® brand material palm provides industry-leading cut resistance (interior layer)
  - Back-of-hand impact guards
  - HexArmor Mud Grip® synthetic leather palm with PVC dots
  - Hi-vis color and reflective tape on back-of-hand
  - Elastic cuff with pull tab and Velcro® closure
  - Lab tested in accordance with EN407 contact heat for a level 1 performance
- Available in sizes 6/XS through 12/3XL



ANSI/ISEA CUT GRAM SCORE CE   
**A8 5126 4X41FP**



## 4027 Chrome Series®

- SuperFabric® brand material palm provides industry-leading cut resistance (interior layer)
  - Back-of-hand impact guards
  - Durable TP-X® palm with reinforced stitching
  - Enhanced palm construction for increased durability between fingers
  - Hi-vis color and reflective tape on back-of-hand
  - Elastic cuff with pull tab and Velcro® closure
- Available in sizes 7/S through 12/3XL



ANSI/ISEA CUT GRAM SCORE CE   
**A8 5261 4X21FP**



## 4030 Chrome Oasis®

- SuperFabric® brand material palm provides industry-leading cut resistance (interior layer)
  - Advanced HexVent® technology allows for a breathable heat-release system
  - Hi-vis back-of-hand impact guards
  - Synthetic leather palm with PVC print
  - Elastic cuff with pull tab and Velcro® closure
- Available in sizes 7/S through 12/3XL



ANSI/ISEA CUT GRAM SCORE EN388: 2016 CE   
**A5 2509 2X23EP**

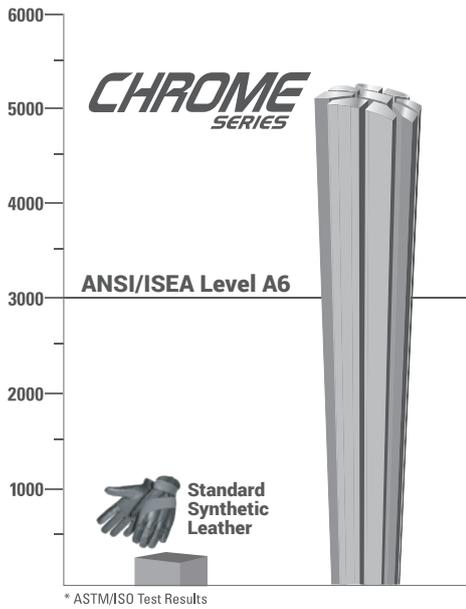


## 4060 Chrome SLT®

- Back-of-hand impact guards
  - Goatskin leather palm provides a traditional style of comfort and grip
  - Full aramid liner for 360° cut protection
  - SlipFit® cuff
  - Lab tested in accordance with EN407 contact heat for a level 2 performance
  - Lab tested in accordance with ANSI/ISEA 105 Conductive Heat for a level 2 performance
  - Lab tested in accordance with HRC ATPV: 23.6 Cal/cm2 for a level 2 performance
- Available in sizes 6/XS through 12/3XL

Contact Heat  
Large splashes of molten metal

Level 2  
Level 1



## 20X MORE Cut Resistance than Standard Synthetic Leather

Mechanic's style gloves fit well, are comfortable, and offer great dexterity. Too often, however, safety managers can't use them; thin synthetic leather and nylon aren't strong enough to prevent injuries. When 250 grams is considered cut resistant, you have a problem. This led to the idea that HexArmor® could use our advanced technologies to create safe mechanic's gloves without sacrificing comfort or dexterity. Chrome Series® gloves are built with SuperFabric® brand materials to provide the highest levels of cut resistance, over 20 times the amount offered by a standard synthetic leather glove. Don't settle for anything less than the safest mechanic's-style glove on the market.



EN388: 2016  
ANSI/ISEA CUT **A5** GRAM SCORE **2509** CE **2X23E**



EN407: 2004  
CE **422241**

Aramid Liner

Burning Behaviour **Level 4**  
Contact Heat **Level 2**  
Convective Heat **Level 2**  
Radiant Heat **Level 2**  
Small splashes of molten metal **Level 4**  
Large splashes of molten metal **Level 1**

### 4061

#### Chrome SLT®

- Goatskin leather palm provides a traditional style of comfort and grip
- Full aramid liner for 360° cut protection
- SlipFit® cuff
- Lab tested in accordance with EN407 contact heat for a level 2 performance
- Lab tested in accordance with ANSI/ISEA 105 Conductive Heat for a level 2 performance
- Lab tested in accordance with HRC ATPV: 46 Cal/cm<sup>2</sup> for a level 4 performance

Available in sizes 6/XS through 12/3XL

EN388: 2016  
ANSI/ISEA CUT **A5** GRAM SCORE **2509** CE **2X23E**



EN407: 2004  
CE **422241**

Aramid Liner

Burning Behaviour **Level 4**  
Contact Heat **Level 2**  
Convective Heat **Level 2**  
Radiant Heat **Level 2**  
Small splashes of molten metal **Level 4**  
Large splashes of molten metal **Level 1**

### 4062

#### Chrome SLT®

- Goatskin leather palm provides a traditional style of comfort and grip
- Full aramid liner for 360° cut protection
- Extended safety cuff for easy on and off
- Lab tested in accordance with EN407 contact heat for a level 2 performance
- Lab tested in accordance with ANSI/ISEA 105 Conductive Heat for a level 2 performance
- Lab tested in accordance with HRC ATPV: 46 Cal/cm<sup>2</sup> for a level 4 performance

Available in sizes 6/XS through 12/3XL

A construction worker wearing a white hard hat and a high-visibility safety vest over a blue work shirt. He is holding a pair of dark-colored work gloves. The background shows a construction site with metal scaffolding and concrete structures.

SAFETY + REDEFINED.

“Great gloves that you can trust when handling sharp materials. And they’re comfortable enough to not tempt our guys to take them off for some tasks.”



# RIG LIZARD



## A Grip for Every Job

The Rig Lizard® Series is purpose-built to provide maximum grip in tough situations – with over five grip options for water, oils, muds, and lubricants. Each glove is also equipped with our highly flexible IR-X® Impact Exoskeleton™, keeping hands protected from smash and pinch injuries. This combination of multiple technologies and features makes the Rig Lizard® the ideal solution for common oil, gas, and mining hazards. And with options for cold and warm weather protection, your hands can stay safe and comfortable in any environment.

# Rig Lizard<sup>®</sup> Technology: High-Flex Impact Protection

Handling heavy tools and materials is a fact of life for workers in the mining and petroleum industries. Consequently, they are exposed to smash and pinch hazards on a daily basis. Whether it's a bruised finger, fractured metacarpal, or something worse, blunt force impact injuries are an all-too-common occurrence on the rig. In recent years, mining and oil companies have included impact protection in their hand safety standards to address this issue and reduce the number of impact injuries on their work sites.

## NOT ALL IMPACT GLOVES ARE CREATED EQUAL

In response to the focus on impact protection, glove manufacturers have flooded the market with cheap gloves that claim to provide adequate impact protection. This has lead safety managers to believe that any glove with back-of-hand smash guards provides sufficient impact protection, and that all impact protection has a similar level of protection. In reality, smash guards have a range of protection based on a number of factors, including the thickness and resiliency of the material used, and the spaces between the guards.

Proprietary IR-X<sup>®</sup> impact technology by HexArmor<sup>®</sup> is proven to dissipate the force of sudden impact, smash and pinch hazards. HexArmor<sup>®</sup> has instituted testing using a load cell sensor. This tests both the amount of force transferred through the impact protection to the hand while wearing a glove, and the amount of time the force is felt. We have found strong evidence that our impact protection minimizes the amount of force felt through the glove, as well as lengthening the amount of time force is transferred. Together, these two factors help diminish or eliminate possible impact injuries. This testing, along with our high-flex design, is what makes it possible for our IR-X<sup>®</sup> Impact Exoskeleton™ to deliver more comfort, more protection, and more dexterity than any other impact glove on the market.

## COMFORT AND DEXTERITY

An impact glove can only prevent injuries if it's worn properly. The new high-flex impact design reduces hand fatigue, allows for higher levels of dexterity, and makes the Rig Lizard<sup>®</sup> an impact glove that's comfortable enough to wear all day. Thanks to the new high-flex design, compliance is increasing, and injuries are decreasing.





## 2021

### Rig Lizard®

- IR-X® Impact Exoskeleton™ with high-flex design
  - Additional IR-X® guard between thumb and index finger
  - Durable TP-X® palm with reinforced stitching
  - SlipFit® cuff with pull tab and nametag
  - Lab tested in accordance with EN407 contact heat for a level 3 performance
  - Protected by U.S. Patent No. D703,389
- Available in sizes 6/XS through 12/3XL

ANSI/ISEA CUT **A3** GRAM SCORE **1074** CE **4343CP**



EN407 Contact Heat  
**LEVEL 2**

Impact Protection  
TP-X® Technology



## 2025

### Rig Lizard®

- SuperFabric® brand material palm provides industry-leading cut resistance (interior layer)
  - IR-X® Impact Exoskeleton™ with high-flex design
  - Additional IR-X® guard between thumb and index finger
  - Durable TP-X+® palm with reinforced stitching
  - SlipFit® cuff with pull tab and nametag
  - Lab tested in accordance with EN407 contact heat for a level 3 performance
  - Protected by U.S. Patent No. D703,389
- Available in sizes 6/XS through 12/3XL

ANSI/ISEA CUT **A6** GRAM SCORE **3702** CE **4X44FP**



EN407 Contact Heat  
**LEVEL 2**

Impact Protection  
SuperFabric® Protection Zone



## 2090X

### Thin Lizzie™

- IR-X® Impact Exoskeleton™ with high-flex design
  - High-performance polyethylene and glass fiber blend shell provides exceptional dexterity and feel
  - Sandy nitrile palm coating
  - Reinforced thumb crotch patch
  - Protected by U.S. Patent No. D703,389
- Available in sizes 5/XXS through 12/3XL

ANSI/ISEA CUT **A4** GRAM SCORE **1725** CE **4X44EP**



Impact Protection  
HPPE Blend Shell



## 7102

### Rig Lizard® Fluid

- IR-X® Impact Exoskeleton™ with high-flex design
  - High-performance polyethylene and glass fiber blend shell provides exceptional dexterity and feel
  - Full sandy nitrile palm coating provides abrasion and fluid resistance
- Available in sizes 5/XXS through 12/3XL

ANSI/ISEA CUT **A3** GRAM SCORE **1274** CE **4X42CP**



Impact Protection  
HPPE Blend Shell



SAFETY + REDEFINED.

"Our crew loves HexArmor gloves. They're comfortable and have prevented several injuries for us in the last year. We have a lot of confidence in HexArmor gloves."

Marcus H., Rigger

# CASE STUDY - Oil & Gas

## Rig Lizard Delivers Perfect Safety Combination

Seeking the right balance of impact protection, comfort, and dexterity, a large well services company finds HexArmor® is the perfect fit. They tried virtually every other glove on the market, but only the Rig Lizard® met the company's hand protection standards and had a 98% approval rating among workers.

### Problem: Finding Impact Gloves Workers will wear

When a customer agreement mandated impact protection for certain tasks, some workers at the well services company's Alberta sites had to trade in the standard leather gloves they'd worn for years. The Safety Manager and his team began the process of finding a glove option that would help prevent impact injuries, and that workers would be willing to wear.

The challenge they and many other HSE managers face is the trade-off when you increase the protection level of your gloves. Increased impact resistance can mean lower dexterity and comfort. Because these workers were accustomed to wearing leather gloves, this discomfort made people initially resistant to the change. The safety team found that workers weren't wearing the impact gloves they were given, even though they understood and accepted the new mandate. Workers complained the gloves weren't flexible enough, didn't fit properly, or otherwise interfered with their ability to do their jobs.

In addition to impact, the well services company's updated hand standards require a higher level of cut protection (for certain tasks) than previous gloves provided, plus puncture and abrasion resistance. To find a glove that would meet all of these criteria and also garner widespread adoption among workers, the well services company's safety team field tested virtually every glove on the market. "Pretty much anything you can



IR-X® Impact Exoskeleton™ with high-flex design protect against forceful

think of, we tried it in one application or another," said the Safety Manager.

They trialed glove after glove, but nothing was a good fit. Most were not "user-friendly," meaning workers didn't like wearing them because they felt the gloves impeded their ability to do work. Some gloves were too stiff. Others lacked sufficient protection. Some would fall apart after a day or two of use. Then they tried the Rig Lizard® by HexArmor® .

### The Rig Lizard® is a Perfect Fit

After field testing Rig Lizard® gloves with their workers, the well services company's safety team immediately knew they'd found the right solution. The Rig Lizard® has industry leading cut resistance, provides excellent puncture and abrasion resistance, and an extremely high level of impact protection. Rig Lizard® gloves deflect 80% of the force of a blow to the back of the hand, while still maintaining a high level of comfort and dexterity.

- Every 32 seconds, there is a hand injury in the workplace.
- According to an industry study, smash and contusion injuries make up more than half of all hand injuries on drill sites.
- Cuts and punctures are the second highest cause of hand injuries in the petroleum industry.
- According to 2009-2010 data from the National Safety Council, the average total cost incurred after a hand injury is \$21,918
- Hand injuries across all industries result in an average 5 to 11 days away from work, not counting rehabilitation.

Even more importantly, almost all the workers who needed impact protection were happy to wear them. of the hand, while still maintaining a high level of comfort and dexterity. Even more importantly, almost all the workers who needed impact protection were happy to wear them.

## Better Gloves, Better Protection, Better Investment

The workers at this well services company in Alberta are pleased with their HexArmor® gloves. They have the dexterity needed to do their jobs effectively, and the protection they need to work safely. “The protection seems to be a lot better than other gloves we’ve used,” said the Safety Manager. “All around just a better glove that people actually want to wear.”

Even though HexArmor® costs more than leather and other standard gloves, the safety team in Alberta received a better return on their investment. HexArmor® gloves are more durable than anything else they’ve used. With proper care and laundering, workers are able to use the same pair for up to three weeks at a time, and in some cases, even longer. Compared to other gloves that disintegrate after a day or two of use, it’s entirely possible to save money by purchasing high quality PPE that provides higher levels of protection.



A pair of Rig Lizard® gloves after three months on the job.

## Proactive Safety Program Equals Great Safety Record

Many companies wait until they have an injury before they make the decision to start looking for new safety gloves. The safety team for the well services company in Alberta, however, is always on the lookout for the best product on the market. “If we have a product that works well, we’re still looking for the next thing to come along, and see how much better it is.” This is certainly one

of the reasons their injury rate has gone down year over year consistently.

*HexArmor® is an industry leading manufacturer of high performance personal protective equipment (PPE) made with technologies that push the limits of cut, puncture, needle, and abrasion resistance. Our mission is simple: give you better products with better technology designed with end user needs and collaboration. HexArmor® works with industries from oil and gas, to mining, food processing and waste recycling to design the best working and most protective glove available today.*

### Grip and Dexterity

The mining industry demands grip and dexterity to allow maintenance workers to handle tools and knives without slipping under extreme pressure. HexArmor® has a variety of grip solutions for the toughest mine site applications.

### Smash Protection

Proprietary HexArmor® IR-X® Impact Exoskeleton™ with advanced shock-absorbing materials deliver a superior level of protection and have the ability to absorb blunt force impacts better than any other product on the market.



## Engineered to Provide Maximum Protection

The GGT5® Series was built to be the toughest oil, gas, and mining glove on the market. With such a high level of safety hazards on these job sites, we made sure that the GGT5® Series was complete with industry-leading cut protection and an IR-X® Impact Exoskeleton™. Our specialized grips are designed to handle long days working with heavy tools, pipes, and machinery, to give workers the protection needed to get the job done.



| ANSI/ISEA CUT | GRAM SCORE | CE | EN     |
|---------------|------------|----|--------|
| A8            | 5234       | 4  | 4X44FP |



Impact Protection  
SuperFabric®  
Protection Zone

## 4021X GGT5®

- SuperFabric® brand material palm provides industry-leading cut resistance (interior layer)
- Full Impact Exoskeleton™ with high-performance IR-X® smash guards
- HexArmor Mud Grip® synthetic leather palm with PVC dots works well with light/medium oil-based muds
- Durable TP-X® palm patches
- SlipFit® cuff with pull tab and nametag

Available in sizes 7/S through 12/3XL

“The hand protection is far superior to any other glove I have used. Anything coming into contact with the front of my hand was easily dampened by the padding, and that is a very big deal when nothing I work with weighs less than a couple hundred pounds.”

J.M., Precision Drilling



## You Do the Job that No One Else Can Do

When we took on the mission of creating the world's safest rescue glove, we knew we couldn't do it alone. Building the perfect safety glove for the toughest first responders takes a lot of work, so we put it back on the hardest workers we know. We went out and asked the heroes in the field what they needed out of their rescue gloves. It's a good thing we did; they helped us create a line of products that we are proud to call the HexArmor® EXT Rescue® Series.



ANSI/ISEA CUT A8    GRAM SCORE 5475    CE    4X43FP

## 4011

### EXT Rescue®

- SuperFabric® brand material palm provides industry-leading cut resistance (interior layer)
- Full Impact Exoskeleton™ with high-performance IR-X® smash guards
- Full TP-X® palm with reinforced stitching
- Neoprene cuff with pull tab and Velcro® closure

Available in sizes 7/S through 11/XXL



Impact Protection  
SuperFabric® Protection Zone

ANSI/ISEA CUT A8    GRAM SCORE 5201    CE    4X41FP

## 4013

### EXT Rescue®

- SuperFabric® brand material palm provides industry-leading cut resistance (interior layer)
- Durable TP-X® palm with reinforced stitching
- Enhanced palm construction for increased durability between fingers
- Back-of-hand impact guards
- SlipFit® and anti-debris cuff

Available in sizes 7/S through 11/XXL



Impact Protection  
SuperFabric® Protection Zone

# 9000 SERIES™



## The Perfect Union of Performance and Comfort

The versatile 9000 Series™ offers a line of palm-coated knit gloves, supplemented with SuperFabric® brand materials for industry-leading cut resistance, and purpose-built for a variety of industrial applications. Most of the 9000 Series™ gloves feature a unique palm coating, maintaining the highest grip in varying conditions while providing increased abrasion resistance to extend product life.



ANSI/ISEA CUT GRAM SCORE CE   
**A8 5364 4X44F**

## 9010 9000 Series™

- SuperFabric® brand material palm provides industry-leading cut resistance (interior layer)
  - High-performance polyethylene and glass fiber blend shell provides exceptional dexterity and feel
  - Flat nitrile palm coating
- Available in sizes 6/XS through 11/XXL



ANSI/ISEA CUT GRAM SCORE CE   
**A7 4818 4X44F**

## 9011 9000 Series™

- SuperFabric® brand material palm provides industry-leading cut resistance (interior layer)
  - Cotton blend shell provides exceptional dexterity and feel
  - Wrinkle rubber latex palm coating
- Available in sizes 7/S through 11/XXL



# HELIX®



## Dexterity, Durability, and Purpose-Built Grip

No matter what the job, there's a Helix® glove for your needs. Each glove in the Helix® Series is made with high-quality yarns, providing a highly dexterous, extremely comfortable shell that can be worn all day without causing hand fatigue. This light-duty line of seamless gloves offers a variety of palm coatings that can be used for wet, oily, and dry situations, and provides additional abrasion resistance.

# Every Worker. Every Glove. **Every Day.**

Innovation intertwined with cut-resistance, high dexterity and a breadth of grip options - that's the Helix® Series. Helix® from HexArmor® features exceptionally seamless gloves with strong, yet extremely dexterous, natural, and engineered yarns that offer the largest range of protection on the market. A series that answers the call of duty from the manufacturing floor to the construction site, these seamless gloves have consistent sizing and fit in a variety of palm coatings that can be used for everything – wet, oily, or dry applications.

**REACH**  
COMPLIANT

REACH Compliant: Avoidance of substances classified as carcinogenic, mutagenic or reprotoxic, persistent, bioaccumulative or toxic.

| ANSI/ISEA CUT | GRAM SCORE  | CE            | EN |
|---------------|-------------|---------------|----|
| <b>A3</b>     | <b>1131</b> | <b>4X43DP</b> |    |



**Impact Protection**  
**HPPE Blend Shell**

**REACH**  
COMPLIANT

## 2096

**Helix®**

- 13-gauge HPPE and fiberglass blend shell
- Flexible sandy nitrile palm coating
- Back-of-hand IR-X® Impact Exoskeleton™ with high-flex design

Available in sizes 6/XS through 11/XXL





## The Most Comfortable Work Gloves Ever Made

From the leader in industrial hand protection comes the Hex1® Series, because we know that not all jobs require heavy-duty safety gloves. Sometimes you just need a pair of gloves that look great, feel great, work great and last. Hex1® gloves are made with the same high-quality materials as our high-performance safety gloves and perform better than any mechanic's glove you've ever worn. Whether you're looking for impact protection, wet or dry grip, cold weather protection or simply a shop-glove, you're sure to find a Hex1® to fit your needs.



CE  
1132

Impact Protection

## 2125

### Hex1® Series

- Light back-of-hand impact protection against bumps and tool slips
  - Back-of-thumb brow cloth
  - Reinforced index finger and thumb saddle
  - Lightly padded goatskin leather palm with reinforced stitching
  - SlipFit® cuff with pull tab
  - Nametag on palm side of cuff
  - Available in dark color scheme for increased concealment in covert situations (2125-BLK)
- Available in sizes 7/S through 12/3XL





# PointGuard<sup>®</sup> *ULTRA*

WITH SuperFabric<sup>®</sup>



## The Industry's Top Needlestick Solution

The ANSI/ISEA standard was updated in February 2016 to include the ASTM F2878-10 needlestick puncture test for hypodermic needles, but HexArmor<sup>®</sup> has been using this test method for years as a performance metric for all our needlestick-resistant products. SuperFabric<sup>®</sup> brand material in HexArmor<sup>®</sup> needlestick products has consistently outperformed the competition in not only needlestick resistance, but also in cut protection, which is an equally-important attribute for several industries such as sanitation and recycling.

# Don't Get Stuck with Faulty Hand Protection

The precise cost of needlestick injuries is difficult to quantify. According to the American Hospital Association, one case of serious infection by bloodborne pathogens can add up to \$1 million or more in expenses for testing, lost work time, and disability payments. Even when no infection occurs, the cost to organizations is estimated to be more than \$3,000 per injury for testing, counseling, and time off work.

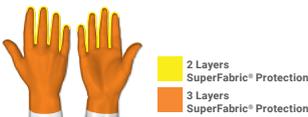
HexArmor® sets the industry standard for needle protection with solutions for a variety of applications. Our needlestick-resistant products do more than simply pass industry-accepted testing methods; we put them through real-world applications countless times, with a history of undeniable success. The accepted standards of testing do not account for the many variables employees face on the jobsite, so we created our own tests, mirroring the conditions and hazards that our users face.



## 3041 Hercules® NSR

- SuperFabric® brand material provides industry-leading needlestick resistance (in noted enhanced areas)
  - Full coverage design and pre-curved shape for maximum comfort and protection
  - Silicone dot palm grip
- Available in sizes 7/S through 11/XXL

|               |            |    |       |
|---------------|------------|----|-------|
| ANSI/ISEA CUT | GRAM SCORE | CE | 4X12F |
| A9            | 8668       |    |       |
| NEEDLESTICK   | NEWTONS    |    |       |
| LEVEL 5       | 11.59      |    |       |



## 4041 PointGuard® Ultra

- SuperFabric® brand material provides industry-leading needlestick resistance (in noted enhanced areas)
  - Back-of-hand knuckle padding for incidental bumps/impact
  - Comfortable memory span liner
  - Silicone dot palm grip
  - Neoprene™ cuff with Velcro® closure
- Available in sizes 6/XS through 11/XXL

|               |            |    |       |
|---------------|------------|----|-------|
| ANSI/ISEA CUT | GRAM SCORE | CE | 4X42F |
| A9            | 6679       |    |       |
| NEEDLESTICK   | NEWTONS    |    |       |
| LEVEL 5       | 11.546     |    |       |



## 4045 PointGuard® Ultra

- SuperFabric® brand material provides industry-leading needlestick resistance (in noted enhanced areas)
  - Back-of-hand knuckle padding for incidental bumps/impact
  - Silicone palm pattern for enhanced grip
  - Airprene cuff with Velcro® closure
- Available in sizes 6/XS through 11/XXL

|                       |                       |    |       |
|-----------------------|-----------------------|----|-------|
| ANSI/ISEA CUT         | GRAM SCORE            | CE | 4X22F |
| A7                    | 4321                  |    |       |
| NEEDLESTICK           | NEWTONS               |    |       |
| LEVEL 2               | 5.284                 |    |       |
| SuperFabric®          | SuperFabric®          |    |       |
| LEVEL 3               | 6.9                   |    |       |
| 2 Layers SuperFabric® | 2 Layers SuperFabric® |    |       |



## 4046 PointGuard® Ultra

- SuperFabric® brand material provides industry-leading needlestick resistance (in noted enhanced areas)
  - Aramid liner for back-of-hand protection
  - Premium goatskin leather
  - SlipFit® cuff
- Available in sizes 6/XS through 11/XXL

|               |              |                       |                       |
|---------------|--------------|-----------------------|-----------------------|
| ANSI/ISEA CUT | GRAM SCORE   | NEEDLESTICK           | NEWTONS               |
| A7            | 4064         | LEVEL 2               | 5.8                   |
|               | SuperFabric® | SuperFabric®          | SuperFabric®          |
|               | 804          | LEVEL 4               | 9.84                  |
|               | Aramid       | 2 Layers SuperFabric® | 2 Layers SuperFabric® |





## 6044 PointGuard® Ultra

- SuperFabric® brand material provides industry-leading needlestick resistance (in noted enhanced areas)
- Recommended use as an underglove solution with appropriate top-glove combination
- Lightweight spandex shell with elastic wrist

Available in sizes 5/XXS through 11/XXL

| ANSI/ISEA CUT | GRAM SCORE | CE    | EN |
|---------------|------------|-------|----|
| A9            | 6408       | 4X33F |    |
| NEEDLESTICK   | NEWTONS    |       |    |
| LEVEL 4       | 8.6        |       |    |



3 Layers  
SuperFabric® Protection



## 7082 SharpsMaster HV®

- SuperFabric® brand material provides industry-leading needlestick resistance (in noted enhanced areas)
- Single-glove needle solution with incredible dexterity and comfort
- Flat nitrile three-quarter knuckle coating

Available in sizes 7/S through 10/XL

| ANSI/ISEA CUT | GRAM SCORE | CE    | EN |
|---------------|------------|-------|----|
| A9            | 7345       | 4X33F |    |
| NEEDLESTICK   | NEWTONS    |       |    |
| LEVEL 4       | 9.87       |       |    |



3 Layers  
SuperFabric® Protection



## 9014 SharpsMaster II®

- SuperFabric® brand material provides industry-leading needlestick resistance (in noted enhanced areas)
- Cotton blend shell provides exceptional dexterity and feel
- Wrinkle rubber latex palm coating with Actifresh™ antimicrobial treatment

Available in sizes 6/XS through 10/XL

| ANSI/ISEA CUT | GRAM SCORE | CE    | EN |
|---------------|------------|-------|----|
| A9            | 7167       | 4X44F |    |
| NEEDLESTICK   | NEWTONS    |       |    |
| LEVEL 5       | 10.279     |       |    |



3 Layers  
SuperFabric® Protection



## AG8TW 8" Needle Resistant Arm Guard

- SuperFabric® brand material provides industry-leading needlestick resistance
- Won't fall down like knit sleeves
- Spandex wrist insert with thumb hole and snap fasteners

Available in sizes 7/S through 12/3XL

| ANSI/ISEA CUT | GRAM SCORE | CE | EN |
|---------------|------------|----|----|
| A8            | 5254       |    |    |
| NEEDLESTICK   | NEWTONS    |    |    |
| LEVEL 2       | 5.5125     |    |    |



2 Layers  
SuperFabric® Protection

SAFETY + REDEFINED.®

"HexArmor® needlestick gloves are the best hand protection on the market. Our HexArmor® rep helped us define our areas of concern and recommended the perfect solution for us. And it's really paid dividend on reducing our injury rates."

Regional Safety Manager

# Puncture & Needle Testing Explained

## The New ANSI/ISEA 105 Test

In February of 2016, the ANSI/ISEA 105 standard was updated and published to include two puncture standards: Puncture Resistance (other than hypodermic needle) and Hypodermic Needlestick Puncture. Prior to 2015, there was only one puncture test, which did not specify the type of puncture hazard the standard was created for, leaving it open for interpretation.



### **EN388: Industrial Puncture Resistance (Non-Hypodermic Needlestick Puncture)**

The EN388 probe is the approved puncture test for ANSI/ISEA 105 and measures the amount of force needed for a blunt probe to pierce through the sample material (taken from palm).

- The blunt probe moves at a 90° angle at a speed of 100mm/minute
- Results are reported in Newtons and are given a 1-5 classification rating, with 1 being low resistance and 5 being high resistance
- The test is done 4 times for every palm sample
- The lowest score is reported

### **ASTM F2878: Hypodermic Needlestick Puncture Resistance**

The ASTM F2878 is the approved puncture test for ANSI/ISEA 105 and measures the amount of force needed for a 25-gauge hypodermic needle to pierce through the sample material.

- The puncture probe (25-gauge needle) travels at a 90° angle into specimen at a vector of 500 millimeters per minute.
- Results are reported in Newtons and are giving a 1-5 classification rating, with 1 being low resistance and 5 being high resistance
- The test is done 12 times for every palm sample
- The average of the 12 results is reported



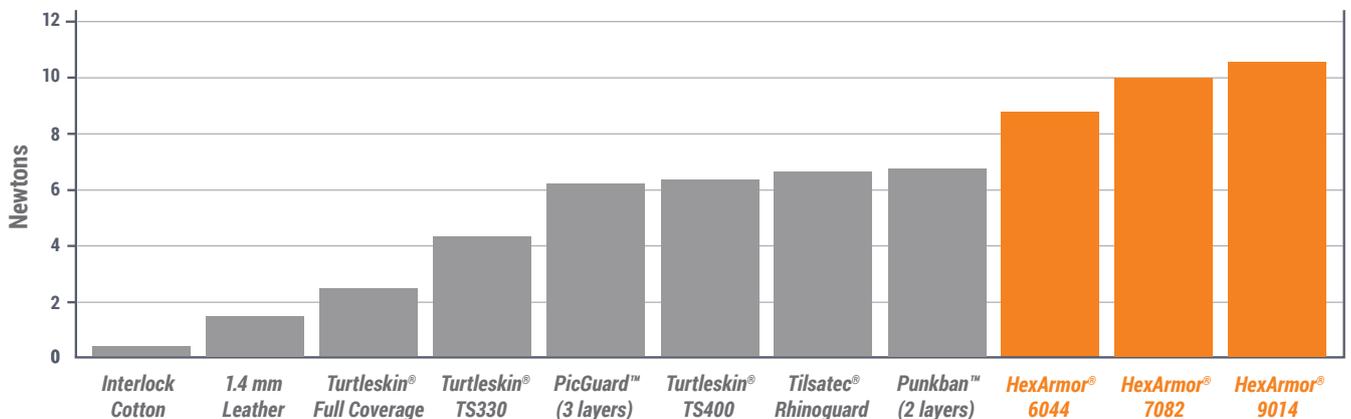
Having both an industrial puncture standard and a hypodermic needle puncture standard allows safety managers to differentiate between what protection they need most, based on more relevant testing and classification.

### The Results

We tested our needlestick and puncture-resistant gloves, as well as competitive gloves, using the ASTM F2878 methodology, producing the following results:

*Our needlestick-resistant gloves and arm guards aren't just lab tested, we test them with actual 25-gauge needles to give you maximum protection and peace of mind.*

## ASTM-F2878 Needle Resistance Comparison



\*The newton is the Standard International unit of force. One newton is the force required to cause a mass of one kilogram to accelerate at a rate of one meter per second squared in the absence of other force-producing effects.

HexArmor®

**HEAVY  
DUTY**



## The Toughest, Most Durable Gloves on the Market

Some job sites require more protection – they demand the strongest, toughest, and most resilient safety gloves. HexArmor® has spent many years on sites like this – it's how we created the heavy-duty line of products. Built to handle the most extreme occupational hazards, HexArmor® heavy-duty gloves are built from the inside out, with proprietary technologies that provide industry-leading cut and industrial puncture resistance. We put everything we have into building our heavy-duty line of safety gloves, and the result is purpose-built PPE you can trust.



| ANSI/ISEA CUT | GRAM SCORE | CE | EN |
|---------------|------------|----|----|
| A9            | 6380       |    |    |



2 Layers SuperFabric® Protection

## 400R6E Hercules®

- SuperFabric® brand material provides 360° industry-leading cut resistance (interior layer)
- Industrial puncture protection on enhanced areas protects against wires, metal, wood, and glass
- Gauntlet design and pre-curved shape for maximum comfort and ultimate protection
- Silicone palm grip
- Extended gauntlet style cuff

Available in sizes 8/M through 11/XXL



# ARM & BODY PROTECTION



## Armor Up!

No more snags, punctures, abrasions, or cuts to your arms and torso. HexArmor® industrial aprons and body protection outperform, outlast, and fit better than the competition. HexArmor® body protection with SuperFabric® brand materials provides industry-leading cut resistance, giving you the protection you need most, where you need it.

# COMPETITIVE FABRICS DON'T ALWAYS CUT IT WHERE PROTECTION IS NEEDED MOST

While common cut-resistant products, with blends of yarns such as Kevlar®, Dyneema®, or Spectra®, give some minimal protection from straight edged cut hazards, they don't offer sufficient protection from variable hazards such as knives, metal burrs, wires, or slivers commonly found in industrial environments. HexArmor® body protection provides industry-leading cut resistance, giving you the protection you need most, where you need it.

No other competitive product comes close.



## AG10009S 9" Arm Guard

- SuperFabric® brand material provides industry-leading cut resistance
  - Industrial puncture protection on enhanced areas protects against wires, metal, wood, and glass
  - Spandex wrist insert with thumb hole
- Available in sizes 6/XS through 12/3XL

ANSI/ISEA CUT **A7** GRAM SCORE **4425** CE **4X42F**



SuperFabric®  
Protection Zone



## AS019S 19" Arm Guard

- SuperFabric® brand material provides industry-leading cut resistance
  - Industrial puncture protection on enhanced areas protects against wires, metal, wood, and glass
  - Neoprene thumb loop and sleeve clip keeps sleeve from falling
- Available in sizes 6/XS through 12/3XL

ANSI/ISEA CUT **A7** GRAM SCORE **4425** CE **4X42F**



SuperFabric®  
Protection Zone



## 1010 PentaArmor®

- SuperFabric® brand material provides industry-leading cut resistance
  - Elastic thumb loop and sleeve clip keeps sleeve from falling
  - Hi-vis color scheme for visibility
- Available in sizes 7/S through 11/XXL

ANSI/ISEA CUT **A7** GRAM SCORE **4886** CE **4X21F**



SuperFabric®  
Protection Zone



## AP229 20" x 30" Apron

- SuperFabric® brand material provides industry-leading cut resistance
  - Industrial puncture protection on enhanced areas protects against wires, metal, wood, and glass
  - Medium weight (single layer)
- One size fits most

ANSI/ISEA CUT **A7** GRAM SCORE **4425** CE **4X42F**



SuperFabric®  
Protection Zone



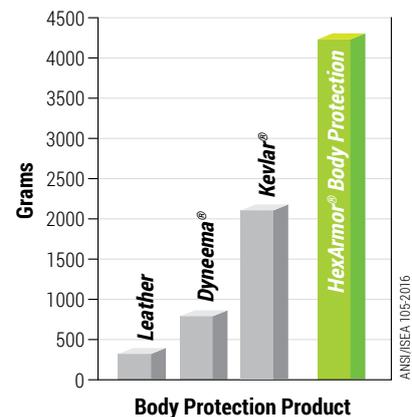
## AP322 24" x 30" Apron

- SuperFabric® brand material provides industry-leading cut resistance
  - Industrial puncture protection on enhanced areas protects against wires, metal, wood, and glass
  - Heavy weight (double layer, AP322)
- One size fits most

ANSI/ISEA CUT **A9** GRAM SCORE **7377** CE **4X44F**



SuperFabric®  
Protection Zone



# Glove Sizing Guide

Industrial gloves fit differently than most gloves because of the materials used to provide protection. We recommend using our sizing charts and reviewing glove descriptions and materials. If you are still uncertain about what size would best fit your hand, give us a call at 1-616-459-4144.

## Measure Your Hand (Recommended)

Using a string or measuring tape, measure the circumference around the knuckles, excluding the thumb. Your hand should be open with the fingers together. Compare this measurement to the chart on the right to determine your glove size.

## Or, Place Your Hand on the Chart Below

Place your right hand on the glove chart so that the saddle of your thumb and index finger line up with the X. The measurement closest to the right edge of your hand will be the appropriate glove size.

| Hand Circumference              | HexArmor® Size |
|---------------------------------|----------------|
| 5 in. (12 cm) - 6 in. (15 cm)   | 5/XXS          |
| 7 in. (18 cm) - 7½ in. (19 cm)  | 6/XS           |
| 7½ in. (19 cm) - 8 in. (20 cm)  | 7/S            |
| 8 in. (20 cm) - 8½ in. (21½ cm) | 8/M            |
| 8 in. (21½ cm) - 9 in. (23 cm)  | 9/L            |
| 9 in. (23 cm) - 10 in. (25 cm)  | 10/XL          |
| 10 in. (25 cm) - 11 in. (28 cm) | 11/XXL         |
| 11 in. (28 cm) - 12 in. (30 cm) | 12/3XL         |

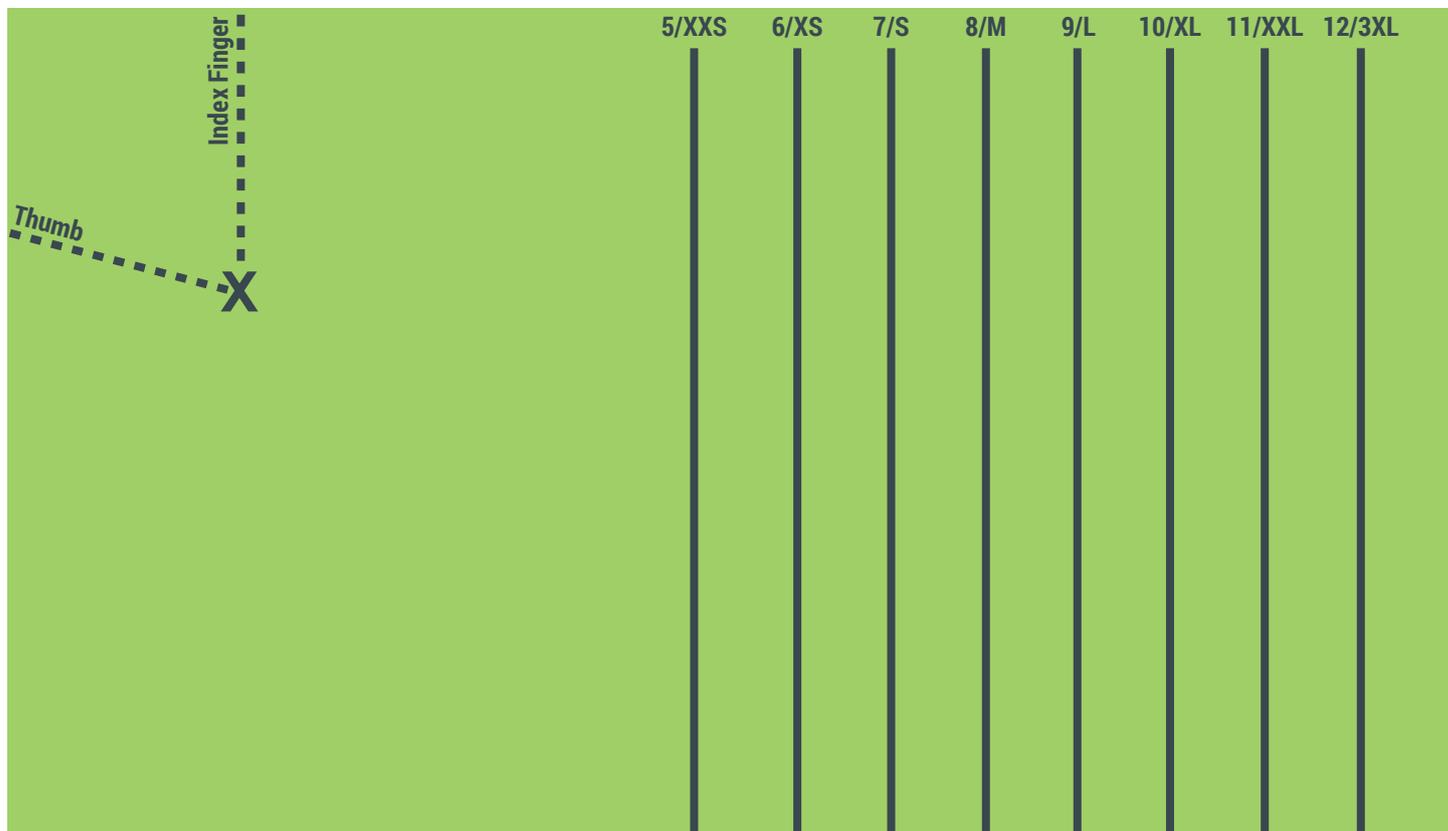


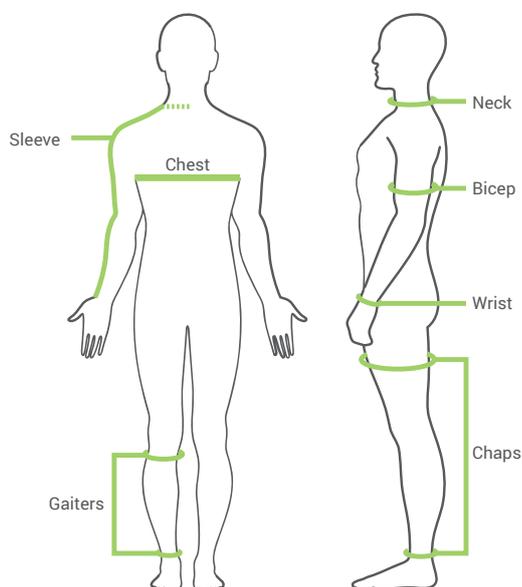
Chart Should Be 7 1/2 in. (19 cm)

# Arm & Body Protection

You may need to order one size larger when wearing arm guards over shirt sleeves, in which case we recommend measuring over your clothes. Having someone assist you will ensure accurate measurements.

## How to Measure

- **Neck:** Measure the circumference where a standard button-down type collar would be fastened.
- **Bicep:** Measure around the widest part, a few inches below the shoulder.
- **Chest:** Measure the circumference at the fullest point, keeping the tape horizontal around the body.
- **Sleeve length:** Measure the distance from the prominent bone in the center on the back of the neck, across the shoulder, over the bent elbow, to the wrist bone.



| Product               | 6/XS  | 7/S   | 8/M   | 9/L   | 10/XL   | 11/XXL  | 12/3XL  |
|-----------------------|---|---|---|---|---|---|---|
| AG8TW                 | n/a   | Length 9.1cm<br>Wrist 20.3cm<br>Width 25.4cm  | Length 19.7cm<br>Wrist 20.3cm<br>Width 25.4cm | Length 21.6cm<br>Wrist 22.9cm<br>Width 27.9cm | Length 23.5cm<br>Wrist 24.1cm<br>Width 31.8cm | Length 25.4cm<br>Wrist 25.4cm<br>Width 35.6cm | Length 25.4cm<br>Wrist 31.8cm<br>Width 40.6cm |
| AG10009S,<br>AG10009V | Length 24.1cm<br>Wrist 21.6cm<br>Width 31.1cm | Length 24.1cm<br>Wrist 22.9cm<br>Width 33.0cm | Length 26.0cm<br>Wrist 26.0cm<br>Width 36.2cm | Length 26.7cm<br>Wrist 29.2cm<br>Width 38.1cm | Length 27.9cm<br>Wrist 35.6cm<br>Width 43.2cm | Length 27.9cm<br>Wrist 35.6cm<br>Width 44.5cm | Length 31.1cm<br>Wrist 36.8cm<br>Width 45.7cm |
| 1010                  | n/a   | Length 41.1cm<br>Wrist 17.8cm<br>Bicep 37.5cm | Length 45.7cm<br>Wrist 21.6cm<br>Bicep 41.9cm | Length 48.3cm<br>Wrist 24.1cm<br>Bicep 48.3cm | Length 50.8cm<br>Wrist 27.3cm<br>Bicep 51.4cm | Length 53.3cm<br>Wrist 30.5cm<br>Bicep 55.9cm | n/a   |

# Cut Standards Explained

In February 2016, the standards outlined in the American National Standard Institute (ANSI) and International Safety Equipment Association (ISEA) for Hand Protection Selection Criteria (ANSI/ISEA 105-16) changed. In April 2018, changes were also made to the EN 388 European regulatory standard for protective gloves (CE). These new glove standards will help safety managers choose the proper hand protection with greater precision and confidence.

## Understanding the Changes to the ANSI/ISEA 105 American National Standard for Hand Protection

To apply consistent meaning to ANSI/ISEA 105 cut ratings for the end user, a single test method is now used for establishing cut levels (ASTM F2992-15). In addition, the number of classification levels was expanded both to address the gaps of protection between cut levels and to model the classification approach used in similar international standards.

The standard employs a 9-level scale (expressed as A1-A9) that spans 0 grams to 6,000 grams of cut resistance. This allows for more accurate identification of cut protection. The most significant change calls for cut level 4—which formerly ranged from 1,500 grams to 3,500 grams of cut resistance – to be divided into three separate levels. The more granular rating allows end users to better identify a level of cut resistance that meets their specific safety requirements.

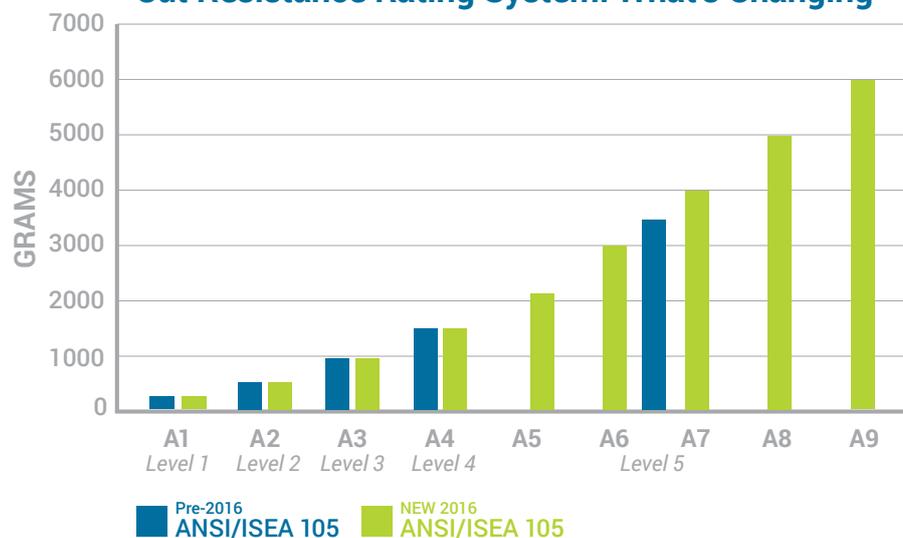
## ANSI/ISEA 105 Cut Resistance Testing

In addition to a more accurate cut resistance classification scale, the ANSI/ISEA 105-16 now only references the Tomodynamometer Test Method (TDM) based on the ASTM F2992-15, discarding the Cut Protection Performance Tester (CPPT) methods formerly recognized as the alternative test(s). The TDM determines the amount of weight, measured in grams, necessary for a blade to achieve cut-through of PPE material at the reference distance of 20 MM of blade travel (a change from the old standards which referenced both 20 MM and 25 MM, depending on the testing standard used).

## Understanding the Changes to the EN 388 European Standard for Cut Resistance

As of April 2018, a number of important changes were finalized to the EU cut resistance standard, EN 388. Most notably, the changes address inconsistencies with the Coup Test and provide additional cut levels for highly cut-resistant materials.

## Cut Resistance Rating System: What's Changing

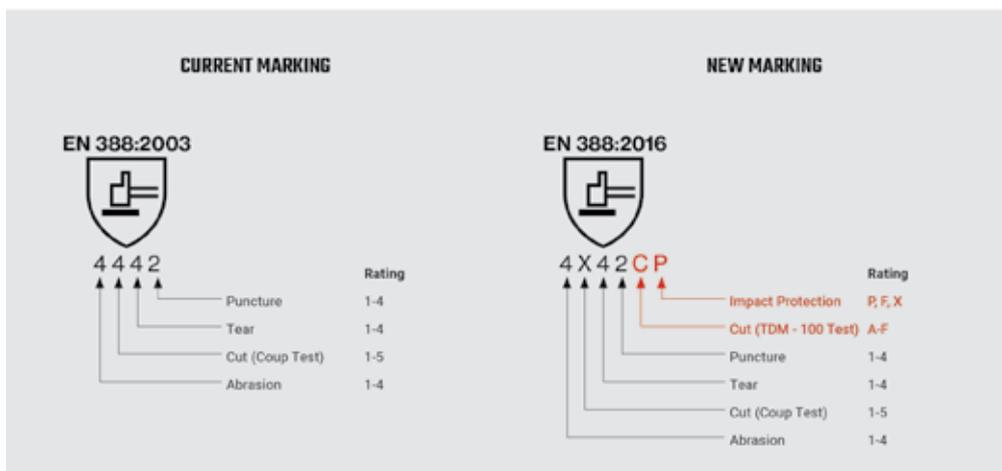


## EN 388 Cut Resistance Testing + New Glove Markings

The EN 388 standard now requires the Coup Test and the TDM-100 Test (ISO 13977) in certain situations. The TDM-100 test is required only if a highly cut-resistant material has not been cut through after 60 rotations with the Coup Test. However, the TDM-100 test can be used on its own without using the Coup Test first.

With the Coup Test, a circular blade moves back and forth across a material sample under a fixed load of 500 grams (a very low force, amounting to less than one pound). The number of blade revolutions needed to cut through the material is then compared to a control sample. The ratio of the sample to the control is converted to an index that is applied to a five-point rating scale—1 (low) to 5 (high). With the updated standard, this test is limited to a maximum of 60 rotations, whether the blade has cut through the material or not. If the test reaches 60 rotations and the material has not been cut through, the TDM-100 test must then be implemented.

The TDM testing machine measures cut resistance using a straight blade and variable weight (like the ANSI/ISEA 105 cut test). The ISO 13997 reports results in Newtons and yields scores expressed by Letters A (low) to Level F (high). If the TDM Test is implemented, it is expressed as the fifth placement on the CE Marking, as seen on “New Marking” portion of the graph below.



### The Employer Is Ultimately Responsible for Providing PPE That Meets Employees' Needs

Per OH&S regulations, the burden of responsibility concerning cut resistance falls on the employer. Though testing regulations and certifications are a viable starting point for a purchase decision process, they are never to be taken as isolated validation of the protection offered to an employee.

### Cut-Resistant PPE Manufacturers and Suppliers Can Provide Further Understanding of Cut Testing

Ask them questions and seek thorough explanations for the methods that they have selected to test their products.

More information on each of these tests listed can be found on these websites:

- [www.astm.org](http://www.astm.org)
- [www.iso.org](http://www.iso.org)
- [www.cen.eu](http://www.cen.eu)

# Be Smart About PPE Testing

## What to Do When Evaluating Gloves

Real-world applications are different from cut tests done in a lab. Even cut tests may vary by using different methods and producing different results.

When people hear the words “cut and puncture resistant,” most will have a tendency to want to do their own informal testing. Often they will put the glove on a hard, flat surface and run a sharp instrument over the surface of the glove to test for cut resistance. We do not encourage customers to test in this manner. Although testing with a knife or other sharp object on a hard surface like a table may seem like a good testing method, in reality it is not and has little semblance to real-world applications.

Each HexArmor® product is unique, with unique cut, puncture, tear, and abrasion properties. We encourage testing using actual hazards in a manner that best represents real-world situations, WITHOUT anyone’s hand in the glove. If you have any questions about testing, or would like to talk to us about testing, please contact us.

**Abrasion resistance** is also a critical factor in preventing hand injuries. In fact, if a glove fails too early due to wearing through from an abrasive hazard, the skin is quickly exposed to cut hazards. So the higher the abrasion level, the higher the level of protection from not just abrasion but from cut and punctures.

**Stability.** Evaluate performance of a new glove versus a glove that has been worn for a day. Look for products that don’t degrade when exposed or used. Some products are affected when subject to abrasion, washed, or exposed to UV light. Many products on the market lack the ability to provide consistent performance.

**Windup, all occurrences.** Some materials can be caught in machine parts such as rotating grinding wheels or drills and sanding materials. This can pull the hand or finger into the equipment and cause severe injury to tendons, muscles, and ligaments. Protective gloves that prevent or reduce windup risks are available and can be used where risks are present.

**Fit** plays a part in the level of protection. Gloves that are too tight may cut easier because many of the fibers used for cut resistance use a rolling action to increase cut resistance. When these fibers cannot roll, such as when they are stretched from an ill-fitting or wrong-sized glove, they can “lose” some of their cut resistance. Take an example from the kitchen and do this simple experiment: Put a cucumber on a cutting board and take a very sharp knife. Try to cut the cucumber with a sawing motion without holding the cucumber. It just rolls and doesn’t cut. Now hold that cucumber and do the same thing. It cuts very easily. Tight-fitting gloves can perform like the immobilized cucumber. Loose-fitting gloves can also be a hazard for catching or snagging on tools and equipment. Make sure your glove program accounts for proper sizing and employees know what to look for when picking gloves.

**Coating** impacts cut-resistant gloves that use cut-resistant fibers. Once the coating is applied, the rolling and twisting that helps the fiber achieve its cut resistance can be reduced. Most coated gloves have higher cut resistance on the back-of-hand than on the palm because the fibers are not coated. Keep this in mind as you select your hand protection.

**Grip** is also important. Using grip that isn’t appropriate for the job can lead to higher injury rates as objects with sharp edges slip, causing injury.

# Glove Care - Why Does It Matter?

**Improper glove care can shorten the life of your PPE. It can also lead to dermatitis, decreased dexterity, loss of protective abilities, and odor. Glove care refers not only to laundering but also proper storage, routine glove checks, and knowledge of materials and their particular strengths and weaknesses.**

Because there are so many different work gloves on the market, experienced safety managers should be aware of what workers' gloves are made of and how they will stand up to the applications they're being used for. Common glove materials include nylon, spandex, leather, cotton, SuperFabric<sup>®\*</sup>, Kevlar<sup>®</sup>, and knit fibers. Each of these materials has a certain way it needs to be cared for. Often there is a blending of the materials, making proper care even more crucial.

## Proper storage

Gloves should be stored in clean, dry conditions, away from direct sunlight and extreme temperatures.

## Routine glove checks

Glove life varies depending on the application, environment, and amount of use. It is vital that you perform routine glove checks before beginning work every day. Take note of areas that have begun to wear down, such as loose Velcro<sup>®</sup> or a worn-down name tag. If you see holes in the synthetic leather or TP-X<sup>®</sup> material on the palm of your glove, this is an indication that its protective qualities may be compromised, putting you at risk of injury. Lingering moisture or a strong odor are also signs that your gloves may need to be replaced.

Keeping an eye out for these issues (and others) takes you one step further from a worksite hand injury, which is the ultimate goal of hand protection.

## Cleaning + Care

Most gloves and arm and body PPE are machine washable. Please see [hexarmor.com](http://hexarmor.com) for product specific washing instructions.

## Companies who properly launder their gloves can increase lifespan by up to 300%

Laundering removes harmful chemicals, perspiration, and everyday grit and grime that can weaken protective fibers and seams. Our team of HexArmor<sup>®</sup> solutions specialists are here to help you with this process, and they are more than happy to provide you with all the information you need.



# SAFETY + REDEFINED<sup>®</sup>

## HexArmor<sup>®</sup>

Call **1800 815 790** or visit **hexarmor.com.au**

HexArmor<sup>®</sup> 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.

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For current product information, please visit [hexarmor.au](http://hexarmor.au), or call 1800 815 790