



Ansell

OIL & GAS

Hazards & Solutions

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Oil & gas and other energy workers encounter countless risks on the job due to the multitude of specific tasks they perform daily. Constant hazards include heavy equipment, sharp objects, and flammable or toxic liquids and gases. This means high potential for injuries from crushing impact, cut or flame, ailments caused by exposure to chemicals and oil, and even muscle and joint strain from long shifts. Mitigating these risks begins with protocols driven by the oil & gas safety culture and ends with each worker's proper Personal Protective Equipment (PPE), including specialty impact, cut and oil-resistant gloves.

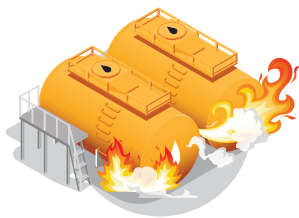
Jobs in the oil & gas industry are some of the most hazardous in the world. In addition to fire and explosion risks, which require full body protection, there are certain risks specific to hands and fingers that workers face on a regular basis. While fire and explosions are the third most common cause of fatal work injuries in the industry, hand and finger injuries make up nearly 50 percent of all incidents. At times that number is closer to 80 percent of all recordable incidents. Hands and fingers have more nerve endings per square centimeter than any part of the human body and more pain receptors than any other part of our bodies. As a result, hand related injuries are more painful than similar injuries to other parts of the body. Having the proper hand and body protection is of extreme importance to minimize injuries and fatalities associated to the common impact, chemical, and fire hazards in the oil & gas industry.

For protection against the risk of cut, impact, chemical splash, fire, repetitive movements, and other hazards in the oil & gas industry, Ansell provides a wide range of best-in-class solutions.

PRIMARY HAZARDS IN THE OIL & GAS INDUSTRY



Impact Risk



Flash Fire
Explosion



Electrical Risk



Exposure to
Oil Fluids



Release of
Toxic Vapors



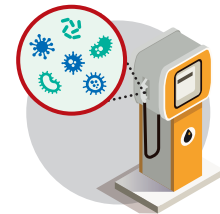
Musculoskeletal
Disorders



Extreme
Temperatures



Cut Risk



Viral Infections

OIL & GAS HAZARDS & SOLUTIONS

High visibility, waterproof, impact-absorbing, chemical resistant, high durability, high dexterity and better grip are just some of the common features of gloves used in the oil & gas industry. High performance PPE hand protection is required for medium to heavy-duty tasks. Such tasks include the use of hand tools, pipe handling, valve operation, where “struck by” and “caught between objects” tend to be the source of recordable incidents. Handling and positioning of heavy equipment often result in trapped or crushed fingers and hands. Flash fires, while less common, are just as serious as most hazards and result in extreme thermal injuries when fire resistant body protection is not worn. Despite the efforts by oil & gas companies, the industry statistic indicates that number of hand and finger injuries are increasing year over year. Ansell’s extensive portfolio of hand and body protection ensures the safety of oil & gas workers and the products they handle.

IMPACT PROTECTION

Whether in upstream, midstream, or downstream where high risk activities are performed daily during exploration, construction, drilling, production, transportation and refining, work is often done in extreme environments and hands may easily be exposed to hazards of crush and pinch impacts. High performance PPE hand protection is required for medium to heavy duty tasks including the use of hand tools, pipe handling, valve operation or positioning of heavy equipment. Effective protection of knuckles, fingers and thumbs is essential while maintaining maximum durability, dexterity and comfort.



RINGERS® R-267

Heavy duty impact glove with TPR protection on top of hand and full length of fingers. Silicone dot grip system on palm resists oil and enhances grip when working with equipment in oily environments. High visibility and Dupont™ Kevlar® stitching provides additional safety protection.



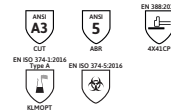
RINGERS® R-074

Short cuff chemical impact glove with a PVC coating, combining waterproof and rated chemical resistance with protection against impact hazards and cuts, providing chemical protection in heavy duty environments.



RINGERS® R-075

Long cuff chemical impact glove with a PVC coating, combining waterproof and rated chemical resistance with protection against impact hazards and cuts, providing chemical protection in heavy duty environments.



RINGERS® R-065

Breathable knit shell offers 360° cut resistance, while the half-dipped nitrile coating on palm with a sandy finish provides enhanced grip. High visibility TPR impact protection on top of hand and full length of fingers to protect against crush and pinch injuries in any environment.



RINGERS® R-665

Premium leather impact glove and excellent cut protection for ultimate comfort, durability, and performance. Single piece palm and point finger-tip construction enhances flexibility and dexterity when handling tools and objects.



RINGERS® R-169

TPR impact protection on top of the hand and full length of fingers with synthetic leather palm for enhanced grip and additional palm layer for enhanced cut resistance. Added security and durability with secure cuff and wrap around index finger protecting wear and tear zone.



RINGERS® R-259

Heavy duty impact glove with TPR protection on top of hand and full length of fingers. Durable synthetic leather palm for enhanced grip, with additional palm layer for enhanced cut protection. High visibility and Dupont™ Kevlar® stitching provide additional safety protection.



ActivArm® 97-120

Knit impact glove that can address workers’ top frustrations in rugged environments by delivering the best of both safety and comfort.



Note: Product availability may vary. These styles serve as examples only. For tailored recommendations for your unique needs and applications, please request an AnsellGUARDIAN® assessment.

FLASH FIRE PROTECTION

Workers in the oil & gas industries face the risk of fire and explosion due to ignition of flammable vapors or gases. Flammable gases, such as well gases, vapors, and hydrogen sulfide, can be released from wells, trucks, production equipment or surface equipment such as tanks and shale shakers. Ignition sources can include static, electrical energy sources, open flames, lightning, cigarettes, cutting and welding tools, hot surfaces, and frictional heat.



AlphaTec® CFR - Model 111

Flame retardant treated fabric with PVC barrier film offers wearers protection in certain applications where there is the possibility of contact with chemical spray without compromising mitigating protection in the event of a flash fire.



AlphaTec® 1500 PLUS FR - Model 111

Provides comfortable protection from particulates and the risk of light non-flammable liquid spray or splash. Tested according to EN 1149-5 with Type 5/6 protection. Air and water vapor permeable (breathable) to help reduce the risk of heat stress.



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ELECTRICAL PROTECTION

Workers might be exposed to uncontrolled electrical, mechanical, hydraulic, or other sources of hazardous energy if equipment is not designed, installed, and maintained properly. Electrical current exposes workers to a serious, widespread workplace hazard. Many workers are exposed to electrical energy while completing their daily responsibilities, and many are unaware of the potential electrical hazards present in their work environment — making them more vulnerable to the danger of electrocution.



ActivArm® Natural Rubber Electrical Insulating Gloves are designed to deliver ultimate comfort, performance, and safety. Better by design, these gloves allow for flexibility and dexterity with an ergonomic shape to reduce hand fatigue.

Low Voltage	ActivArm® Class 00	ActivArm® Class 0		
High Voltage	ActivArm® Class 1	ActivArm® Class 2	ActivArm® Class 3	ActivArm® Class 4



ActivArm® 96-001 Canvas Bag

Essential storage solution for your electrical insulating gloves that protects the gloves from folding and keeps them out of excessive heat, sunlight, humidity, ozone, and chemicals or substances that could damage the rubber.



ActivArm® 96-002

Low voltage leather premium goat skin leather protector.



ActivArm® 96-003

High voltage leather premium goat skin leather protector.



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OIL PROTECTION

When working at the wellsite, transporting fluids, or even at the shop, oil & gas workers are exposed to oils such as hydraulic fluids. Workers need surface barrier protection to prevent oils and other lubricants from making contact with the skin as well as enhanced grip to mitigate muscle fatigue and proper handling of medium to heavy duty tools and equipment.



RINGERS® R-068

Breathable knit shell offers 360° cut resistance, while the half-dipped nitrile coating on palm with a sandy finish offers enhanced grip. TPR impact protection on top of hand and full length of fingers. Patented double dipped technology for a full nitrile in smooth finish for liquid resistance.



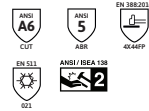
RINGERS® R-080

Internal liquid-proof barrier added to the breathable knit shell offers 360° cut and liquid resistance, while the half-dipped nitrile coating on palm with a sandy finish offers enhanced grip. High visibility TPR impact protection on top of hand and full length of fingers.



RINGERS® R-259B

Heavy duty impact glove with high visibility TPR impact protection on top of hand and full length of fingers. Durable synthetic leather palm for enhanced grip with additional palm layer for enhanced cut resistance. Waterproof barrier to keep hands dry with a liquid resistant coating on top of hand.



HyFlex® 11-925

Ultimate performance and comfort when working in and around oily environments, whether in a shop or field.



HyFlex® 11-920

Provides high performance grip and oil repellence when handling tools while working in oily environments.



EDGE® 48-919

Good combination of grip and oil repellence provides a reliable glove for any situation you may encounter.



AlphaTec® 2000 STANDARD - Model 111

Made from superior breathable microporous laminate technology to provide superior protection from low hazard liquid spray and fine particulates. Tunneled elasticated 3-piece hood, wrists and ankles help minimize the risk of linting and cross contamination.



AlphaTec® 2300 PLUS - Model 132

Protective barrier to numerous inorganic liquid chemicals including acids and bases. Certified according to the EN 14126 standard to protect against infective agents such as bacteria, fungi and viruses and ASTM F 1671.



Note: Product availability may vary. These styles serve as examples only. For tailored recommendations for your unique needs and applications, please request an AnsellGUARDIAN® assessment.

CHEMICAL PROTECTION

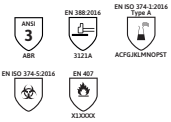
Workers who use hazardous chemicals during work processes such as hydraulic fracturing could be exposed to hazardous byproducts of oil & gas drilling. Possible hazards include chemical burns from caustic substances and toxic vapors.

It is also important to know the potential means for contamination, such as vapors, spray, splash and immersion, and the route of exposure to the worker, such as inhalation or skin absorption. Many studies from OSHA (Occupational Safety and Health Administration) have shown that absorption of chemicals through the skin can occur without being noticed by the worker.



AlphaTec® 53-001

Multi-layer polymer design of nitrile/neoprene/nitrile layers provides chemical protection against a wide range of chemicals from acids and bases to hydrocarbons and organic solvents. MICROCHEM™ Chemical Barrier Technology provides superior protection for use in hazardous environments.



AlphaTec® 58-530B AlphaTec® 58-535B



AlphaTec® 58-530B/535B

Reliable liquid-proof chemical protection. ANSELL GRIP™ Technology is a coating treatment that minimizes the force required to grip dry, oily and wet tools or materials, relieving hand and arm strength caused by poor grip.



AlphaTec® 04-002 AlphaTec® 04-003



AlphaTec® 04-002/003

Medium weight PVC supported gloves with a comfortable, fleece liner and superb oil resistant coating. Secure grip for handling wet or oily foods and objects.



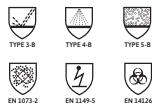
AlphaTec® 2300 STANDARD - Model 111

Medium duty chemical barrier, Type 5/6 protection, provides a good protective barrier to numerous inorganic liquid chemicals including acids and bases. Lightweight, yet relatively strong and durable and highly visible bright yellow. Designed to protect, typical coverall features include respirator fit hood and a zip flap with self-adhesive tape closure.



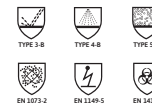
AlphaTec® 4000 - Model 111

Engineered to provide an exceptional barrier against a wide range of organic and inorganic chemicals and biological agents. Innovative multi-layer chemical barrier technology, Type 3/4/5 protection.



AlphaTec® 5000 - Model 111

Engineered to protect with excellent protection and durability against a wide range of chemical hazards, and with outstanding permeation performance to numerous organic and inorganic chemicals, biological hazards and chemical warfare agents.



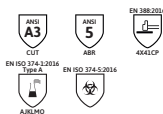
AlphaTec® EVO Type CV/VP1

Top-of-the-line industrial chemical and warfare agent protection for critical-risk environments and HAZMAT response.



RINGERS® R-074

Short cuff chemical impact glove with a PVC coating, combining waterproof and rated chemical resistance with protection against impact hazards and cuts, providing chemical protection in heavy duty environments.



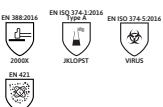
RINGERS® R-075

Long cuff chemical impact glove with a PVC coating, combining waterproof and rated chemical resistance with protection against impact hazards and cuts, providing chemical protection in heavy duty environments.



MICROFLEX® 93-260

Thin, chemical-resistant disposable glove offers tough chemical protection and unparalleled comfort. Three-layer design provides exceptional protection against acids, bases and solids in a single use glove.



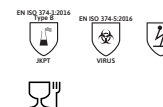
MICROFLEX® SafeGrip® SG-375

Thick latex glove with extra durability and a soft, elastic fit and feel. Double chlorinated for easy donning and doffing.



TouchNTuff® 92-600

The world's leading disposable glove for chemical splash protection. Strong and stretchy nitrile provides added durability.



Note: Product availability may vary. These styles serve as examples only. For tailored recommendations for your unique needs and applications, please request an AnsellGUARDIAN® assessment. Or use our self-service AnsellGUARDIAN® Partner tool to search our extensive chemical permeation and degradation data to identify the appropriate hand and body protection for the chemicals you use.

COLD & HEAT PROTECTION (TEMPERATURE PROTECTION)

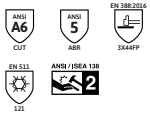
Well-site workers are exposed to extreme temperatures and should take precautions to stay safe. Dressing properly is extremely important to preventing cold or heat stress. The type of fabric worn also makes a difference. Cotton loses its insulation value when it becomes wet. Wool, silk and most synthetics, on the other hand, retain their insulation even when wet. Just as important as having the proper body apparel, using the right-hand protection for any given environment, such as knit, cotton, insulated or water-resistant gloves is just as crucial to mitigate the effects of cold or heat related hazards.

COLD



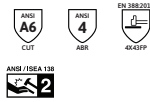
RINGERS® R-176

TPR impact protection on top of hand and full length of fingers with 70g Thinsulate™ insulation for additional warmth. Proprietary waterproof barrier to keep hands dry and PVC patches on palm with additional palm layer for enhanced grip and cut resistance in the most extreme environments. Includes index, middle, and thumb tips with touchscreen compatibility.



RINGERS® R-085

Breathable knit shell offers cut resistance, while the half-dipped nitrile coating on palm with a sandy finish offers enhanced grip. TPR impact protection on top of hand and full length of fingers with fleece lining for weather protection, and a thumb saddle patch to reinforce wear and tear zones. Includes index, middle, and thumb tips with touchscreen compatibility.



RINGERS® R-279

Winter impact gloves with superior impact protection. High performance and heavy-duty durable water-resistant coated polyester. Fully lined with foam for extra insulation.



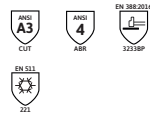
RINGERS® R-277

Thermal insulated impact protection with waterproof barrier and silicone dot palm, for enhanced grip in extreme elements. Synthetic leather palm with silicone dots for enhanced grip. Dupont™ Kevlar® stitched palm, with index, middle, and thumb tips for touchscreen compatibility.



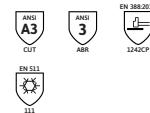
RINGERS® R-266

Hands stay warm and dry with heavy winter-time impact protection and synthetic grip patches. Thermal/Waterproof Thinsulate liner, lined palm with patched and Dupont™ Kevlar® stitching. Wing thumb and point fingertips construction.



RINGERS® R-261

Heavy duty impact protection combined with thermal insulation and waterproof barrier on a cotton palm with cut protection. Includes high visibility and extended neoprene wrist closure for added safety and security.



ActivArmr® 97-631

Excellent grip and flexibility, even in the coldest temperatures.



ActivArmr® 97-681

Leading dexterity among liquid-proof cold weather gloves. PVC foam coating stays flexible down to -15°F.



AlphaTec® 23-202

Comfortable PVC glove designed to protect at low temperatures and warms the hands immediately after donning.



AlphaTec® 19-024



AlphaTec® 19-026

AlphaTec® 19-024/026

Neoprene gloves with a double insulating liner to better resist cold environments.



AlphaTec® 09-022

Special Hi-Lo insulated gauntlet permits intermittent handling in cold temperatures.



Note: Product availability may vary. These styles serve as examples only. For tailored recommendations for your unique needs and applications, please request an AnsellGUARDIAN® assessment.



RINGERS® R-298

Vented mesh for better ventilation, with Dupont™ Kevlar® stitched palm with extreme grip and contact heat resistance combined with TPR impact protection on top of the hand and full length of fingers.



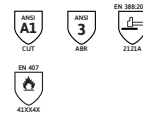
RINGERS® R-299

Heavy duty glove with TPR impact protection on top of the hand and full length of fingers, with durable palm with contact heat resistance and additional palm layer for enhanced grip and cut resistance.



ActivArm® 43-217

Our best welding glove provides users with high tactility and dexterity while keeping their hands protected and safe.



ActivArm® 43-216

Excellent heat-resistant gloves offer high levels of durability, control and protection from heat, flame, sparks and puncture.



AlphaTec® 58-530B

AlphaTec® 58-535B



AlphaTec® 08-352/354

Neoprene chemical work glove with rough finish and light contact heat resistance. Contact heat level 1 with protection up to 212°F.



AlphaTec® 19-024



AlphaTec® 19-026

AlphaTec® 19-024/026

Neoprene-coated gloves with a double insulating liner that provides protection from intermittent contact with hot surfaces up to 356°F.



AlphaTec® 39-122



AlphaTec® 39-124

AlphaTec® 39-122/124

A reinforced nitrile glove, combining the durability and chemical resistance of nitrile, with the added strength and comfort of an interlock knit cotton liner. Contact heat level 1 with protection up to 212°F.



CUT PROTECTION

Oil & Gas workers are exposed to puncture and cuts through sharp objects including razor blades, sharp steel edges, and dangerous tools and machinery. These hazards are prominent during the machining, assembly, installation, operation, and field repair of oil field assets. To reduce the risk of cuts and infectious diseases, PPE plays an important role and full protection of the hand and arm can be achieved when combining the right gloves.

Ansell's cut resistant gloves are made with innovative technologies to provide outstanding cut protection with enhanced dexterity, grip and comfort.

HyFlex® 11-280



The seamless design and width options make these HyFlex® sleeves the best choice for all-day comfort and additional protection when using Ansell gloves. INTERCEPT™ Cut Resistance Technology provides best-in-class cut protection and a soft and cool feel to the worker.



HyFlex® 11-281



HyFlex® 11-644



INTERCEPT™ Technology for enhanced cut protection to provide confidence while working with sharp objects. Allows for longer wear due to low palm weight and excellent abrasion resistance.



HyFlex® 11-738

Ultra-strong fibers provide extreme resistance against cuts and burrs and the reinforced thumb crotch increases protection and extended use life. Made with water-based polyurethane for enhanced comfort and dexterity.

HyFlex® 11-542



INTERCEPT™ Technology provides high levels of protection against cuts and lacerations. Also provides high abrasion resistance and protection from intermittent heat contact.



AlphaTec® 58-735

INTERCEPT™ Cut Resistance Technology provides protection against lacerations. Optimized fit that integrates the high visibility cut liner into the nitrile shell, acting as an indicator when glove is cut and highlighting when chemical protection is compromised.



RINGERS® R-065



Breathable knit shell offers 360° cut resistance, while the half-dipped nitrile coating on palm with a sandy finish offers enhanced grip. TPR impact protection on top of hand and full length of fingers adds protection against crush and pinch injuries without sacrificing dexterity.



Note: Product availability may vary. These styles serve as examples only. For tailored recommendations for your unique needs and applications, please request an AnsellGUARDIAN® assessment.

VIBRATION & REPETITIVE/ ERGONOMIC MOVEMENT PROTECTION

Vibration in the workplace is generally classified as hand–arm vibration, which is transmitted through the use of hand-held powered equipment like impact drills and air powered wrenches. Prolonged exposure can lead to damage to the hand and arm muscles (hand–arm vibration syndrome). The main concerns are therefore the magnitude of vibration transmitted and the duration of exposure.

In addition to muscle fatigue due to vibration, musculoskeletal injuries are often caused by repetitive movements, overexertion of the muscle, and improper positioning while working. Selecting the right PPE can help reduce the risks of damage to muscles, bones & joints.



RINGERS® R-161

Durable synthetic leather palm for enhanced grip with palm padding for extra comfort. Flexible knuckle TPR design with two detached fingers provides impact protection on top of hand and fingers.



RINGERS® R-167

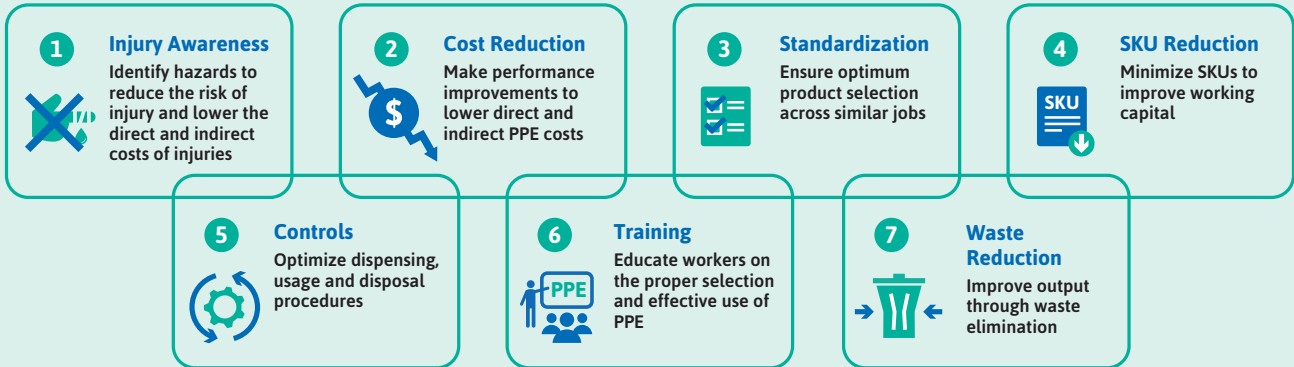
Split fit padded palm for comfort with additional palm layer for enhanced cut resistance. Flexible knuckle TPR design with two detached fingers provides impact protection on top of hand and fingers.



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AnsellGUARDIAN® is our consultative service to help companies select and implement the right personal protective equipment solutions to improve safety, increase productivity and reduce costs. Using our 125 years of experience, proprietary software system and database of over 30,000 chemicals, we analyze PPE needs and identify the solutions that will work best for each company's unique risks and applications. As an industry pioneer with the most advanced technology and analytics, we have evaluated and implemented best business practices in over 15,000 facilities worldwide, reducing injuries and saving companies a total of \$165M. AnsellGUARDIAN® assessments address 7 functional areas:

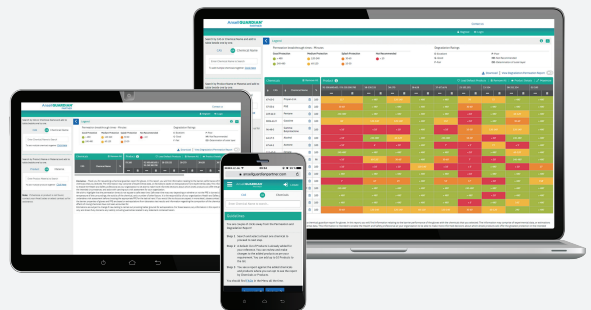


Get Started Today

There's no cost for an AnsellGUARDIAN® assessment. Learn how we can help you reduce injuries, improve productivity and lower costs. Contact your local Ansell Sales Representative or Customer Service Representative today.

AnsellGUARDIAN® Partner

AnsellGUARDIAN® Partner is our self-service tool that allows users to search our extensive chemical permeation and degradation data to identify the appropriate hand and body protection for the chemicals they use. Search by CAS or chemical name and create a customized table with different products or materials to view permeation and degradation charts. Visit ansellguardianpartner.com to get started.



How It Works

- 1 Search for chemicals by CAS Name**
- 2 Search for products or materials**
- 3 View permeation and degradation charts and identify optimal solutions**

CAS	CHEMICAL NAME
110-82-7	CYCLOHEXANE



CHEMICAL PERMEATION DATA





ABOUT ANSELL

As a global leader in personal protective solutions with over 125 years of experience in keeping people safe, Ansell's mission is to provide innovative and reliable solutions for safety, well-being and peace of mind to workers around the world. Our global team of more than 12,000 people in 55 countries design, manufacture and market cutting edge PPE that millions of workers in industrial and healthcare settings rely upon every day. We offer a comprehensive portfolio of hand and body protection products and provide customers with tailored solutions to meet their unique needs across a wide range of industries and applications.

ANSELL HEALTHCARE PRODUCTS LLC

111 Wood Avenue South,
Suite 210
Iselin, NJ 08830, USA
T: +1-800-800-0444

ANSELL CANADA INC

105 Lauder
Cowansville, QC,
J2K 2K8 Canada
T: +1-800-363-8340

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WARNING: Products that provide "cut resistance" and "cut protection" or "puncture resistance" and "puncture protection" do not completely prevent or eliminate the potential for cuts or punctures, and are not intended or tested to provide protection against powered blades, serrated or other sharp or rotating equipment. Products offering "viral protection" do not completely prevent the transmission of disease. Products that provide chemical resistance" or "chemical protection" do not completely prevent or eliminate the potential for injury due to chemical exposure. Products that provide "resistance" to oil or grease or which are "oil repellent" do not completely prevent or eliminate the potential for oil or liquid penetration or absorption. Products that provide "snag resistance" or "snag protection" do not completely prevent or eliminate the potential for snags or friction-related injuries. Products that provide protection against sparks or flames are not "fireproof" and do not completely prevent or eliminate the potential for burns or associated injuries. Products that provide protection or resistance against heat or cold are not intended for use in extreme temperatures – use only as specified. Products containing natural rubber latex may cause allergic reactions in some individuals. Products that provide "impact, crush and pinch protection" do not completely eliminate the potential for impact or crush related injuries. Users are encouraged to always use caution and care when handling sharp or abrasive materials, chemicals, or other hazardous or dangerous substances. Any information or data provided is based upon Ansell's current knowledge and understanding of the subject matter, and is offered solely as a possible suggestion for use in making your own decisions or product choices. Product users should conduct all appropriate testing or other evaluations to determine the suitability of Ansell products for a particular purpose or use within a particular environment. It is the responsibility of a product user to assess the level of risk and to determine the protective equipment required or appropriate for the user's particular purpose. Ansell may revise this information as new information, knowledge or experience becomes available. ANSELL DISCLAIMS ALL WARRANTIES OTHER THAN AS EXPRESSLY PROVIDED.