BIODECONTA
Intelligent Clean

Product Catalog
Glove

PHARMACEUTICAL
NUCLEAR

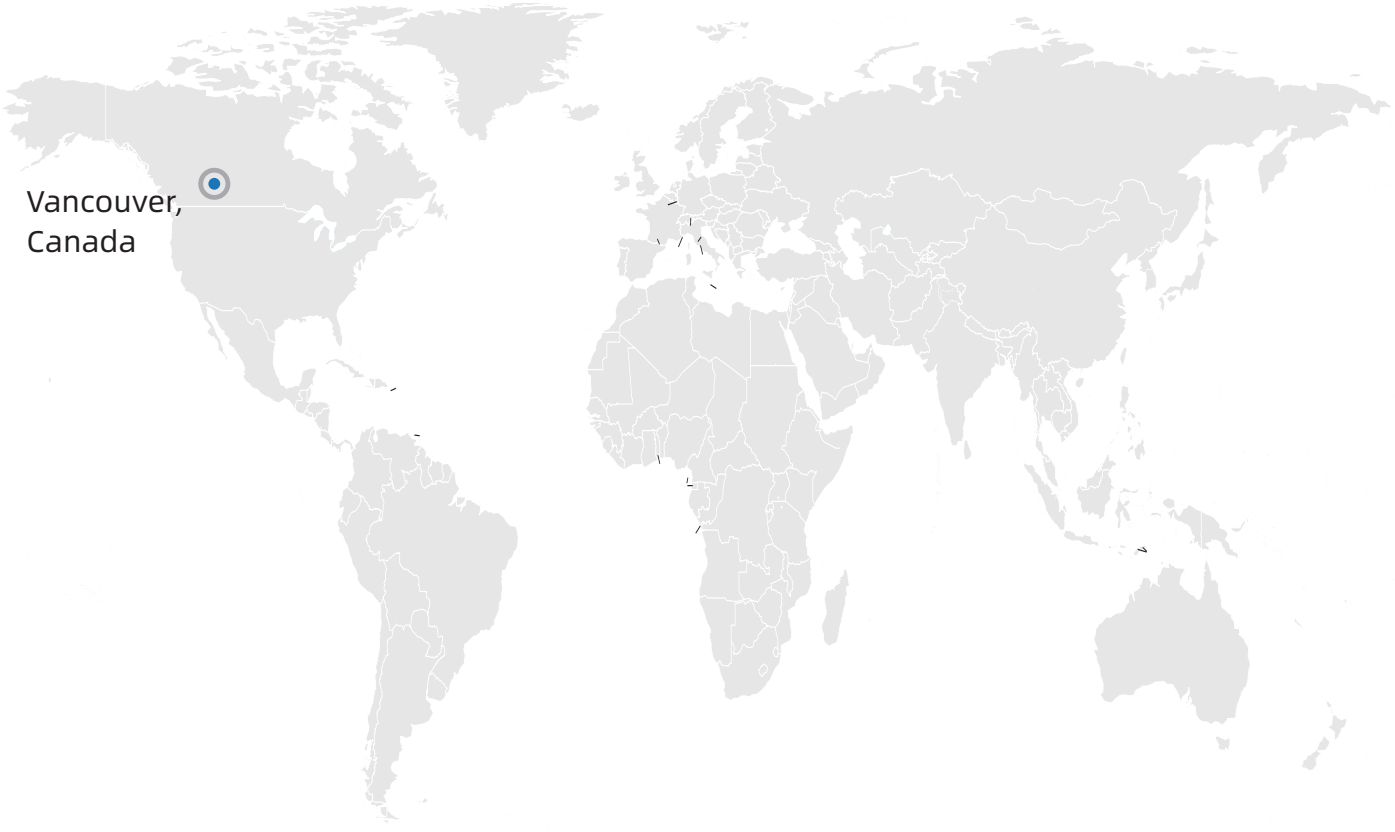
www.biodeconta.ca

Company profile

Biodeconta is an innovative manufacturer, headquartered in Vancouver, Canada.

We are dedicated to providing advanced pharmaceutical cleanroom solutions by integrating cutting-edge technology with rigorous quality standards.

By bridging international expertise with localized service, Biodeconta delivers true added value to our partners across the global pharmaceutical and healthcare industries, ensuring the highest levels of safety and contamination control.



Defination

Leading provider of intelligent data and service for clean environments

Mission

Leading provider of intelligent data and service for clean environments

Vision

Make the environment intelligent safe and clean

Values

Innovation and excellence lead continue progress

Production and Quality

Why Choose Biodeconta Isolation Gloves?

Precision Engineering

Every glove ismanufactured to meet the strictdemands of isolators, RABS (Restricted Access Barrier Systems), and glove boxes.

Material Excellence

Our formulationsare optimized for repeated sterilization cycles (VHP/ Autoclave) without compromising physical integrity.

Global Compliance

Engineered to exceed international safety standards, ensuring your facility remains compliant and your operators stay protected.

Ergonomic Design

Specifically shaped to reduce hand fatigue during long shifts, enhancing both comfort and productivity in critical environments.

Production and Quality

Production Process:
The Next Generation of Aseptic Protection: One Piece Die Casting

The New Process: Beyond Traditional Dipping

Biodeconta has pioneered the transition from the traditional "dipping" method to an advanced One-Piece Die Casting (Injection Molding) process. While conventional gloves are made by dipping ceramic formers into liquid coagulants and latex/nitrile, Biodeconta utilizes precision molds and high-pressure injection to create a seamless, integrated glove structure.

Definitions & Process Descriptions

- **One-Piece Die Casting：**
A high-precision manufacturing technique where specialized elastomeric materials are injected into a closed, high-tech mold under controlled pressure.

- **Integrated Molding:**
Unlike dipped gloves which can suffer from uneven thickness or "beading" at the cuff, this process ensures the glove is formed as a single, uniform unit from fingertips to the mounting flange.

- **Automated Polymer Stabilization:**
The process involves a "closed-loop" system where raw materials are thermally stabilized and cured within the mold, eliminating the need for the extensive acid/alkaline washes and open-air chemical tanks used in traditional lines.

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One-Piece Die Casting Technology

What is the "integral die-casting process" for gloves?

The New Process: Beyond Traditional Dipping, Biodeconta has pioneered the transition from the traditional "dipping" method to an advanced One-Piece Die Casting (Injection Molding) process. While conventional gloves are made by dipping ceramic formers into liquid coagulants and latex/nitrile, Biodeconta utilizes precision molds and high-pressure injection to create a seamless, integrated glove structure.

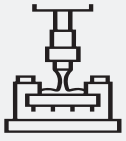
This process no longer involves dipping a mold into liquid rubber; instead, much like plastic mold production, it directly injects solid/semi-solid compound rubber into a sealed mold cavity under high pressure.

Feeding

Pre-prepared solid compound rubber (including CSM, EPDM or nitrile raw rubber and additives) is cut into strips and fed into the machine.

Plasticization

The screw inside the machine shears the solid rubber into a fluid high-temperature melt through rotation and heating.



High-pressure Injection

The melt is instantly injected into the cavity formed by the "hand-shaped inner mold" and "outer shell mold" under immense pressure.

In-mold Vulcanization

Since the mold itself is heated to a high temperature, the rubber completes vulcanization and molding directly in the sealed cavity.

Demolding

The mold opens and a complete glove is ejected.

Why This Process Is More Eco-Friendly & Stable

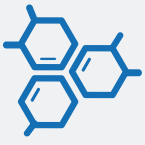
The integrated die-casting technology is an upgrade from the traditional dipping process to high-pressure injection molding. It is solvent-free and ultra-low in VOC emissions throughout the process, meeting strict environmental requirements.Meanwhile, mold shaping plus precise PLC control ensures uniform thickness and extremely high batch consistency for every glove, fundamentally solving problems such as pinholes and uneven thickness.It is comprehensively superior in environmental protection, stability and safety.

Eco-Advantage: Zero solvent emissions (ultra-low VOCs)

Dipping process: Requires large amounts of organic solvents (toluene, xylene, MEK, etc.) to dissolve rubber; heavy solvent volatilization during drying demands costly waste gas recovery systems to prevent severe pollution.
Die-casting process: Relies on physical melting and extrusion with no solvents, bringing almost no VOC emission pressure to the factory.

Ultra-High Batch Consistency

Dipping process: Highly affected by environmental humidity, rubber slurry viscosity and lifting speed, easily causing uneven thickness (thicker fingertips, thinner cuffs).
Die-casting process: Thickness is fixed by mold cavity; pressure and time are PLC-controlled, resulting in nearly identical thickness and weight for all gloves with minimal errors.



Structural Strength: Pinhole-Free

High-pressure molding creates extremely dense material, completely eliminating the micro-bubble (pinhole) issue common in dipping— a critical safeguard for chemical-resistant gloves.

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Glove Advantages

Unique Features & Biodeconta Advantages

▸ Uniform Wall Thickness

Eliminates weak points. The injection molding process enables precise micron-level control over the density and thickness of the entire glove surface.

▸ Superior Integrity

Reduces the risk of micro-pores common in dipped gloves. High-pressure die-casting creates a denser molecular structure in the material, ideal for high-demand sterile isolation scenarios.

▸ Zero VOCs & Eco-Friendly

The closed injection molding process drastically reduces Volatile Organic Compounds (VOCs) emissions and chemical wastewater generation, serving as a green alternative to traditional dipping processes that use large amounts of chemical reagents.

▸ Enhanced Durability

One-piece molded design with no seams or stress concentration points, delivering better tear and puncture resistance during long-duration operations.

▸ VHP Sterilization Compatible

Specially engineered to withstand repeated Vaporized Hydrogen Peroxide (VHP) sterilization cycles without material degradation or yellowing.

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Product-Glove Material Summary

We offer a diverse range of high-performance materials tailored for specific containment and protection requirements in nuclear and pharmaceutical environments.

BUTYL (Butyl Rubber)

Highly impermeable to gases and vapors, Butyl offers exceptional chemical resistance to ketones, acids, and bases. It remains flexible even at low temperatures.

▸ **Typical Applications:**

Glove boxes (maintaining inert atmosphere), ketone/ester chemical handling, nuclear industry.

IIR/FKM (Viton® over Butyl)

A premium multilayer material combining the gas tightness of Butyl with the superior chemical and temperature resistance of FKM (Viton). Ideal for handling highly aggressive solvents and oxidizing agents.

▸ **Typical Applications:**

Semiconductor manufacturing (high-purity chemicals), petrochemical industry (harsh environments), aerospace.

Neoprene (Polychloroprene)

A versatile, all-purpose material providing a good balance of mechanical strength, comfort, and resistance to oils, greases, and moderate chemicals.

▸ **Typical Applications:**

Automotive repair (motor oil), general chemical handling, outdoor work.

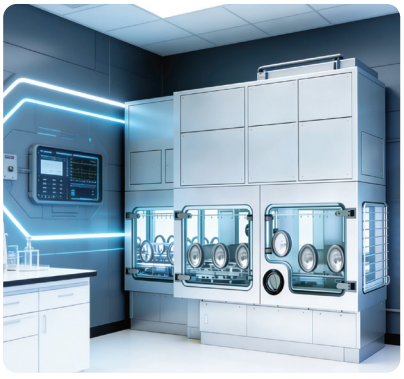
These materials are widely applicable across a multitude of critical sectors, delivering versatile, long-lasting protection for a full spectrum of high-demand industrial applications.

CSM (Chlorosulfonated Polyethylene/Hypalon)

Renowned for its excellent resistance to ozone, UV radiation, and oxidizing chemicals. It is highly durable against abrasion and environmental aging.

▸ **Typical Applications:**

Water treatment (chlorine, disinfectants), pharmaceutical biotechnology (sterilant resistance), papermaking bleaching.



EPDM (Ethylene Propylene Diene Monomer)

Commonly used for Isolator applications due to its excellent steam sterilizability (autoclave resistance) and resistance to common disinfecting agents.

▸ **Typical Applications:**

Food and pharmaceutical (steam sterilization), automotive brake fluid, detergents and strong alkali environments.

Note: We also offer a specialized Radiation-Shielding EPDM for nuclear environments.

Nitrile (Acrylonitrile Butadiene)

Offers superior puncture resistance and excellent protection against petroleum-based oils and hydrocarbon solvents. It is a popular choice for high dexterity tasks

▸ **Typical Applications:**

Mechanical maintenance (grease, gasoline), automotive manufacturing, cleaning, food processing.

Product Configuration

The Range of Gloves

Biodeconta glove portfolio has three main types of gloves:

Long Gloves

Also known as isolator gloves, these are one-piece seamless gloves that are used to handle objects in an enclosed environment

– L Series

Sleeves

Sleeve systems offer the operative an ergonomic fit and perfect freedom of movement. The sleeve is connected to a Short Glove via securering

– F Series

Short Gloves

Short gloves are connected to Sleeves. These Short gloveSleeve systems are oftently used in pharmaceutical production where flexibility is required

– S Series

Example: Long Gloves

GISTOOL®-Glove-L-9-Y-45-80-A-9Q-B

Brand	Product	Type	Port Size	Material
GISTOOL®	**Gloves**	**L**	**9**	**Y**
GISTOOL®	Gloves	Long Gloves	9“	CSM

Brand	Thickness	Length	HandSpec	HandSize
GISTOOL®	**45**	**80**	**A**	**9Q**
GISTOOL®	0.45mm	800mm	Ambidextrous	9Q 9 ¾ Inch Hand Circumferen ce

Long Gloves Technical Parameters

Seamless Anti-contamination | High Flexibility

Enclosed Environment Adaptation

Long Gloves - Also known as isolator gloves, these are one-piece seamless gloves specifically designed to enable safe and efficient handling of objects in enclosed environments such as isolators, glove boxes, or cleanrooms. Crafted with high-quality, durable materials, the seamless construction eliminates potential weak points, prevents particle generation, and ensures a tight, secure fit that minimizes the risk of contamination—critical for industries where sterility and environmental control are paramount. Their extended length provides additional arm protection, while the flexible material maintains dexterity, allowing operators to perform precise tasks (such as handling delicate components, samples, or equipment) without compromising safety or operational efficiency. This series is categorized as the L Series, tailored to meet the rigorous demands of enclosed environment operations.

Long Gloves						
Material	BUTYL	CSM	Neoprene	EPDM	EPDM-Radio Proof	Nitrile
Port Size	7"/8"/9"/10"/ Custom	7"/8"/9"/10"/ Custom	7"/8"/9"/10"/ Custom	7"/8"/9"/10"/ Custom	7"/8"/9"/10"/ Custom	7"/8"/9"/10"/ Custom
Color	White/Black	White/Black	White/Black	White/Black	White/Black	White/Green
Hand Spec	Ambidextrous	Ambidextrous	Ambidextrous	Ambidextrous	Ambidextrous	Ambidextrous
Thickness	0.45mm	0.45mm	0.45mm	0.45mm	0.8mm	0.45mm
Surface	Smooth	Smooth	Smooth	Smooth	Smooth	Smooth
Cuff Style	Rolled edge, One-piece die casting	Rolled edge, One-piece die casting	Rolled edge, One-piece die casting	Rolled edge, One-piece die casting	Rolled edge, One-piece die casting	Rolled edge, One-piece die casting
Length	800mm	800mm	800mm	800mm	800mm	800mm
Hem Height	4-6mm	4-6mm	4-6mm	4-6mm	4-6mm	4-6mm
Size Options (Hand Size)	9Q	9Q	9Q	9Q	9Q	9Q
Packaging	Individually Vacuum Packaged	Individually Vacuum Packaged	Individually Vacuum Packaged	Individually Vacuum Packaged	Individually Vacuum Packaged	Individually Vacuum Packaged

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Sleeves Technical Parameters

Ergonomics | Sealed Connection | High Freedom of Movement

Sleeves - Sleeve systems are engineered to deliver an ergonomic fit and unrestricted freedom of movement for operators, addressing the need for comfort during prolonged work sessions. Made from lightweight, breathable, and highly flexible materials, these sleeves conform to the natural contour of the arm, reducing fatigue and enhancing overall operational efficiency.

A key feature of the sleeve system is its secure connection to a Short Glove via a specialized secure ring—this connection is designed to be airtight and robust, preventing any gaps that could lead to contamination or exposure to hazardous substances. The sleeve system ensures seamless integration with the short glove, creating a continuous protective barrier while maintaining the operator's ability to move their arms freely. This series is designated as the F Series, ideal for applications requiring both protection and mobility.

Sleeves			
Material	BUTYL	CSM	EPDM
Port Size	7"/8"/9"/10"/Custom	7"/8"/9"/10"/Custom	7"/8"/9"/10"/Custom
Color	White/Black	White/Black	White/Black
Thickness	0.45mm	0.45mm	0.45mm
Surface	Smooth	Smooth	Smooth
Cuff Style	83.4mm	83.4mm	83.4mm
Length	600mm	600mm	600mm

Short Gloves Technical Parameters

Flexibility & Dexterity

Sterile Adaptation

Sleeve Linkage

Short Gloves - Short gloves are specifically designed to connect with the aforementioned Sleeve systems, forming a cohesive Short Glove-Sleeve protective assembly. This integrated system is widely utilized in pharmaceutical production, as well as other industries (such as biotechnology, medical device manufacturing, and sterile compounding) where flexibility, sterility, and dexterity are essential.

The short length of the gloves allows for enhanced maneuverability, making them perfect for tasks that require frequent hand movement, fine motor skills, or interaction with small, delicate equipment. Like the matching sleeves, the short gloves are crafted from high-purity materials that meet industry-specific standards for biocompatibility and contamination control, ensuring they integrate seamlessly with the sleeve's secure ring connection to form a reliable protective barrier. This series is classified as the S Series, optimized for flexible and sterile operational environments.

Short Gloves			
Material	BUTYL	CSM	Nitrile
Port Size	9Q	9Q	8M/9L/10XL/11XXL
Hand Spec	Ambidextrous	Ambidextrous	Ambidextrous
Length	320mm	320mm	350mm
Thickness	0.45mm	0.45mm	0.45mm
Wrist diameter	77mm	77mm	77mm
Surface	Smooth	Smooth	Smooth

Standards

Related Standards: EU Regulation (EU) 2016/425 on Personal Protective Equipment (PPE)

Category	Risk Level	Conformity Assessment	Typical Use
I	Minor	Self-certification (No third party)	Cleaning, gardening, simple weather protection
II	Intermediate	Notified Body Verification	Construction (helmets, gloves), mechanical industry
III	Fatal/Irreversible	Strict Quality Assurance (Notified Body + ongoing production monitoring)	Working at height, chemical/nuclear environments, underwater diving

CE

Category I

Minor RisksCharacteristics

This category covers PPE designed to protect against minimal or superficial risks. These are risks that are generally considered non-lethal and do not cause serious or irreversible harm. The user is typically able to assess the level of risk themselves.

Conformity Assessment

Manufacturers can self-certify that the product meets the Essential Health and Safety Requirements (EHSR). No involvement of a Notified Body is required.

Category II

Intermediate RisksCharacteristics

This category covers PPE designed to protect against risks that are not considered minimal (Category I) nor complex/fatal (Category III) . It represents the majority of PPE on the market. The risks involved are significant but not automatically life-threatening.

Conformity Assessment

The manufacturer must have the product verified by a Notified Body (an independent third-party organization) to ensure compliance with the EHSR. The manufacturer must also draw up an EU declaration of conformity.

Category III

Irreversible or Fatal RisksCharacteristics

This category covers PPE designed to protect against risks that may cause very serious consequences, such as death or irreversible damage to health. These are high-complexity environments where failure of the equipment is immediately life-threatening.

Conformity Assessment

This category requires the strictest oversight. In addition to the initial EU type-examination (by a Notified Body), the manufacturer must also choose an additional procedure to ensure ongoing quality control, typically:Module C2: Internal production control plus periodic random product checks by a Notified Body; orModule D: Production quality assurance (factory audit) monitored by a Notified Body.

Standards

Related Standards: EN ISO 21420:2020 – General Requirements for Protective Gloves

Scope

This is the umbrella standard that sets out the general requirements and test methods applicable to all protective gloves, regardless of their specific protection type (mechanical, chemical, thermal, etc.).

Key Elements

- **Innocuousness**: Gloves must not impair the user's health or hygiene (e.g., pH value, chrome VI content, prohibited substances).
- **Sizing and fit**: Clear marking of size and instructions for correct fitting.
- **Comfort and dexterity**: Requirements for ergonomics and, where applicable, measurement of dexterity (performance levels 1–5).
- **Marking and information**: Mandates that gloves carry the relevant pictograms and that the manufacturer provides instructions for use, storage, and disposal.

Performance Category	Specific Requirements
Innocuousness	Gloves must not impair the user's health or hygiene (e.g., pH value, chrome VI content, prohibited substances).
Sizing and Fit	Clear marking of size and instructions for correct fitting.
Comfort and Dexterity	Requirements for ergonomics and, where applicable, measurement of dexterity (performance levels 1–5).
Marking and Information	Mandates that gloves carry the relevant pictograms and that the manufacturer provides instructions for use, storage, and disposal.

Standards

Related Standards: EN 388:2016+A1: 2018 – Protective Gloves against Mechanical Risks

Scope

This standard specifies requirements, test methods, and marking for gloves that protect against abrasion, blade cut, tearing, puncture, and—since the amendment A1:2018—impact (knuckle protection).

Key Elements – Performance Levels

For each hazard, the glove is assigned a performance level (from 0 to 4 or 5, where higher = better protection). The marking is shown as a 4-digit (or 5-digit) pictogram:

Property	Test Method	Level Range
Abrasion resistance	Cycles to wear through	1–4
Blade cut resistance (Coupe test)	Index (ratio vs. reference)	1–5
Tear resistance	Force (N)	1–4
Puncture resistance	Force (N)	1–4
Cut resistance (ISO 13997) – optional	Force (N) for TDM test	A–F (letter)
Impact protection (knuckles) – optional	Pass / Fail	P (if present)

**Marking Example*

A glove marked EN 388 – 4.5.4.3 means: abrasion level 4, cut (Coupe) level 5, tear level 4, puncture level 3.

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Standards

Related Standards: EN ISO 374-1:2016 – Protective Gloves against Dangerous Chemicals and Micro-organisms

Scope

This standard specifies requirements for gloves that protect against chemicals and micro-organisms. It defines three types of chemical protection based on permeation resistance and, where applicable, penetration and degradation.

Key Elements – Types

Type	Description	Test Requirement	Typical Use
Type A	Protection against at least 6 test chemicals (from a defined list) with a breakthrough time ≥ 30 min (performance level 2 or higher)	Self-certification (No third party)	Permeation test (EN 16523-1)
Type B	Protection against at least 3 test chemicals with breakthrough time ≥ 30 min (level 2 or higher)	Notified Body Verification	Permeation test
Type C	Protection against 1 test chemical with breakthrough time ≥ 10 min (level 1 or higher)	Strict Quality Assurance (Notified Body + ongoing production monitoring)	Permeation test

Standards

Related Standards: EN ISO 374-1:2016 – Protective Gloves against Dangerous Chemicals and Micro-organisms

Chemical Code Letters and Corresponding Test Chemicals

Code	Test Chemical	CAS No.	Note
A	Methanol	67-56-1	Primary alcohol
B	Acetone	67-64-1	Ketone
C	Acetonitrile	75-05-8	Nitrile compound
D	Dichloromethane	75-09-2	Chlorinated hydrocarbon
E	Carbon disulfide	75-15-0	Organic sulfide
F	Toluene	108-88-3	Aromatic hydrocarbon
G	Diethylamine	109-89-7	Amine
H	Tetrahydrofuran	109-99-9	Heterocyclic ether
I	Ethyl acetate	141-78-6	Ester
J	n-Heptane	142-82-5	Saturated hydrocarbon
K	Sodium hydroxide (40%)	1310-73-2	Caustic base
L	Sulfuric acid (96%)	7664-93-9	Strong mineral acid
M	Nitric acid (65%)	7697-37-2	Oxidizing acid
N	Acetic acid (99%)	64-19-7	Organic acid
O	Ammonium hydroxide (25%)	1336-21-6	Alkaline base
P	Hydrogen peroxide (30%)	7722-84-1	Oxidizing agent
S	Hydrofluoric acid (40%)	7664-39-3	Highly corrosive acid
T	Formaldehyde (37%)	50-00-0	Aldehyde

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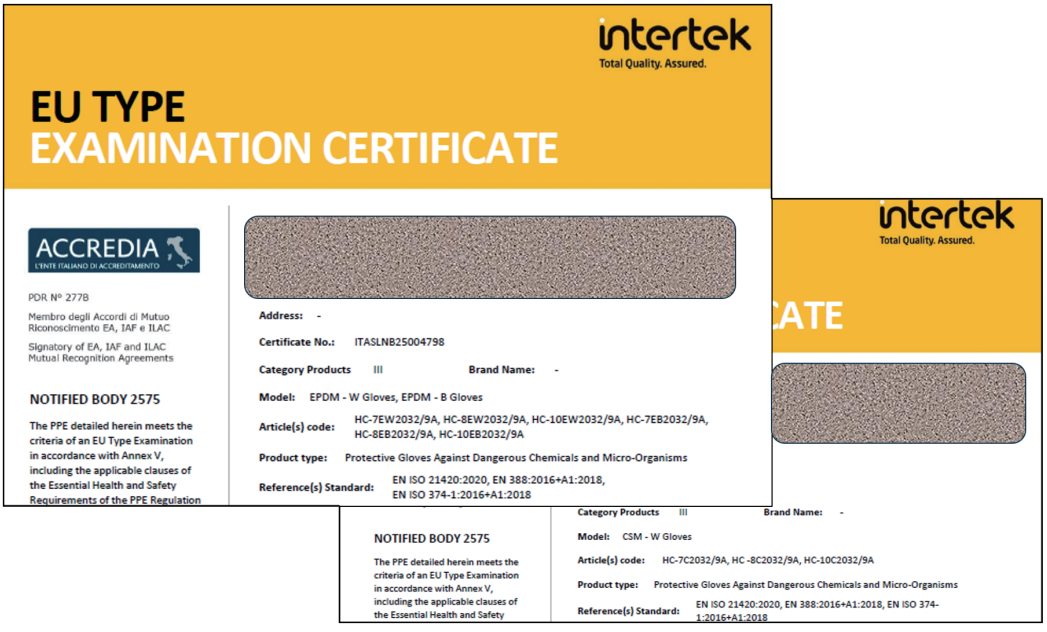
Standards

Following is the detail information of all our types gloves for the different StandardsAnd our Gloves has passed the EU Certificate

BIT-Strandard/COA	CSM	EPDM	BUTYL	Neoprene	Nitrile	EPDM -Radio Proof
EN ISO 21420:2020						
General Test	Pass	Pass	Pass	N/A	N/A	Pass
Dexterity	5	5	5	N/A	N/A	N/A
EN 388:2016+A1:2018						
Mechanical Performance Requirements	Pass	Pass	Pass	N/A	N/A	N/A
Abrasion resistance	4	1	3	3	3	3
Blade cut resistance (Coupe test)	1	1	1	1	1	1
Tear resistance	2	1	1	0	0	1
Puncture resistance	1	1	1	1	1	1
Cut resistance	X	X	X	X	X	X
EN ISO 374-1:2016+A1:2018						
Chemical Performance Requirements	Type A	Type A	Type A	Type B	Type B	Type B
Air Tightness Test	Pass	Pass	Pass			
Water Tightness Test	Pass	Pass	Pass			
Code A	6	6	6		3	
Code B	3	2				
Code C	6	2				
Code F	6	2				
Code I			4	5		
Code J					6	



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EU TYPE
EXAMINATION CERTIFICATE

ACCREDIA
L'ENTE ITALIANO DI ACCREDITAMENTO

PDR N° 277B

Membro degli Accordi di Mutuo Riconoscimento EA, IAF e ILAC

Signatory of EA, IAF and ILAC Mutual Recognition Agreements

NOTIFIED BODY 2575

The PPE detailed herein meets the criteria of an EU Type Examination in accordance with Annex V, including the applicable clauses of the Essential Health and Safety Requirements of the PPE Regulation

[redacted]

Address: -

Certificate No.: ITASLNB25004798

Category Products III Brand Name: -

Model: EPDM - W Gloves, EPDM - B Gloves

Article(s) code: HC-7EW2032/9A, HC-8EW2032/9A, HC-10EW2032/9A, HC-7EB2032/9A, HC-8EB2032/9A, HC-10EB2032/9A

Product type: Protective Gloves Against Dangerous Chemicals and Micro-Organisms

Reference(s) Standard: EN ISO 21420:2020, EN 388:2016+A1:2018, EN ISO 374-1:2016+A1:2018

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ATE

[redacted]

Category Products III Brand Name: -

NOTIFIED BODY 2575

The PPE detailed herein meets the criteria of an EU Type Examination in accordance with Annex V, including the applicable clauses of the Essential Health and Safety

Model: CSM - W Gloves

Article(s) code: HC-7C2032/9A, HC -8C2032/9A, HC-10C2032/9A

Product type: Protective Gloves Against Dangerous Chemicals and Micro-Organisms

Reference(s) Standard: EN ISO 21420:2020, EN 388:2016+A1:2018, EN ISO 374-1:2016+A1:2018

BIT-Strandard/COA	CSM	EPDM	BUTYL	Neoprene	Nitrile	EPDM -Radio Proof
Code K	6	6	6	6	6	6
Code L	6	6	6	6	6	6
Code M	6	5	6			
Code N	6	4				
Code O	6	5	6		6	
Code P	6	6	6	6		6
Code T	6	6				
Degradation Resistance	Pass	Pass				

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