

# Isolator gloves and sleeves

Hands under high security





# Expertise that is renowned WORLDWIDE

PIERCAN GLOVES is today the uncontested leader in the field of drybox gloves, setting the standards in both quality and responsiveness.



# Innovation, our response to a world in constant flux

Understanding and above all anticipating the needs of our customers means that our R&D (Research and Development) and Innovation departments are able to offer solutions that are a perfect fit in terms of changes in the working environment and customer expectations. While the latest innovations involve safely and quickly changing gloves, PIERCAN is also very interested in improving glove traceability and researching new materials that perform ever more effectively.







#### PIERCAN'S R&D LABORATORY

PIERCAN invests heavily in Research & Development. Since its creation in 1948, R&D has been one of the core elements of the PIERCAN group's strategy. Its laboratory is equipped with the latest technologies.

#### THE LATEST DEVELOPMENT: **EPDM** (ETHYLENE PROPYLENE DIENE MONOMER)

PIERCAN'S EPDM glove is the only one in the range with a composition that complies with the FDA positive list (§ 1772600, CFR 21). These features mean it is placed among the best elastomers with an outstanding ability to withstand steam sterilisation, excellent resistance to H202 along with very good mechanical resistance and superb flexibility.



THE **NEW SECURE CUFF RING** BY PIERCAN

PIERCAN isolator gloves protect operatives and the products from the risk of irreversible damage. The gloves fitted to the cuff ring will be changed on multiple occasions, which often involves delicate and complex handling that takes time. With the new secure cuff ring, PIERCAN offers an innovative and effective solution that simplifies operations and ensures they are conducted safely.





# The range of gloves (NUCLEAR) (PHARMACEUTICAL)

The range of gloves that PIERCAN offers is very wide, comprising drybox gloves that may or may not be fitted to a support ring. From mid-2019, PIERCAN will be making its flagship models (the highest selling models) available as in stock items. The gloves that will be available in this way are those made from natural rubber and neoprene.

#### THE 3 TYPES OF GLOVES

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

- 2 Sleeves: Sleeve systems offer the operative an ergonomic fit and perfect freedom of movement. The sleeve is connected to an ELS glove via the Secure Cuff Ring developed by PIERCAN.
- **3 ELS gloves (or short gloves):** ELS gloves are connected to sleeves. These ELS glove/sleeve systems are mainly used in pharmaceutical laboratories and hospitals.

# Decontaminated and/or sterilised gloves

For over 10 years, PIERCAN has offered its customers decontaminated and/or sterilised gloves. This service is intended in particular for pharmacy environments (pharmaceutical laboratories, hospitals etc.) but it may also be for industries in which an extremely high level of cleanliness is now absolutely vital (space, military, research etc.). Please do not hesitate to request the documentation about this service.



# The materials

### CSM 111

- Very good ability to withstand chemical products and sterilising agents
- Highly resistant to ozone and UV rays
- Very good ability to withstand sterilisation (gamma and beta rays)



### BLACK EPDM

- Excellent ability to withstand chemical products and chemical sterilising agents
- Antistatic
- Good mechanical properties
- Excellent ability to withstand steam sterilising

The composition of this glove is compliant with the FDA positive list (§ 1772600, CFR 21)



### BLACK AND WHITE EPDM

- Excellent ability to withstand chemical products and chemical sterilising agents
- · Good mechanical properties
- · Excellent ability to withstand steam sterilising
- Specially adapted for the constraints of a pharmaceutical laboratory in terms of the exterior colour (white)

The composition of this glove is compliant with the FDA positive list (§ 1772600, CFR 21)

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#### POLYURETHANE

- Excellent mechanical properties (punctures, tears, abrasion)
- · Highly resistant to ozone and UV rays



### CSM/POLYURETHANE/CSM

- · Excellent ability to withstand chemical products
- Good mechanical properties
- Highly resistant to ozone and UV rays
- Very good ability to withstand chemical sterilising agents



### NATURAL RUBBER

- · Excellent flexibility and dexterity
- Low cost



### NEOPRENE

- · Good general resistance to chemical products
- Good mechanical properties
- · Good resistance to ozone and UV rays
- Good flexibility and dexterity
- Good technical and cost-effective compromise



Cytotoxic agents: efficacy of Neoprene

### POLYURETHANE/CSM

- A glove that combines mechanical properties (polyurethane) with chemical resistance (CSM)
- Good resistance to chemical sterilising agents (CSM side)



### LEAD-FREE LOADED POLYURETHANE

- Excellent protection from ionising radiation (gamma and beta rays)
- High mechanical protections
- · Highly resistant to ozone and UV rays



### HIGH PERFORMANCE BUTYL

- Highly impermeable to liquids and gases
- · Good ability to withstand chemical products
- Highly resistant to ozone and UV rays
- · Good flexibility and dexterity
- Antistatic (compliant with European standard EN 16350-2014)



# The **manufacturing** processes

The PIERCAN process consists of dipping moulds either in an aqueous medium (emulsion dipping) or with a suitable solvent (solution dipping), depending on the type of elastomer being used. Emulsion dipping is the technique used for neoprene and natural rubber and solution dipping is used for CSM, EPDM, the various types of Polyurethane and BHP. After the various stages of dipping, the gloves are then vulcanised in order to give them the desired mechanical properties.

#### TWO DIPPING TECHNIQUES:

#### **EMULSION**



#### **SOLUTION**



# The production sites



#### PORT-EN-BESSIN: 110 STAFF 2 EMULSION DIPPING STATIONS 5 SOLUTION DIPPING STATIONS 6 000 M<sup>2</sup>

The Port-en-Bessin site processes many elastomers to meet the needs of its customers. This is the group's historic site on which  $\in$ 3 million will be invested in 2019 and 2020.



BONDY: 40 STAFF 1 ASSEMBLY PLANT 1 000 M<sup>2</sup>

PLASTUNION manufactures and markets a range of flexible plastic products such as: isolator halfsuits, sleeves, flexible wall isolators, bags, tunnel sleeves, sheaths etc.



SAN MARCOS (USA): 50 STAFF 1 EMULSION DIPPING STATION 3 SOLUTION DIPPING STATIONS 6 000 M<sup>2</sup>

PIERCAN USA, a subsidiary of PIERCAN founded in 1995, handles the same categories of products as PIERCAN FRANCE. PIERCAN USA manages its own markets but is also able to support PIERCAN France.

# Exacting quality control for our gloves

PIERCAN guarantees the quality of these products because they are subject to a quality control procedure consisting of a number of steps that remains very strict through the processes of design, manufacture, testing and dispatch, while complying with PPE regulations.

#### 1. TESTING ON RECEIPT

- Raw materials
- Checking compliance with the specifications
- Tooling

#### 2. TESTING DURING PRODUCTION

- Physical and chemical parameters tested by the quality control laboratory
- Dipping parameters tested by the operatives

#### **3. PROPERTIES OF THE GLOVE TESTED**

#### BY AN EXTRENAL LABORATORY

• Checking that the gloves comply with the claims made

#### 4. FINAL TESTING OF THE GLOVE IN 6 STEPS:



• Length check:

Done by sampling, 1 glove per box. If the sample glove is non-compliant, testing is expanded and every glove is checked.



• **Beading check:** By sampling, 1 glove per box. At the mid-point between the sides and at the fold of the glove.



• Thickness check: By sampling, 1 glove per box. Thickness is measured in 5 places.



• Visual inspection: 100% are checked. Each glove undergoes inspection to detect any visual imperfections.



• Glove integrity testing: 100% are checked. Each glove is leak tested under negative pressure in line with the standard EN 421.



• Marking:

This ensures the total traceability of the finished product, from raw materials to the inspector.

# Standards

#### THE CE STANDARD

The framework of the CE legislation on PPE (Personal Protective Equipment) has changed a great deal over the past few years. The gloves sold by PIERCAN are compliant with the new European Regulation 2016/425, which came into force definitively in 2019, and permanently replaces Directive 89/686/EEC.

PIERCAN gloves meet the following standards worldwide: EN 420: general requirements for gloves EN 374: chemical risks EN 388: mechanical risks EN 421: nuclear risks



**ISO** CERTIFICATIONS

PIERCAN has been ISO 9001 certified for a number of years. Quality is therefore a core concept at a Group level.



PIERCAN has been ISO 14001 certified since 2010. Rooted in sustainable development, the PIERCAN company is conscious of the environmental impact of its industrial operations and wishes to reduce these negative effects as far as possible.

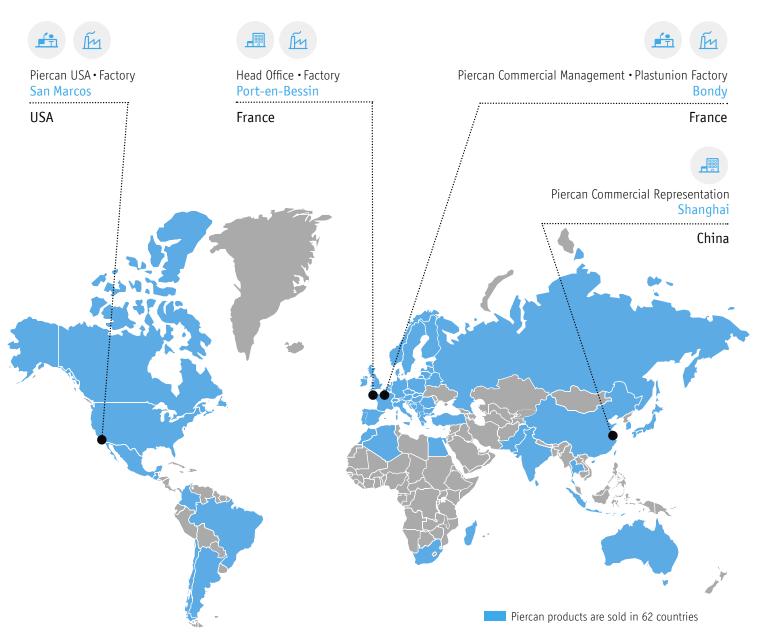
#### THE FDA STANDARD

The latest development in the PIERCAN range is the EPDM glove. This is also the only PIERCAN glove with a composition that is compliant with the FDA positive list (§ 1772600, CFR 21).





# Piercan throughout the world





# FURTHER INFORMATION OR QUESTIONS?

Do not hesitate to call us or send us an e-mail, Piercan is here to help with your projects. Reach your contact on:

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