

# EXCIA

There's Comfort in Quality



Hand Protection

Body Protection

**Machinery  
Industry**

S E R I E S



CATALOGUE

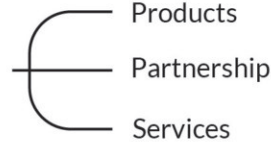
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# About Us

We are an Asian user-oriented Personal Protective Equipment (PPE) solution provider that has been serving Asian users for more than 22 years, empowering people to work efficiently, comfortably, and safely.

**There's Comfort in Quality**



With over 22 years of experience in product knowledge, industry expertise, and Asia-wide supply, we optimize:

PPE

Personal Protective Equipment

Product Protection Equipment

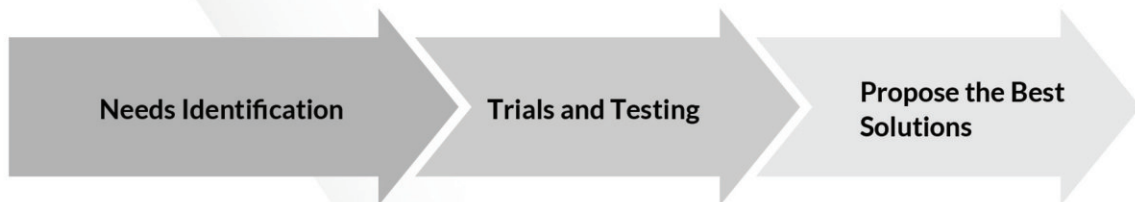
Production Productivity Efficiency

We strive to provide the Highest Quality of Products and Maximum Customer Satisfaction by getting our employees to actively participate in the process, ensuring that we comply with the ISO 9001:2015 Quality Management System.



Our mission is to create a comfortable workplace that helps businesses and households enhance efficiency and productivity. We do this because comfort, functionality, and dexterity in PPE are more important now than ever before. To achieve this, we provide expert solutions, tools, and services that are suitable for your industry's application:

By doing this, our customers can enjoy Excia's product benefits in hand, body and respiratory protection.



We believe Asia's businesses and people deserve a quality work life, which can be achieved by leveraging Asia's rich resources, creativity and technological expertise in making Asia superior - from Asia, to Asia, for Asia.



# The Needs For The Machinery Industry

The machinery industry is a crucial subsector of the industrial sector, responsible for designing, manufacturing, and maintaining equipment and machinery used in various industries, including heavy machinery, precision machinery, and industrial machinery.

Workers in this industry are often exposed to numerous hazards, including harmful particles, chemical splash, cuts by sharp objects, direct contact with oil, contamination, etc. The use of protective gloves and clothing can significantly reduce the risk of exposure to hazardous materials. However, poor-quality protective wear can be uncomfortable and not meet the Occupational Safety and Health standard requirement, making it challenging for the workers to perform their duties and put workers at risk.

To address these challenges, it is crucial to ensure that the protective gloves and clothing provided are not only effective in protecting workers from hazards but also comfortable and well-fitting to enhance productivity and work efficiency.



# Why Choose Excia Machinery Industry Series

## Comfort in Quality

Excia Machinery Industry Series products are designed with both quality and user comfort in mind. We prioritise meeting technical and functional requirements, ensuring high functionality and dexterity. This not only makes them easy to work with but also enables users to handle machines efficiently, ultimately reducing operational costs.



## User-Oriented Solutions

Our team's extensive experience serving end-users in the machinery industry has given us a deep understanding of the machinery process and the challenges associated with different types of machinery processes. This enables us to design protective products that are user-oriented to ensure superior protection and improve productivity.

## Asian Market Expert

We specialise in the Asian market and have been serving the machinery industry in Asia for over 22 years. Our products are designed to cater to the unique needs of Asian users for the best comfort and fit to reduce hand fatigue. We know what suits Asian hands and bodies.



# 7 Challenges & Our Solutions





**! Challenge**

**Handling Slippery Object**

Poor grip strength due to unsuitable gloves is the cause of many preventable workplace accidents, particularly when handling slippery objects contaminated with oils or liquids that reduce surface friction. Such accidents result in worker injuries, object damage, high repair/replacement costs, costly downtime, and lost productivity.

**💡 Solution**

**Grip Performance**

Excia Machinery Industry Series Gloves are designed to provide maximum grip performance with micro-granular nitrile coating material that significantly increases the surface friction of contact points in light oil & wet conditions compared to other nitrile coatings. Our unique technology of sand-pebble, embossed patterns, and full-texture finishing provides a better grip than smooth gloves, reducing injury risk and enhancing work performance.

**👍 Recommended Product**

Micro-granular coating		Sand pebble texture finishing		Unique embossed pattern design		Full texture finishing	
GT505	CT205	CT135	9500	24% more grip*	33% more grip*	12% more grip*	

\*Testing of glove was carried out in comparison with well known brand

\*Testing of gloves was carried out in accordance to SATRA TM438:2011 – Whole hand grip using engine oil



**!** Challenge

**Handling Sharp-Edged Object**

Handling sharp objects poses safety concerns in many workplaces. Accidents are inevitable due to machine failure or worker fatigue. Insufficient cut protection puts workers at risk of serious injuries, resulting in lost productivity and downtime. In serious cases, medical attention may be required, incurring high medical costs and even long-term disability that impacts the worker and employer significantly.

**💡 Solution**

**Cut Resistance**

Excia Machinery Industry Series Gloves provide cut level D protection for medium-risk environments such as machinery operation, metal handling, light glass handling, assembly and maintenance work. Cut Level D Protection is effective than Level A to C in preventing cuts; and is more practical and cost-effective than Levels E and F for these environments. Choosing the appropriate level of protection can reduce the risk of injuries and minimise operating costs.

**👍 Recommended Product**

**Cut level D protection**







3  
 Handling  
 Chemical  
 Liquid

**!** Challenge

**💡** Solution

**Handling Chemical Liquid**

Direct exposure to hazardous chemicals can cause severe health risks and injuries such as skin irritation, rash, chemical burns, and permanent scarring. Some chemicals can be harmful to the body's internal organs, leading to long-term health impacts and affecting the quality of life. Chemical exposure varies depending on the type, concentration, and duration of exposure, and can result in lost productivity and high medical costs for companies.

**Chemical Resistance**

Excia Machinery Industry Series gloves offer superior chemical protection, with premium nitrile to provide an EN374 Type A or B chemical-resistance performance. Type A and Type B gloves offer better chemical protection than Type C gloves, which may not be sufficient for heavy or medium-to-heavy chemical conditions. Hence, choosing suitable chemical-resistant gloves can reduce the risks of health hazards and lead to better productivity.

**👍 Recommended Product**

**Class A**

Excellent Chemical Performance

**Type A certified**  
(6 chemicals)

CT135

**Type B certified**  
(4 chemicals)

CT205

CT007



4

**Handling Oil**

**Challenge**

**Handling Oil**

Poor performance against liquid penetration can result in harmful health effects for workers. Chronic exposure to oils can pose serious health hazards to workers which range from skin irritation to cancer. When workers are not protected from oil exposure, they may have to take time off work due to illnesses or injuries, leading to low productivity and high costs for companies.

**Solution**

**Oil Resistance**

Excia Machinery Industry Series gloves are available in light, moderate, and heavy variants. Our Double Coating Gloves provide better protection against liquid penetration and reduce the risk of direct contact with oils compared to single-coating gloves. Premium Nitrile Gloves like CT135 are made of a higher percentage of pure nitrile material with less filler, providing superior protection against oil. These gloves protect against chronic exposure to oil, reducing health risks and improving productivity

**Recommended Product**

**Light oil**  
(Double coating)

**GT505**

\*Double Coating Prevent Liquid Penetration

- 1 Micro granular finishing
- 2 Nitrile coating (Middle)
- 3 Nylon (Inner)

**Medium to heavy oil**  
(Double coating)

**CT205**

\*Double Coating Prevent Liquid Penetration

- 1 Micro granular finishing
- 2 Nitrile coating (Middle)
- 3 Cotton Liner (Inner)

**Heavy oil**  
(Premium grade nitrile)

**CT135**



**!** Challenge

**Handling Food Processing**

Food contamination is a serious public health concern, with millions falling ill and hundreds of thousands dying each year. Using gloves not designed for food handling can result in contamination, serious health risks and death. Eventually, this could lead to loss of customers and business closure. This can also result in high costs due to recalls, penalties, legal fees, and damage to reputation.

**💡** Solution

**Contamination-Free/ Food Safe**

Excia Machinery Industry Series gloves are tested by recognised Notified Body for food handling to prevent the spread of harmful bacteria and contaminants that can cause illness or even death. Our disposable glove 9300 is halal certified and meets Hazard Analysis and Critical Control Points (HACCP) requirements. This reduces the risk of contamination and improves work efficiency.

**👍** Recommended Product

**Food-safe certified**



Thickness  
0.40mm

CT135



Thickness  
0.28mm

CT007



Finger Thickness  
0.07mm

9300

HACCP  
HALAL (JAKIM)



Finger Thickness  
0.12mm

9500



### Challenge

#### Handling Small Part/ Object

When handling small objects, poorly fitting gloves can cause hand fatigue, which can result in reduced efficiency and productivity, leading to increased costs for the company.



### Solution

#### Dexterity Performance

Excia Machinery Industry Series gloves feature a form-fitting, ergonomic design that fits the user's hands perfectly, while the lightweight design provide additional dexterity and tactile sensitivity, This allows for increased precision when handling small objects, reducing the chances of mishandling and human error. Ultimately, choosing the right gloves can improve efficiency and productivity.



### Recommended Product

#### Ergonomic design



GT505

#### Hand specific form design



CT007

#### Lightweight



TT515

15 Gauge Liner



9300

9500

Finger Thickness  
0.07mm

Finger Thickness  
0.12mm



7



**Machine  
Cleaning &  
Maintenance**

**! Challenge**

**💡 Solution**

**Machine Cleaning & Maintenance**

Without proper protective clothing and gloves, exposure to harmful chemicals in machinery processes can cause skin and respiratory problems and have long-term health effects. When working for long hours, unsuitable protective gear in hot and confined environments can lead to excessive sweating, which can cause discomfort and decrease work productivity.

**Chemical Hazards Protection**

Excia Machinery Industry Series Protective Clothing is made using professionally selected high-breathability Microporous PE Laminate material and provides a Type 6B and 5B protection rating which protects against solid particulates (Type 5B) and liquid chemicals (Type 6B).

Together with the protective clothing, Excia also offers the CT135 gloves, which are Type A certified for 6 different chemicals, it will be able to offer complete body and hand protection to carry out their work safely and effectively in challenging machinery working conditions.

**👍 Recommended Product**



**CT135**

**6 chemicals  
Type A certified**

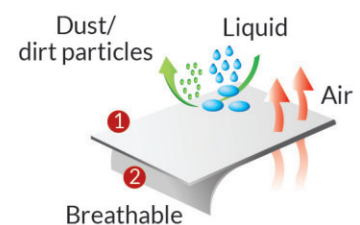
**Class A**

**Excellent Chemical  
Performance**



**T5-200**

**Type 6B and 5B certified  
standard, high breathability**



- ① Microporous polyethylene film
- ② Nonwoven inner layer

# NexPolymer™

## New Generation Coating

The NexPolymer™ is a multi-functional, green polymer coating with a leather-like surface, made from polymer polyurethane material. It's a fundamental breakthrough for the long-term safety of the environment as it eliminates the use of solvents in the manufacturing process.



### The Benefits of NexPolymer™



Food grade



Biodegradable



Touch screen function\*



Good durability



High elasticity



Water proof



Up to -25°C low temperature resistance



Leather-like texture



Natural latex free



Best grip performance



Up to 160°C heat resistance



Odourless



Quick dry



Natural foam



Silicone free

\*selected model

### NexPolymer™ Gloves Series



GX 505



GX 518



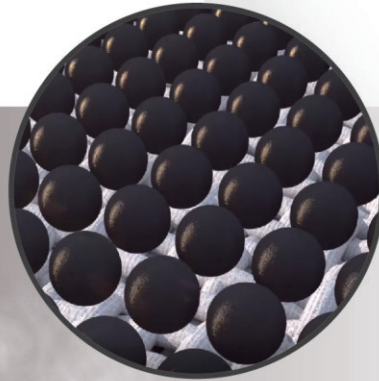
TX 536



TX 537

# NexPolymer™

Coating Passed the Food Contact Test and Biodegradable



**360° Breathable**

Lightweight, Soft, Best Fitting and Comfort

**10,000**  
**Cycle of Abrasion Resistance**

More Durable and Long Lasting



# TungFlex™

## New Cut Resistant Yarn

TungFlex™ is a proprietary metal fiber solution that has been innovated to provide superior cut protection without the need for fiberglass, basalt or steel fiber reinforcements. Using TungFlex™ yarn in areas requiring cut resistance is more flexible, stronger and safer.

### The Benefits of TungFlex™



#### HIGH FLEXIBILITY

25% to 50% thinner than conventional cut resistance materials (steel, fiberglass or basalt) and lightweight.



#### SUPERIOR CUT PROTECTION

TungFlex™ Special Metal Fiber hardness is 2x better than Steel, 1.5x better than Basalt and Fibreglass based on Mohs scale (Hardness values higher is stronger).



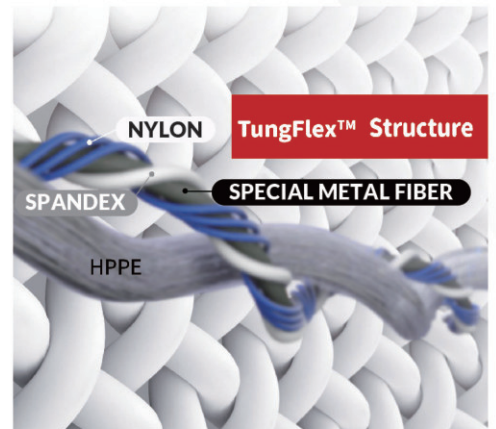
#### EXCELLENT COMFORT

50% lighter than conventional cut resistance gloves of same protection level resulting in more comfort and reduce hand fatigue.



#### ALLERGY-FREE

TungFlex™ Special Metal Fiber do not contain material that cause allergy.



### TungFlex™ Cut Resistant Glove Series



TX 536



TX 537



TT 535



# Product Range



## GT505

General Purpose

Excellent grip performance with nitrile micro granular coating improve job performance in light wet/ oil condition

Product Specification:

<b>Packaging</b>	12 Pairs per inner box 12 Polybags per carton 144 Pairs per carton	<b>Sizes</b>	6/XS 7/S 8/M 9/L 10/XL
<b>Length</b>	220mm - 250mm	<b>Coating</b>	Nitrile micro granular
<b>Thickness</b>	0.40mm - 0.50mm	<b>Material</b>	13 Gauge nylon liner
<b>Colour</b>	Dark Blue		

Standards:  CAT.II  
0075  EN 388:2016  
4121X



## GT527

General Purpose

High abrasion performance with ultra fine foam nitrile prolonged usage in dry condition

Product Specification:

<b>Packaging</b>	10 Pairs per polybag 12 Polybags per carton 120 Pairs per carton	<b>Sizes</b>	8/M 9/L 10/XL
<b>Length</b>	240mm	<b>Coating</b>	Ultra fine foam nitrile
<b>Thickness</b>	-	<b>Material</b>	15 Gauge nylon + Spandex glove lining
<b>Colour</b>	Black		

Standards:   EN 388  
4131X



## GX518

General Purpose

Superior breathability with NexPolymer™ coating technology prevent sweaty hand

Product Specification:

<b>Packaging</b>	10 Pairs per polybag 12 Polybags per carton 120 Pairs per carton	<b>Sizes</b>	7/S 8/M 9/L 10/XL
<b>Length</b>	240mm	<b>Coating</b>	NexPolymer™
<b>Thickness</b>	-	<b>Material</b>	15 Gauge nylon + Spandex glove lining
<b>Colour</b>	Blue		

Standards:   EN 388  
4131X 



## GX505

General Purpose

Superior breathability with NexPolymer™ coating technology prevent sweaty hand

Product Specification:

<b>Packaging</b>	10 Pairs per polybag 12 Polybags per carton 120 Pairs per carton	<b>Sizes</b>	7/S 8/M 9/L 10/XL
<b>Length</b>	240mm		
<b>Thickness</b>	-	<b>Coating</b>	NexPolymer™
<b>Colour</b>	Black	<b>Material</b>	15 Gauge nylon + Spandex glove lining

Standards:   



## TT515

Cut Resistance

Light weight with superior cut performance to reduce risk of injury

Product Specification:

<b>Packaging</b>	10 Pairs per polybag 12 Polybags per carton 120 Pairs per carton	<b>Sizes</b>	7/S 8/M 9/L 10/XL
<b>Length</b>	220mm - 280mm		
<b>Thickness</b>	0.92mm	<b>Coating</b>	Foam nitrile
<b>Colour</b>	Grey	<b>Material</b>	15 Gauge HPPE + Stainless steel, Spandex, Nylon liner

Standards:  



## TT519

Cut Resistance

Excellent cut performance with reinforce crotch for extra protection

Product Specification:

<b>Packaging</b>	10 Pairs per polybag 12 Polybags per carton 120 Pairs per carton	<b>Sizes</b>	8/M 9/L 10/XL
<b>Length</b>	240mm		
<b>Thickness</b>	-	<b>Coating</b>	Ultra fine foam nitrile
<b>Colour</b>	Grey	<b>Material</b>	18 Gauge HPPE + Stainless steel

Standards:  

## TT520

Cut Resistance

Highest cut resistance with reinforce crotch & extra length for wrist protection



Product Specification:

Packaging	10 Pairs per polybag 12 Polybags per carton 120 Pairs per carton	Sizes	8/M 9/L 10/XL
Length	350mm		
Thickness	-	Coating	Flat nitrile
Colour	Light Grey	Material	13 Gauge HPPE + Stainless steel

Standards:  

## TX536

Cut Resistance

Superior breathability & cut resistance performance with NexPolymer™ coating & TungFlex™ fiber technology prevent cut injury



Product Specification:

Packaging	10 Pairs per polybag 12 Polybags per carton 120 Pairs per carton	Sizes	8/M 9/L 10/XL
Length	240mm		
Thickness	-	Coating	NexPolymer™
Colour	Green	Material	18 Gauge TungFlex™

Standards:   

## TX537

Cut Resistance

Superior breathability & higher cut resistance performance with NexPolymer™ coating & TungFlex™ fiber technology prevent cut injury



Product Specification:

Packaging	10 Pairs per polybag 12 Polybags per carton 120 Pairs per carton	Sizes	8/M 9/L 10/XL
Length	240mm		
Thickness	-	Coating	NexPolymer™
Colour	Blue	Material	18 Gauge TungFlex™

Standards:   



## TT535

Cut Resistance

Excellent grip with nitrile micro granular coating & outstanding cut resistance performance with TungFlex™ fiber technology prevent cut injury

Product Specification:

<b>Packaging</b>	10 Pairs per polybag 12 Polybags per carton 120 Pairs per carton	<b>Sizes</b>	8/M 9/L 10/XL
<b>Length</b>	240mm		
<b>Thickness</b>	-	<b>Coating</b>	Nitrile micro granular
<b>Colour</b>	Grey	<b>Material</b>	18 Gauge TungFlex™

Standards:  



## TU550

Cut Resistance

Superior cut performance with reinforce crotch for long lasting use

Product Specification:

<b>Packaging</b>	10 Pairs per polybag 12 Polybags per carton 120 Pairs per carton	<b>Sizes</b>	7/S 8/M 9/L 10/XL 11/XXL
<b>Length</b>	240mm		
<b>Thickness</b>	-	<b>Coating</b>	PU
<b>Colour</b>	Grey	<b>Material</b>	13 Gauge HPPE + Glass fiber

Standards:  









## CT135

Chemical Resistance

Excellent performance against chemical permeation & durability in handling chemical with confident

Product Specification:

<b>Packaging</b>	12 Pairs per polybag 12 Polybags per carton 144 Pairs per carton	<b>Sizes</b>	7/S 8/M 9/L 10/XL
<b>Length</b>	330mm ± 30mm		
<b>Thickness</b>	0.40mm ± 0.10mm (Palm area)	<b>Coating</b>	Flat nitrile
<b>Colour</b>	Green	<b>Material</b>	Flock lined

Standards:      



## CT205

Chemical Resistance

Excellent grip performance with nitrile micro granular coating improve job performance in heavy wet/ oil condition

Product Specification:

<b>Packaging</b>	10 Pairs per polybag 12 Polybags per carton 120 Pairs per carton	<b>Sizes</b>	8/M 9/L 10/XL
<b>Length</b>	300mm ± 5mm		
<b>Thickness</b>	1.15mm (Cuff) ± 0.20mm	<b>Coating</b>	Nitrile micro granular
<b>Colour</b>	Black	<b>Material</b>	15 Gauge cotton liner

Standards:    



## CT037

Chemical Resistance

Excellent performance against chemical permeation & durability in handling chemical with confident & extended length

Product Specification:

<b>Packaging</b>	10 Pairs per polybag 6 Polybags per carton 60 Pairs per carton	<b>Sizes</b>	8/M 9/L 10/XL
<b>Length</b>	410mm		
<b>Thickness</b>	0.52mm ± 0.3mm	<b>Coating</b>	Flat nitrile
<b>Colour</b>	Green	<b>Material</b>	Flock lined

Standards:     



## CT007

Chemical Resistance

Excellent grip performance with unique embossed design improve job performance in light wet/ oil condition

Product Specification:

<b>Packaging</b>	12 Pairs per polybag 12 Polybags per carton 144 Pairs per carton	<b>Sizes</b>	7/S 8/M 9/L 10/XL 11/XXL
<b>Length</b>	300mm		
<b>Thickness</b>	0.25mm - 0.33mm	<b>Coating</b>	Flat nitrile
<b>Colour</b>	Blue	<b>Material</b>	Unlined

Standards:     



## 9300

Disposable

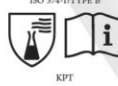
Significant odour-free process brings comfort to work

Product Specification:

<b>Packaging</b>	100 Pcs per box 10 Boxes per carton 1000 Pcs per carton	<b>Sizes</b>	7/S 8/M 9/L 10/XL
<b>Length</b>	240mm ± 5mm	<b>Coating</b>	-
<b>Thickness</b>	0.05mm ± 0.02mm   2mil ± 1mil (Palm) 0.07mm ± 0.02mm   2.8mil ± 1mil (Finger)	<b>Material</b>	Flat nitrile
<b>Colour</b>	Blue		

Standards:

CE 2777



HACCP  
HALAL (JAKIM)



## 9500

Disposable

Unique full texture finishing for enhanced grip & work efficient in wet/ dry condition

Product Specification:

<b>Packaging</b>	100 Pcs per box 10 Boxes per carton 1000 Pcs per carton	<b>Sizes</b>	7/S 8/M 9/L 10/XL
<b>Length</b>	240mm ± 5mm	<b>Coating</b>	-
<b>Thickness</b>	0.10mm ± 0.02mm   3.9mil ± 1mil (Palm) 0.12mm ± 0.02mm   4.7mil ± 1mil (Finger)	<b>Material</b>	Flat nitrile
<b>Colour</b>	Blue		

Standards:

CE 2777



## 9410

Disposable

Skin friendly with fingertips textured finishing & accelerator free

Product Specification:

<b>Packaging</b>	100 Pcs per box 10 Boxes per carton 1000 Pcs per carton	<b>Sizes</b>	7/S 8/M 9/L 10/XL
<b>Length</b>	240mm ± 5mm	<b>Coating</b>	-
<b>Thickness</b>	0.08mm ± 0.02mm   3.1mil ± 1mil (Palm) 0.11mm ± 0.02mm   4.3mil ± 1mil (Finger)	<b>Material</b>	Flat nitrile
<b>Colour</b>	Blue		

Standards:

CE 2777



HACCP  
HALAL (JAKIM)



## 9600

Disposable

Extended length with fingertips textured finishing provide extra protection

Product Specification:

<b>Packaging</b>	100 Pcs per box 10 Boxes per carton 1000 Pcs per carton	<b>Sizes</b>	7/S 8/M 9/L 10/XL
<b>Length</b>	295mm ± 5mm	<b>Coating</b>	-
<b>Thickness</b>	0.10mm ± 0.02mm   3.9mil ± 1mil (Palm) 0.12mm ± 0.02mm   4.7mil ± 1mil (Finger)	<b>Material</b>	Flat nitrile
<b>Colour</b>	Blue		

Standards:

CE 2777



## T5-200 (T5-200-SW-LA0)

Protective clothing

High comfortability, durable & protection against chemical splash & dust



Product Specification:

Packaging	Individual polybag (40pcs per carton)	Colour	White
Weight	55g	Style	Standard
Seam	Stitched	Description	Standard, stitched seam, microporous polyethylene laminate non woven white coverall with 3 piece hood, elasticated wrists, hood and ankles, 2 way front zipper with re-sealable storm flap and attached thumb loops.
Fabric	Microporous PE Laminate		
Size	S, M, L, XL, XXL, XXXL		

Standards: CE 0624



## T5-200 (T5-200-BW-LA1)

Protective Clothing

High comfortability, durable & extra protection against chemical splash & dust



Product Specification:

Packaging	Individual polybag (40pcs per carton)	Colour	White
Weight	55g	Style	Standard
Seam	Bound	Description	Standard, bound seam (not include for hood, wrist and ankle part), microporous polyethylene laminate non woven white coverall with 3 piece hood, elasticated wrists, hood and ankles, 2 way front zipper with re-sealable storm flap and attached thumb loops.
Fabric	Microporous PE Laminate		
Size	S, M, L, XL, XXL, XXXL		

Standards: CE 0624



## T5-200 (T5-200-BW-LB1)

Protective Clothing

High comfortability with breathable back for long working hour



Product Specification:

Packaging	Individual polybag (40pcs per carton)	Colour	White + Blue
Weight	55g with 35g of blue breathable fabric on the back	Style	Comfort
Seam	Bound	Description	Comfort, bound seam (not include for hood, wrist and ankle part), microporous polyethylene laminate non woven white coverall with 3 piece hood, elasticated wrists, hood and ankles, 2 way front zipper with re-sealable storm flap and attached thumb loops, breathable SMS back in blue
Fabric	Microporous PE Laminate		
Size	S, M, L, XL, XXL, XXXL		

## Product Selection Guide

### How to choose the glove based on application

			Grip			Handling			Resistance					Machinery Industry Application	
Category	Product Model	Coating	Type of Coating	Dry	Oily	Hand Dryness	Small Object	Large Object	Cut	Heat	Oil	Chemical	Food Safe	Handling Oily object (Small)	Handling Oily object (Large)
General	Excia GT505	Nitrile micro granular	Palm	✓	✓✓✓	Palm	✓	✓						✓✓	✓
General	Excia GT527	Foam NBR	Palm	✓	✓✓		✓	✓						✓	
General	Excia GX518	NexPolymer™	Palm	✓	✓✓	Palm	✓✓	✓					✓	✓	
General	Excia GX505	NexPolymer™	Palm	✓	✓✓	Palm	✓✓	✓					✓	✓	
Cut	Excia TT515	Foam NBR	Palm	✓	✓✓		✓	✓	D					✓	
Cut	Excia TT519	Foam NBR	Palm	✓	✓✓	Palm	✓✓	✓	D					✓	
Cut	Excia TT520	Flat NBR	Palm	✓	✓	Palm	✓✓	✓	F					✓	
Cut	Excia TX536	NexPolymer™	Palm	✓	✓✓	Palm	✓✓	✓	D					✓	
Cut	Excia TX537	NexPolymer™	Palm	✓	✓✓	Palm	✓✓	✓	E					✓	
Cut	Excia TT535	Nitrile micro granular	Palm	✓	✓✓	Palm	✓✓	✓	F					✓	
Cut	Excia TU550	PU	Palm	✓	✓✓	Palm	✓✓	✓	D					✓	
Chemical	Excia CT135	Flat NBR	All	✓	✓	All	✓	✓				✓	✓	✓	✓
Chemical	Excia CT205	Nitrile micro granular	All	✓	✓✓✓	All	✓	✓				✓		✓	✓✓
Chemical	Excia CT037	Flat NBR	All	✓	✓	All	✓	✓				✓		✓	✓
Chemical	Excia CT007	Flat NBR	All	✓	✓	All	✓	✓				✓	✓	✓	
Disposable	Excia 9300	Flat NBR	All	✓	✓	All	✓	✓				✓	✓	✓	
Disposable	Excia 9410	Flat NBR	All	✓	✓	All	✓	✓				✓	✓	✓	
Disposable	Excia 9500	Flat NBR	All	✓	✓	All	✓	✓				✓	✓	✓	
Disposable	Excia 9600	Flat NBR	All	✓	✓	All	✓	✓				✓	✓	✓	

The above information is for reference only, actual performance might differ in different applications, working environments, actual usage.



# EN Standard – Protective Glove

CE Category  European Directive 89/686/EEC

Category I	Category II	Category III
Minor risks.	Reversible risks (injury), certified compliant by a notified body.	Irreversible risks (corrosion), certified compliant and tested by a notified body whose number is specified.

## EN 420 General Requirements for Protective Gloves

- Technical information\*
- Glove markings
- Sizes
- Level of dexterity (1 to 5)
- Innocuousness of the glove

\*Printed on the packaging or on the user instruction of EXCIA gloves. For further details, contact your distributor or visit the website.

## EN ISO 374:2016 Gloves Giving Protection From Chemicals and Microorganisms

The standard defines the capability of gloves to protect the user against penetration, permeation and degradation by chemicals and microorganisms. It classifies three types of gloves by level of protection (A, B, and C).

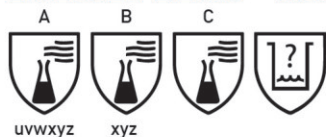
## EN 374-2:2014 Penetration Resistance

The gloves must pass the air leak and/or water leak test, and meet the defined AQL inspection level. In an air leak test the interior of glove is pressurized with air and the surface is checked for holes. In a water leak test the glove is filled with water, and checked for the appearance of water droplets on the outside surface after a defined time period.

AQL (accepted quality level) is a measure of quality assurance based on random sampling procedure according to ISO 2859-1 used by manufacturers for measuring the likelihood of pinhole defects in a batch of gloves. An AQL of 1,5 accepts the statistical probability that there are less than 1.5% of the gloves with defects in the batch.

Performance level	Level 1	Level 2	Level 3
Acceptable quality level unit	under 4,0	under 1,5	under 0,65
Inspection levels	S4	G1	G1

## EN 16523-1:2015 Resistance to chemical permeation



Test method to measure the resistance of the PPE material to permeation by hazardous chemicals at molecular level and under continuous contact. The resulting value is the breakthrough time or the time needed by the hazardous liquid or gas to get in contact with the skin. The glove is classified in terms of breakthrough time performance level 1 to 6.

Permeation performance index	1	2	3	4	5	6
Measured breakthrough time	> 10	> 30	> 60	> 120	> 240	> 480

The standard defines a list of 18 chemicals. The minimum breakthrough time for a Type A glove is 30 mins (Level 2) for 6 chemicals, for a Type B it is 30 mins for at least 3 chemicals, and for Type C it is 10 mins (Level 1) for at least 1 chemical on the list.

Type of gloves	A	B	C
Breakthrough time	≥ 30 min for at least 6 chemicals	≥ 30 min for at least 3 chemicals	≥ 10 min for at least 1 chemical

The 'chemical resistant' glove pictogram must be accompanied by code letters for the tested chemicals for Type A and Type B gloves. Type C marked gloves are without any code letter.

Letter code	Chemical	CAS numbere	Class	Letter code	Chemical	CAS numbere	Class
A	Methanol	67-56-1	Primary alcohol	K	Caustic soda 40%	1310-73-2	Inorganic base
B	Acetone	6764-1	Ketone	L	Sulphuric acid 96%	7664-93-9	Inorganic mineral acid
C	Acetonitrile	75-05-8	Nitrile compound	M*	Nitric acid 65%	7697-37-2	Inorganic mineral acid, oxidizing
D	Dichloromethane	75-09-2	Chlorinated hydrocarbon	N*	Acetic acid 99%	64-19-7	Organic acid
E	Carbon disulphide	75-15-0	Organic compound containing sulphur	O*	Ammonium hydroxide 25%	1336-21-6	Organic base
F	Toluene	108-88-3	Aromatic hydrocarbon	P*	Hydrogen peroxide 30%	7722-84-1	Peroxide
G	Diethylamine	109-89-7	Amine	S*	Hydrofluoric acid 40%	7664-39-3	Inorganic mineral acid, contact poison
H	Tetrahydrofurane	109-99-9	Heterocyclic ether	T*	Formaldehyde 37%	50-00-0	Aldehyde
I	Ethyl acetate	141-78-6	Ester				
J	n-Heptane	142-85-2	Saturated hydrocarbon				

\*New chemicals

## EN 374-4:2013 Resistance to chemical degradation

Degradation is the deleterious change in one or more properties of a protective glove material due to contact with a chemical. Indications of degradation can be delaminating, discoloration, hardening, softening, dimensional change, loss of tensile strength, etc. It is determined by measuring the percentage change in puncture resistance of the glove material after a continuous contact for 1 hour of the external surface with the challenge test chemical. The results of the degradation test must appear in the information leaflet for all three glove types.

## EN 374-5:2016 Protection against micro-organisms

EN ISO 374-5 EN ISO 374-5



Micro-organisms are defined by the standard as bacteria, fungi or viruses. To claim resistance to bacteria and fungi the glove must pass the penetration resistance test according to standard EN 374-2: 2014. If the glove passes ISO 16604: 2004 (method B) test it can claim resistance to viruses as well, and the term "VIRUS" will be added below the biohazard pictogram.

## EN 388:2016 Mechanical Risks



abcdef

The EN 388 standard underwent revision in 2016. EXCIA gloves are in the process of being recertified by the notified bodies to conform to the revised standard. Currently reported ISO 13997 cut resistance values are indications until officially certified. In the meantime the existing certificates according to EN 388: 2003 remain valid.

### A) Abrasion Resistance (0-4)

Number of cycles required to abrade a hole using abrasive paper in a circular sample of glove material under constant pressure and motion.

### B) Blade Cut Resistance by Coup Test (0-5)

Number of cycles required to cut a sample using a stainless steel circular blade under constant speed and low force of 5 newtons (approx. 510g). For materials that dull the blade, after a certain number of cycles without cut through, the ISO 13997 test is performed and becomes the reference cut resistance value.

### C) Tear Resistance (0-4)

Force required to propagate a tear in a rectangular sample of a glove with a starting incision, to a maximum force of 75N (approx. 7,6kg).

### D) Puncture Resistance (0-4)

Force required to puncture the sample with a standard size steel point at a constant speed of 10 cm/min.

### E) Blade Cut Resistance by ISO Test (A-F)

Force in newtons (N) required to cut through a sample using a rectangular blade in a specified cut test machine such as Tomodynamometer (TDM). This test is optional unless the blade in Coup test becomes dull, whereupon it becomes the reference for cut resistance. A letter value is assigned as follows:

Level of protection	A	B	C	D	E	F
Force in newtons	> 2 low	≥ 5 Medium	≥ 10 Medium	≥ 15 High	≥ 22 High	≥ 30 High

### F) Impact Resistance (P)

For protective gloves claiming impact resistance. Measures dissipation of force by the area of protection upon an impact of a domed anvil at an impact energy of 5 joules. Testing is carried out in accordance with the impact protection test for motorcycle protective gloves of EN 13594:2015 standard. A letter "P" is added on successful pass, while a fail remains unmarked.

Level X can also be applied for a-f above, which means "not tested".

Level of protection	Abrasion resistance (number of cycles)	Blade cut resistance by Coup test (index)	Tear resistance (force in newtons)	Puncture resistance (force in newtons)
1	> 100	> 1,2	> 10	> 20
2	≥ 500	> 2,5	≥ 25	≥ 60
3	≥ 2000	≥ 5	≥ 50	≥ 100
4	≥ 8000	≥ 10	≥ 75	≥ 150
5	-	≥ 20	-	-

## EN 1149-1 Antistatic properties

Tested level of glove surface resistivity. Measured in ohms/ square ( $\Omega$ ), this indicates the capacity of the glove to disperse via a dissipative and/ or conductive effect the accumulated static electricity discharges on the operator's hand.

## Risks Related to Food Contact

It is applied to materials and articles that, at finished state, are intended to come into contact or are brought into contact with foodstuffs or with water that is for human consumption. According to Regulation 1935/2004: <<The materials and articles must be manufactured in accordance with good manufacturing practice so that, under normal or foreseeable conditions for their use, they do not transfer their constituents to food in quantities which could:









- Present a danger to human health,
- Results in an unacceptable change in the composition of the foodstuffs or a deterioration in the organoleptic characteristics thereof.

# EN Standard – Protective Clothing

## Current European “Types” of Chemical Protective Clothing

EN 943-1 & 2 <b>TYPE 1</b>	<b>Gas Tight Chemical Protective Clothing</b> Protection against liquid and gaseous chemicals, aerosols, and solid particulates.	 TYPE 1	EN 14605 <b>TYPE 4</b>	<b>Spray Tight Protective Clothing</b> Protect against saturation of liquid chemicals.	 TYPE 4
EN 943-1 <b>TYPE 2</b>	<b>Non Gas Tight Chemical Protective Clothing</b> Retain positive pressure to prevent dust, liquids, and vapors.	 TYPE 2	EN ISO 13982-1 <b>TYPE 5</b>	<b>Dry Particulate Protective Clothing</b> Protect the full body against airborne solid particulates.	 TYPE 5
EN 14605 <b>TYPE 3</b>	<b>Liquid Tight Protective Clothing</b> Protect against strong and direct jets of liquid chemicals.	 TYPE 3	EN 13034 <b>TYPE 6</b>	<b>Light Spray Protective Clothing</b> Limited protection against a light spray of liquid chemicals.	 TYPE 6

## Additional Standards

EN 1073-1**	<b>Radioactive particulate Protective Clothing</b>	 EN 1073-1	DIN 32781	<b>Protective Clothing against pesticides.</b>	 DIN 32781
EN 1073-2**	<b>Radioactive particulate Protective Clothing</b>	 EN 1073-2	EN ISO 14116	<b>Limited flame spread Protective Clothing</b>	 EN ISO 14116 INDEX 1/0/0
EN 14126	<b>Protective clothing against infective agents</b> Add "-B" after "Type TYPE" [such as TYPE 3-B] to indicate passing the European standard.	 EN 14126	EN 12941	<b>Respiratory protective devices</b> Powered filtering devices incorporating a helmet or a hood.	 EN 12941
EN 1149-5	<b>Anti-static Protective Clothing</b>	 EN 1149	EN 14594	<b>Respiratory protective devices</b> Powered filtering devices incorporating a helmet or a hood.	 EN 14594

\* Type approvals do not necessarily apply to accessories. Always refer to the garment label and instructions for use document which will indicate the protection level offered.

\*\* Gives no protection against radioactive radiation.

\*\*\* Always ensure the garment and wearer are properly grounded.

# EXCIA

There's Comfort in Quality

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