



GREENHOUSE AGRICULTURE

Industry-Specific Protection Solutions
Quick Reference Guide

[ansell.com](https://www.ansell.com)



ABOUT ANSELL

Ansell has been protecting workers for over 125 years. We have specialized teams across 10 industries dedicated to developing solutions for the hazards and applications that workers face every day.

Ansell is dedicated to safety: We provide a comprehensive range of gloves and body protection solutions to cover worker needs across the greenhouse agriculture industry.

DID YOU KNOW?

- Using different colored gloves is critical for easy identification to prevent cross contamination.
- Mil thickness of a glove does not equate to chemical protection. The composition material is more important than the thickness of the glove in regards to chemical protection.
- Using gloves that are not ergonomically designed to help support your musculoskeletal health can lead to hand fatigue that can result in injury.
- Certain single use gloves have anti-stick properties that will minimize the adherence of medical tapes and other sticky substances to the gloves.
- Not all single use gloves can protect you against the most common of chemicals, like isopropyl alcohol.
- Certain gloves are made to protect you and certain gloves are made to protect the product, as in the case of clean and sterile gloves.
- Certain chemicals can cause foaming in some single use gloves. Ansell has non-foaming solutions.

Disposable glove quality - understand AQL

What is AQL?

Regulatory agencies allow a certain number of failures (holes) in every lot of disposable gloves that a manufacturer produces. That number is called an "Acceptable Quality Level" - or AQL.

How is AQL Tested?

Using random sampling from every production lot, quality testers fill gloves with water and check for pinhole defects (leaks)

Why is AQL Important?

AQL tests measure and rate the barrier integrity of disposable gloves. Low AQL numbers indicate fewer pinhole defects, and higher levels of quality.



	Comfort	Performance	Protection	Comment
Natural Rubber Latex				<ul style="list-style-type: none"> • Highest comfort with elasticity & dexterity • Great wet and dry grip • Allergenic: type I & type IV
Nitrile				<ul style="list-style-type: none"> • Strong and durable material • Excellent puncture and abrasion resistance • Good chemical splash resistance
Neoprene				<ul style="list-style-type: none"> • Broad chemical splash resistance • Maintain flexibility across a wide range of temperatures • Consistent performance even in wet environments
Polyisoprene				<ul style="list-style-type: none"> • As comfortable as natural rubber latex • Second skin fit and feel • Reduces the risk of type I and type IV allergies
Vinyl				<ul style="list-style-type: none"> • Most economical • Provides lowest level of protection and performance

Extremely Low
 Low
 Moderate
 High
 Very High

SINGLE USE



MICROFLEX®
LIFESTAR EC™
LSE-104

Benefits & Features:

- Tested against both fentanyl and gastric acid (vomit) to simulate hazardous, real world overdose situations
- Dual layer, dual color design for two layers of protection
- Advanced barrier protection (AQL 0.65)
- Non-stick and non-foaming properties for reduced interference when working



MICROFLEX®
COBALT™ N19

Benefits & Features:

- Ideal in trimming, racking, drying, sanitation and packaging applications where fine dexterity is required
- Comfortable, form fitting examination grade, powder free nitrile glove
- 1.5 AQL, excellent tensile strength
- Easily identifiable, unique cobalt color to help reduce the potential of cross-contamination



MICROFLEX®
Ultraform™

Benefits & Features:

- Perfect for applications that require high dexterity and tactile sensitivity throughout the entire facility
- ERGOFORM Ergonomic Design Technology to support musculoskeletal health
- Available in half-sizes to ensure perfect fit
- Medical examination grade



MICROFLEX®
XCEED®

Benefits & Features:

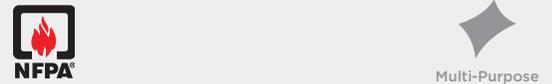
- Excellent choice for trimming, packaging and racking applications
- ERGOFORM Ergonomic Design Technology to support musculoskeletal health
- Environmentally friendly, smart packaging with 250 gloves per box
- Medical examination grade



MICROFLEX®
BLAZE™ N48

Benefits & Features:

- High visibility color is perfect for easy detection
- Durable nitrile material with high abrasion resistance to help prevent rips and tears that could potentially contaminate the product
- Extended cuff for added protection; easy to extend over protective sleeves
- Medical examination grade



MICROFLEX®
Sensation™ N73

Benefits & Features:

- With its specialized formulation clinically proven to reduce chances of contact dermatitis, this glove is ideal for workers who have sensitivity to accelerators found in most disposable nitrile gloves
- Medical examination grade



BioClean™
Excell BEXS

Benefits & Features:

- Excellent choice for laboratory-controlled environments where sterile gloves are required
- Extended cuff offers superior protection and durability
- Compatible with Class 100 (ISO 5) / Grade A Cleanroom Environments
- Chemical resistant*, accelerator-free, non-foaming properties



DID YOU KNOW?

When some nitrile gloves are exposed to water or other liquids, they can start to foam. This is commonly the result of water-activated residual surfactants - detergents left over from the manufacturing process. While non-toxic, the foam produced from surfactants can impact the integrity of the product and reduce grip. Some nitrile gloves are designed to eliminate the incidence of foaming. The MICROFLEX® LIFESTAR EC™ glove is non-foaming and an excellent choice for wet environments where product integrity is key.

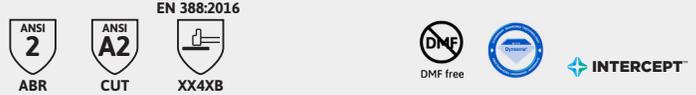
GENERAL PURPOSE, CUT & CHEMICAL



HyFlex®
11-318

Benefits & Features:

- Excellent choice for use as a cut-protective under glove for trimming, racking and processing applications
- INTERCEPT Cut Resistance Technology offering cut level protection ANSI level A2
- Ultralight, 18-gauge fabric creates a sensation of bare hand contact and helps to maintain the hand at a comfortable working temperature



HyFlex®
11-541

Benefits & Features:

- Ideal in applications where high cut resistance is essential such as shipping, receiving, maintenance as well as any applications requiring knife handling
- Ultralight weight glove with ZONZ Comfort Fit Technology that offers unparalleled dexterity and refined mobility
- Palm-dipped coating and the FORTIX formulation provide enhanced abrasion resistance and grip
- INTERCEPT Cut Resistance Technology offering cut level protection ANSI Level A4



HyFlex®
11-800

Benefits & Features:

- The foam coating offers improved grip in dry and slightly oily environments along with extended durability
- Ansell ZONZ™ Comfort Fit Technology for enhanced fit, breathability and improved feel to increase workers' comfort
- No transfer of silicone contaminants to metal parts prior to painting



AlphaTec®
58-735

Benefits & Features:

- Ideal for drain cleaning, shredding, sanitation and any additional application where cut and chemical protection is required
- High-visibility liner acts as an indicator for when glove is cut, allowing the worker to see when chemical protection is compromised
- INTERCEPT Cut Resistance Technology ANSI level A3
- ANSELL GRIP Technology for superior grip in both wet and dry environments



ActivArm®
97-681

Benefits & Features:

- High dexterity and liquid-proof for cold weather
- RIPEL Liquid Repellence Technology
- Helps to fight frostbite



AlphaTec® Solvex®
37-185

Benefits & Features:

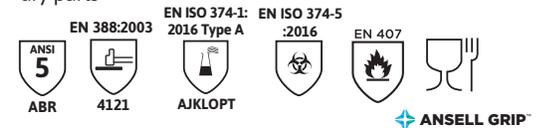
- Ideal in maintenance or sanitation applications
- High performance nitrile compound for good chemical resistance, including isopropyl alcohol
- Suitable for heavy-duty cleaning applications



AlphaTec®
58-535B

Benefits & Features:

- Ideal in maintenance or sanitation applications
- Protects against a wide range of chemicals, including isopropyl alcohol
- ANSELL GRIP Technology for superior handling of wet or dry parts



DID YOU KNOW?

Ansell is committed to keeping you informed of the regulatory changes in hand protection safety standards. With recent changes to the ANSI ISEA 105 and EN ISO 374 standards, our intent is to keep you "Well Informed, Well Protected & Well Ahead" with our various educational tools, our comprehensive product portfolio, and our supporting experts to ensure that we deliver compliance with our glove range.

BODY PROTECTION



AlphaTec®
68-1500

Benefits & Features:

- Offers superior dirt, dust and dry particulate protection for medium-duty applications such as trimming, shredding, packaging, and sanitation tasks not involving liquids
- Breathable SMS fabric with serged seams. Proven to filter 100% of particles <3 microns
- Water vapour permeable to help reduce heat stress



AlphaTec®
68-2000

Benefits & Features:

- Moisture vapor permeable fabric reduces risk of heat stress
- Key applications include pharmaceutical, agricultural, paint spraying, clean environment, crime scene investigation and veterinary and food processing
- Low linting and silicone free
- Available in multiple model configurations and a broad selection of accessories

Size	VWR Cat. No.
MICROFLEX® LIFESTAR EC™ LSE-104	
S	76201-712
M	76201-714
L	76201-702
XL	76201-704
XXL	76201-706
3XL	76201-708
MICROFLEX® COBALT™ N19	
XS	75841-204
S	89500-618
M	89500-620
L	89500-622
XL	89500-624
MICROFLEX® Ultraform™	
XS	89235-576
S	89235-578
M	89235-580
L	89235-582
XL	89235-584
MICROFLEX® XCEED®	
XS	89174-538
S	89174-540
M	89174-542
L	89174-544
XL	89174-546
MICROFLEX® BLAZE™ N48	
S	89500-608
M	89500-610
L	89500-612
XL	89500-614

Size	VWR Cat. No.
MICROFLEX® Sensation™ N73	
XS	10159-898
S	10159-900
M	10159-902
L	10159-904
XL	10159-906
BioClean™ Excell BEXS	
6	75972-598
6.5	75972-600
7	75972-602
7.5	75972-604
8	75972-606
8.5	75972-608
9	75972-610
10	75972-596
HyFlex® 11-318	
6	10769-420
7	10769-494
8	10769-496
9	10769-498
10	10769-500
11	10769-502
HyFlex® 11-541	
6	10002-004
7	10002-074
8	10002-076
9	10002-078
10	10002-080
11	10002-082

Size	VWR Cat. No.
HyFlex® 11-800	
6	76245-938
8	76237-830
9	76237-832
10	76237-826
11	76237-828
AlphaTec® 58-735	
6	76170-080
7	76170-082
8	76170-084
9	76170-268
10	76170-270
11	76170-272
ActivArm® 97-681	
8	76196-270
9	76196-272
10	76196-274
11	76196-276
AlphaTec® Solvex® 37-185	
7	76169-828
8	76169-830
9	76169-832
10	76169-834
11	76169-836

Size	VWR Cat. No.
AlphaTec® 58-535B	
7	76218-514
8	76218-516
9	76218-518
10	76218-544
11	76218-546
AlphaTec® 68-1500	
S	10836-090
M	10836-092
L	10836-094
XL	10836-096
XXL	10836-098
3XL	10836-100
4XL	10836-104
5XL	10836-106
AlphaTec® 68-2000	
S	10836-358
M	10836-360
L	10836-362
XL	10836-364
XXL	10836-366
3XL	10836-368
4XL	10836-370
5XL	10836-372

DID YOU KNOW?

Before handling vegetation, isopropyl alcohol (IPA) is often applied to sanitize a worker's gloves to protect the product and reduce possible cross contamination. If a worker isn't wearing adequate hand protection, the IPA can permeate through the glove and absorb into the worker's skin, leading to irritation and dermatitis with prolonged exposure. Be sure to check the glove's Chemical Permeation Breakthrough Time (BTT)^{1,2} against isopropyl alcohol to ensure protection is suitable for splash resistance. MICROFLEX® LIFESTAR EC™ gloves can remain in continuous contact with IPA up to 136 minutes and are an excellent choice for splash protection.

¹Chemical Permeation is a process by which chemical moves through a protective glove material on a molecular level. It is tested in accordance with glove industry standards ASTM F739 and EN 374-1.

²Breakthrough Time (BTT) is the elapsed time between the initial application of a test chemical to the outside surface of a protective glove material and its subsequent presence on the other side of the material, measured as described in the standards.

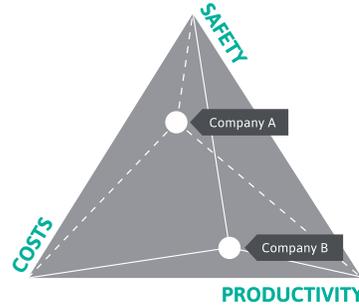
ANSELLGUARDIAN®: MAXIMIZING SAFETY AND PERFORMANCE

AnsellGUARDIAN®

FOCUS ON SAFETY TO IMPROVE YOUR BUSINESS PERFORMANCE

AnsellGUARDIAN® is our proprietary service to help companies select the right personal protective equipment solution to improve their safety, productivity and cost performance.

An integrated approach. AnsellGUARDIAN® partners with organizations around the world to address the challenges in today's PPE environment and deliver measurable safety and business improvements



Depending on the business objectives, one or more of the following solutions will be deployed.

CHEMICAL GLOVE AND SUIT SELECTION SIMPLIFIED

AnsellGUARDIAN® Partner simplifies the glove and suit selection process for your unique set of chemicals.

AnsellGUARDIAN® Partner evaluates the resistance of glove and suit materials against your chemicals to offer a risk assessment with expected permeation breakthrough times. This assessment can either be carried out during a personal consultation with one of our AnsellGUARDIAN® specialists or online by using our chemical permeation database. As a result, selecting the right chemical glove and suit has never been easier.

CAS	Chemical Name	%
100-21-0	Terephthalic acid	100
100-41-4	Ethylbenzene	100
107-66-4	Dibutyl phosphate	100
108-31-6	Maleic anhydride	100
110-82-7	Cyclohexane	100
141-43-5	Ethanolamine	100

Safety data sheet (SDS)

Ansell GUARDIAN® Partner

Software assessment

Material	Butyl	LLDPE	Necprene	Nitrile	Nitrile	Nitrile	Nitrile	Nitrile	Nitrile/Necp	Ultrax Butyl					
Thickness (mm)	0.35	0.852	N.A.	0.12	0.35	0.425	N.A.	N.A.	0.13	0.7					
Product Name / Style	ClientTak	Barrier	Scopio	TouchTuff	Solvex	Solvex	AlphaTec	AlphaTec	Microflex	ClientTak					
Type	CAB	Chemical name	%	38.314	60.188	60.332.324	30	30	300.888.993	27.415.616	37.908	50.128	50.528.335	60.288	38.428
nf	110-54-3	m-Heptane	100	+107	+107	24	+107	+107	+107	+107	+107	+107	+107	+107	+107
nf	120-98-4	Bulky acetone	100	50.107	+107	27	110	28	44	+107	27	27	10.50	10.50	10.50
nf	7854-85-9	Sulphuric acid	98	66.107	+107	200.007	+107	50.64	50.107	10.50	10.50	10.50	10.50	10.50	+107

Suit Type	Non-Gauntlet	Non-Gauntlet	Non-Gauntlet	Non-Gauntlet	Gauntlet	Gauntlet	Gauntlet			
Brand	MICROGARD	MICROCHEM	MICROCHEM	MICROCHEM	TRELLCHEM	TRELLCHEM	TRELLCHEM			
Type	CAS	Chemical name	%	1200	3000	4000	5500	SUPER	VPS	EVO
nf	100-42-0	Styrene	100	+107	+107	+107	+107	+107	+107	+1407
nf	67-56-1	Methanol	100	+107	+107	+107	+107	+107	+107	+1407
nf	67-64-1	Acetone	100	+1	28	+107	+107	+107	+107	+1407

Evaluation

Simplification

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DISCLAIMER: Recommendations made in this note are based on extrapolations from laboratory test results and information regarding the composition of chemicals and may not adequately represent specific conditions of end use. Synergistic effects of mixing chemicals have not been accounted for. For these reasons, and because Ansell has no detailed knowledge of or control over the conditions of end use, any recommendation must be advisory only and Ansell fully disclaims any liability including warranties related to any statement contained herein.

WARNING: No glove provides complete protection against cuts, abrasions or chemicals. Users should test the suitability of Ansell products for a particular purpose, for use within a particular environment or against particular chemicals.

WARNING: Natural Rubber Latex may cause allergic reactions in sensitive individuals.

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