

# Going the extra distance™

**Esteem® *Stretchy* Premium Latex-Free Exam Gloves**



# Above and beyond the call of duty



At Cardinal Health, we share your dedication to going beyond what's expected. And when we set out to develop a premium line of latex-free exam gloves, we knew you would expect nothing but the best — a glove that works as hard as you do and is every bit as dependable.

We designed Esteem® premium latex-free exam gloves for maximum comfort and protection. But we also recognized an opportunity to provide you with relief from the dry, irritated, and compromised skin that healthcare workers often experience.

So, we went the extra distance and created an entirely new kind of exam glove — **Esteem® with Neu-Thera™**

Now you can  
*Treat your hands well™*  
while you treat your patients.

# Choosing the right protection

- **Esteem® Stretchy Nitrile with Neu-Thera™**

Esteem® with Neu-Thera™ offers all the comfort and protection of our Stretchy Nitrile glove and it's the first glove of its kind to offer dermal conditioning benefits for the wearer.

- **Esteem® Stretchy Nitrile**  
*(Finger Textured and Microtextured)*

Made of nitrile material, both finger textured and microtextured gloves are for situations with high risk and greater exposure to blood or body fluids, or for use with many chemotherapy agents and harsh chemicals.

- **Esteem® XP**

Made of nitrile material, Esteem® XP provides an additional 2" of material at the cuff for greater coverage when additional protection from splashed or sprayed fluids is needed.

- **Esteem® Stretchy Synthetic**

Esteem® Stretchy Synthetic is for short-term use (<15 minutes) where there is minimal stress and low to no risk of exposure to blood or other potentially infectious materials.



*Added stretch provides added comfort when donning and wearing*

## *Stretching the boundaries of comfort*

So what does it mean when we say we offer a “stretchy” material in a glove? It means you’ll get a glove that offers all the protection of a synthetic while delivering latex-like comfort and flexibility.

Nitrile has always provided an excellent barrier and superior resistance to chemicals, but nitrile gloves have traditionally been stiff and uncomfortable. Clinicians had to sacrifice comfort to get protection. **Not anymore.**

Esteem® Stretchy Nitrile exam gloves are made from the first material to achieve this balance of comfort and strength. They’re soft and flexible, don easily, and feel natural while in use, but they also provide the high level of protection you need in demanding clinical situations.

# Introducing Esteem<sup>®</sup> exam gloves with Neu-Thera<sup>™</sup>

## A REVOLUTION IN EXAM GLOVES

Esteem<sup>®</sup> latex-free exam gloves with Neu-Thera<sup>™</sup> offer something you won't find in any other exam glove available today — the opportunity to actually improve the condition of your skin while you work.

- **Unique Neu-Thera<sup>™</sup> formula is incorporated in the manufacturing process**
- **Helps restore the damage done by repeated scrubbing**
- **Same fit and feel as our premium exam gloves**
- **Based on our exclusive Stretchy Nitrile latex-free glove**
  - Soft, stretchy material performs like latex
  - Superior fit and comfort
  - Tested against many harsh chemicals and chemotherapy drugs
- **PROTECT** hands from moisture loss
- **RESTORE** smooth texture and healthy condition of hands
- **MOISTURIZE** skin for deep-down relief
- **SOOTHE** dry, flaking, and irritated skin

*Designed for and tested by healthcare professionals, these gloves are clinically proven to do more than moisturize — they improve the health of your skin.*

## The science of skin therapy

A recognized team of scientists and dermatologists spent years selecting and formulating ingredient combinations that would deliver the maximum dermal conditioning benefit. The following ingredients were chosen for their unique ability to *protect, restore, moisturize, and soothe*:

- **Gluconolactone** — Used for therapy of photodamaged skin and known to minimize skin flakiness (restores skin smoothness). It is a second-generation alpha hydroxy acid (AHA) that has less irritating properties than the basic AHAs.
- **Glycerin/Glycerine/Glycerol** — One of the best natural moisturizers available. Used in skin care products for preventing and treating skin dryness because it moisturizes and plasticizes the stratum corneum. It optimizes skin barrier function and restores healthy skin by minimizing skin flakiness.
- **ProVitamin B5** — Improves and increases skin moisturization. Protects by restoring skin softness and elasticity. Soothes irritated skin and helps to heal minor wounds by stimulating the proliferation of cells.

**Incorporating the Neu-Thera<sup>™</sup> ingredients in an exam glove took a great deal of ingenuity. The formulation had to deliver the benefits without changing the fit, feel, or grip of the glove at all. The proprietary process we developed provides a complete, consistent application of the formula that:**

- **Feels soft and dry to the touch**
- **Preserves dexterity**
- **Won't crack, peel, or separate**

# Proven results

Extensive clinical testing has shown Esteem® exam gloves with Neu-Thera™ to be effective in treating the damaged skin that healthcare workers often experience. In a study conducted by the California Skin Research Institute,\* 26 clinicians had their skin conditions analyzed using a variety of measurement techniques before and after using Esteem exam gloves with Neu-Thera formula.

## • PROTECT

*Transepidermal water loss (TEWL) was less than 1%.*

## • RESTORE

*Fine flaking was reduced by an average of 34%.  
Coarse scaling was reduced 58%.*

## • MOISTURIZE

*Skin moisture levels were increased 13%.*

## • SOOTHE

*Dryness was reduced 42%.*



Additionally, a standardized self-assessment survey\*\* was conducted with 30 clinicians to evaluate the performance of Esteem exam gloves with Neu-Thera.

### The results?

**84% of the subjects who had chapped skin saw significant improvement.**

**94% of the subjects who had redness or irritation saw improvement.**

**97% of the subjects reported an improvement in their skin moisture level.**

The clinicians in the test program also reported the benefits of Esteem exam gloves with Neu-Thera were still detectable 24 hours after the trial period.

\*Study conducted on 3/16/03 by the California Skin Research Institute. Subjects (n=26) compared Esteem® with Neu-Thera™ exam gloves to a standard nitrile exam glove in 12 successive 15-minute wear periods. Measurements were taken before and after the testing segments.

\*\*Study conducted on 4/22/03 by the California Skin Research Institute. Subjects (n=30) completed a self-assessment questionnaire prior to testing an Esteem exam glove with Neu-Thera and a standard nitrile exam glove for six successive 15-minute sessions. The subjects then answered a second self-assessment questionnaire and a follow-up questionnaire 24 hours later.



## Nitrile – the new standard of protection

- No concerns about latex allergies
- Nitrile contains no DEHP
- No concerns about use with alcohol

Latex allergies are often a consideration in the decision to switch to latex-free medical gloves. While latex-free medical gloves may be more expensive than their natural rubber latex counterparts, the direct and indirect costs of managing latex allergies need to be factored into the overall assessment, along with the cost savings due to improved standardization and glove utilization.

Your Cardinal Health representative can help you assess your total costs of managing latex allergies so you can better understand the financial and clinical implications of this important decision.

**Ask for a copy of *The Synthetic Value Model: Making the Switch to Synthetic Medical Gloves today.***

## Meets the quality standard for surgical gloves

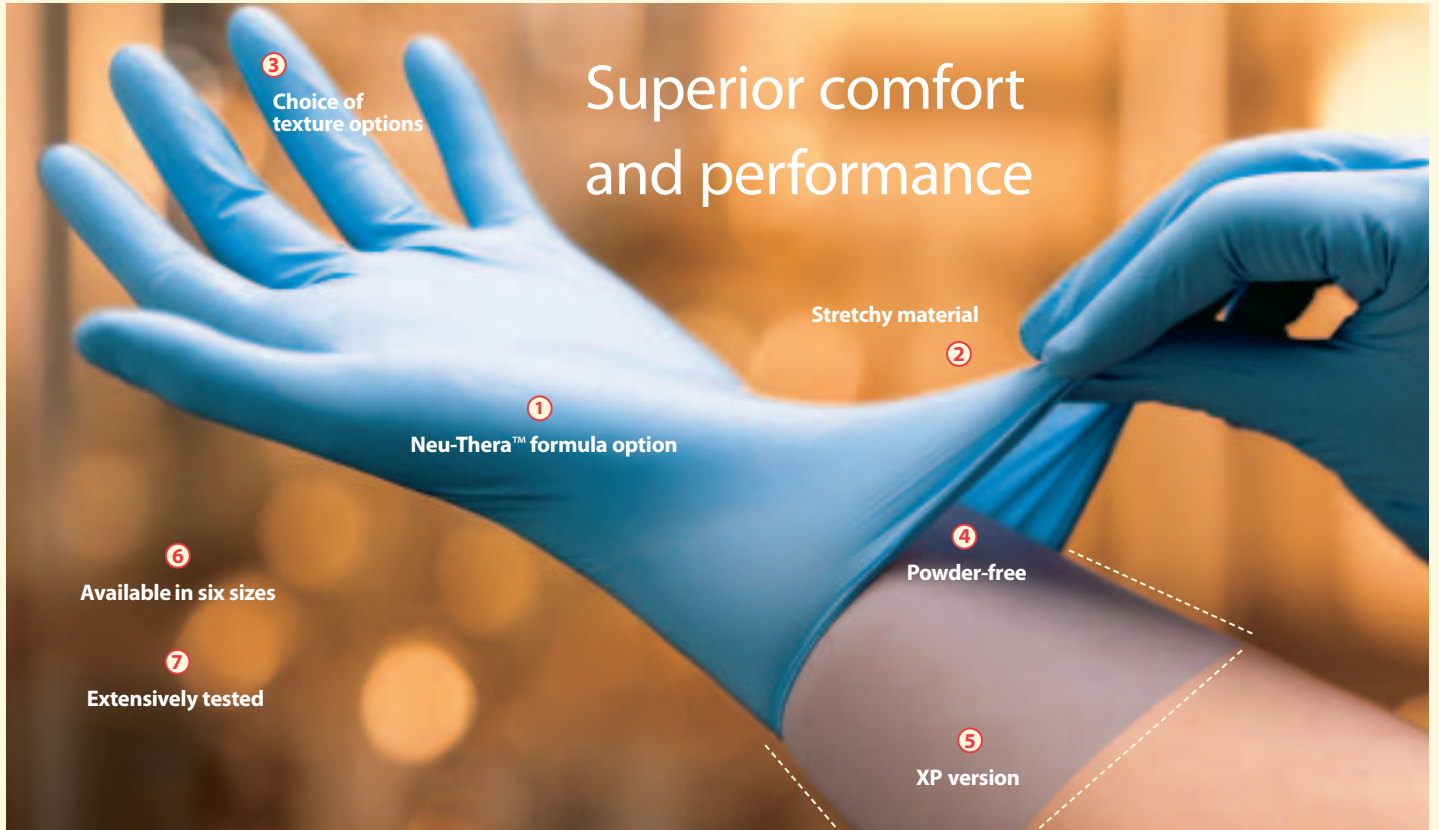
All gloves must meet a certain Acceptable Quality Level (AQL) as established by the Food and Drug Administration (FDA). This refers to their freedom from holes and their subsequent level of barrier protection. That is, **gloves with a lower actual AQL will have fewer barrier defects.**

<b>FDA maximum AQL for exam gloves</b>	<b>4.0</b>
<b>American Society for Testing and Materials (ASTM) maximum</b>	<b>2.5</b>
<b>FDA maximum for surgical gloves</b>	<b>1.5</b>
<b>Esteem® Latex-Free Exam Gloves</b>	<b>1.5</b>

*We go the extra distance with our testing because the **safety of clinicians and patients is a top priority.** You expect a certain level of protection when you put on an exam glove, **we ensure you're getting that protection – and more.***



*A higher quality standard corresponds with a lower failure rate during actual use*



*You'll notice the difference the first time you try them on. Esteem® latex-free exam gloves fit like latex and stretch like latex. They fit your hand like they were custom made for you, delivering exceptional freedom of movement and tactile sensitivity.*

- 1 Neu-Thera™ formula option** — An industry first. Esteem® exam gloves with Neu-Thera™ incorporate a proprietary formula designed to *protect, restore, moisturize, and soothe* your skin.
- 2 Stretchy material** — Esteem® latex-free gloves feature a unique, stretchy formulation that conforms to your hand quickly. The soft, flexible material facilitates range-of-motion, especially around the thumb area.
- 3 Choice of texture** — Esteem® *Stretchy Nitrile* gloves are available either with textured fingers or with our microtextured finish for a sure grip.
- 4 Powder-free** — All Esteem® latex-free gloves are powder-free. The stretchy nitrile material has a naturally low coefficient of friction, making them all easy to don. Esteem latex-free gloves meet or exceed the requirements for a powder-free glove per ASTM D6319 Standard Specification for Nitrile Examination Gloves for Medical Application.
- 5 Esteem® XP version** — When additional protection is needed, Esteem® XP nitrile gloves offer a 2" longer cuff for increased coverage.
- 6 Available in six sizes** — Now everyone on your staff can get the benefit of a well-fitting glove. Esteem® is the first line to offer six sizes ranging from XS to XXL.
- 7 Extensively tested** — Tested for use with many harsh chemicals and chemotherapy agents.

# Proven performance

To be considered truly reliable, exam gloves should provide consistent performance in the kind of environments in which you work. Not all manufacturers go through the time and expense required to thoroughly test their gloves the way we do. We go the extra distance and subject Esteem® latex-free exam gloves to an exhaustive series of tests to measure their barrier integrity.

*All Esteem® Stretchy Nitrile gloves feature textured fingers or a microtextured surface for a sure grip*



## Information for Non-Medical Uses

### Common Hospital and Laboratory Chemicals

Working with harsh chemicals can degrade a glove's performance. Esteem® latex-free stretchy nitrile exam gloves are tested according to ASTM F739 Standard Test Method for Resistance of Protective Clothing Materials to Permeation by Liquids or Gases Under Condition of Continuous Contact. *(Results are average normalized breakthrough times in minutes.)*

<b>Glutaraldehyde 2.4%</b>	<b>&gt;480</b>
<b>Ortho-phthalaldehyde</b>	<b>&gt;480</b>
<b>Sodium Hydroxide 50%</b>	<b>&gt;480</b>
<b>Sodium Hypochlorite 10%-13%</b>	<b>&gt;480</b>

### Chemotherapy Agents

Esteem® *Stretchy Nitrile* (both textured and microtextured), Esteem with Neu-Thera™ and Esteem XP gloves are additionally tested per ASTM F739 for resistance to chemotherapy drugs, which can be especially damaging to a glove or cause a glove failure. **Refer to page 10.**



# Going the extra distance™

*Esteem® Stretchy Synthetic gloves are a great choice for low-risk situations*



**Bacteriophage Penetration Test** — The risk of exposure to bloodborne pathogens in the clinical workplace is significant.

ASTM F1671 is the Standard Test Method for Resistance of Materials Used in Protective Clothing to Penetration by Bloodborne Pathogens Using Phi-x174 Bacteriophage Penetration as a Test System. **All Esteem® latex-free gloves pass this test.**

Microorganism	Average Size
Phi-x174 bacteriophage	25-30 nm

When we do ASTM F1671 testing, we use a significant sample that is 10 times what's required (32 gloves versus three).

	ASTM Standard	FDA Required	Cardinal Health Tests
<b>Barrier Protection</b>			
AQL (pinhole testing)	Yes	Yes	Yes
Puncture resistance	No	No	Yes
Chemical resistance	Yes	No	Yes
Bacteriophage penetration	Yes	No	Yes
Aging/shelf life (accelerated)	Yes	No	Yes
Chemotherapy resistance	Yes	No	Yes
<b>Allergy/Irritation Related</b>			
Powder levels (powder-free claim)	Yes	Yes	Yes
Residual accelerators	No	No	Yes
Irritation potential	No	No	Yes
Endotoxin	No	No	Yes
<b>Strength</b>			
Tensile	Yes	Yes	Yes
Material thickness	Yes	Yes	Yes
Elongation/stretchiness	Yes	Yes	Yes
V-tear	Yes	No	Yes
Trouser tear	Yes	No	Yes



*You get comfort, precision, and protection with Esteem® exam gloves*

	Esteem® with Neu-Thera™	Esteem® Stretchy Nitrile (textured)	Esteem® Stretchy Nitrile (microtextured)	Esteem® XP	Esteem® Stretchy Synthetic					
<b>Chemotherapy Agents</b>										
Cisplatin (1.0 mg/mL)	>480	>480	>480	>480	—					
Cyclophosphamide (20 mg/mL)	>480	>480	>480	>480	—					
Dacarbazine (10.0 mg/mL)	>480	>480	>480	>480	—					
Doxorubicin Hydrochloride (2.0 mg/mL)	>480	>480	>480	>480	—					
Etoposide (1.0 mg/mL)	>480	>480	>480	>480	—					
Fluorouracil (50 mg/mL)	>480	>480	>480	>480	—					
Ifosfamide (1.0 mg/mL)	>480	>480	>480	>480	—					
Mitoxantrone (1.0 mg/mL)	>480	>480	>480	>480	—					
Paclitaxel (6.0 mg/mL)	>480	>480	>480	>480	—					
Thiotepa (1.0 mg/mL)	>480	>480	>480	>480	—					
Vincristine (1.0 mg/mL)	>480	>480	>480	>480	—					
Carmustine (3.3 mg/mL)	>91	63	63	63	—					
<b>Information for Non-Medical Uses, Common Hospital and Laboratory Chemicals</b>										
Glutaraldehyde 2.4%	>480	>480	>480	>480	—					
Ortho-phthalaldehyde	>480	>480	>480	>480	—					
Sodium Hydroxide 50%	>480	>480	>480	>480	—					
Sodium Hypochlorite 10%-13%	>480	>480	>480	>480	—					
<b>Length and Thickness</b>										
Average Length (mm)	259	236	246	300	247					
Cuff Thickness (mil/mm)	3.9/0.10	3.9/0.10	3.5/0.09	4.3/0.11	3.8/0.10					
Palm Thickness (mil/mm)	5.1/0.13	4.7/0.12	4.5/0.12	6.1/0.16	4.8/0.12					
Finger Thickness (mil/mm)	5.9/0.15	6.8/0.17	5.0/0.13	8.5/0.22	8.7/0.22					
<b>Physical Properties</b>										
<b>ASTM Limit</b>										
Tensile Strength	≥2031 psi/≥14 MPa	≥2031 psi/≥14 MPa	≥2031 psi/≥14 MPa	≥2031 psi/≥14 MPa	≥1305 psi/≥9 MPa					
Ultimate Elongation	≥500%	≥500%	≥500%	≥500%	≥300%					
<b>Cardinal Health Actual</b>										
Tensile Strength	3524 psi/24 MPa	3916 psi/27 MPa	3771 psi/26 MPa	2611 psi/18 MPa	1740 psi/12 MPa					
Tensile Stress at 300%	696 psi	1030 psi	609 psi	305 psi	—					
Ultimate Elongation	615%	537%	578%	642%	411%					
<b>AQL</b>	1.5	1.5	1.5	1.5	1.5					
<b>Ordering Information</b>										
	<b>Cat. No.</b>	<b>Qty./Bx.</b>	<b>Cat. No.</b>	<b>Qty./Bx.</b>	<b>Cat. No.</b>	<b>Qty./Bx.</b>	<b>Cat. No.</b>	<b>Qty./Bx.</b>	<b>Cat. No.</b>	<b>Qty./Bx.</b>
X-small	N88RX01	100	8815N	100	8810N	100	N8850XP	50	8880	100
Small	N88RX02	100	8816N	100	8811N	100	N8851XP	50	8881	100
Medium	N88RX03	100	8817N	100	8812N	100	N8852XP	50	8882	100
Large	N88RX04	100	8818N	100	8813N	100	N8853XP	50	8883	100
X-large	N88RX05	90	8819N	90	8814N	90	N8854XP	50	8884	90
XX-large	N88RX06	90	8819NXX	90	8814NXX	90	—	—	—	—
<b>Other Non-Latex Specialty Gloves</b>										
Sterile powder-free, latex-free nitrile singles — N8820-N8823										
Sterile powder-free, latex-free nitrile pairs — N8830-N8833										
Sterile powdered, latex-free vinyl singles — 2D7001LI-2D7003LI										
Sterile powdered, latex-free vinyl pairs — 2D7011LI-2D7013LI										

## What it means to go the extra distance



At Cardinal Health, *Going the extra distance™* means more than making premium latex-free exam gloves. It means providing the service and support you'd expect from a world leader in the healthcare industry.

*Discover the advantage of Esteem® latex-free exam gloves and see why these innovative gloves are... **The leader by a long stretch.™***



## Esteem® *Stretchy* Premium Latex-Free Exam Gloves

**For additional information, please contact your Cardinal Health, Glove Products sales representative, call customer service at 1.800.964.5227, or visit our web site at [www.cardinal.com/gloves](http://www.cardinal.com/gloves).**

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