



**BE SURE  
DERMASSURE.**

**Medline DermAssure™ Green Surgical Gloves**  
Not Made with Chemical Accelerators or Natural Rubber Latex

# ISSUES BEYOND LATEX: THE IMPACT CHEMICAL ALLERGIES HAVE ON YOUR STAFF.

If you, or someone on your surgical staff, have skin issues exhibited by red, irritated, cracked and itchy hands, what do you do?

One of your first steps may be to switch to **powder-free** surgical gloves. But what happens if the problem continues? You may then convert to surgical gloves **not made with natural rubber latex**. But what else could be causing this problem?

This type of skin reaction can be caused by other materials used in glove manufacturing, including a group of chemicals called **accelerators**, which can cause Type IV allergic reactions.<sup>1</sup>



## What are chemical accelerators?

Chemical accelerators are added to the glove formulation during the manufacturing process to help make them more durable and provide elasticity. Accelerators are used in both latex and synthetic gloves.<sup>2</sup>

## What happens when a Type IV allergic reaction occurs?\*

Clinically, a Type IV allergy appears as a red, raised and palpable area at the point of contact with the glove, accompanied by subjective symptoms such as itching, burning and tingling. Additional symptoms include: erythema, swelling, cracking, weeping and dryness of the skin at the site of contact although dermatitis may extend beyond the area of contact.

- » The Type IV response begins when the antigens (such as residual chemicals leached from the glove in one's own perspiration) penetrate the skin, triggering the formation of T cells sensitized to the specific antigens.
- » Repeated exposure to the antigen in allergic individuals results in the re-activation of sensitized T cells and the production of an inflammatory response causing the Type IV symptoms.
- » These effects typically appear anywhere from six to 48 hours following exposure to the antigen-containing product and can last up to four days.

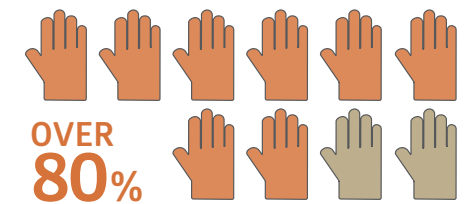


Allergic contact dermatitis brings an even greater risk of bloodborne pathogen infection because the body's most efficacious barrier—intact skin—becomes compromised.<sup>3</sup>

\* Source: Michael Zedalis, PhD, and Patty Taylor, RN, BA; "Uncovering the Mystery of Type IV Allergies" published in *Infection Control Today*, April 5, 2012.

## Did you know?

- » While the rates of most other occupational diseases are declining, skin disease rates are actually rising.<sup>4</sup>



of reported glove-associated allergic contact dermatitis is attributed to chemical accelerators.<sup>5</sup>

- » Contact dermatitis (along with other occupational skin diseases) is the second-most common occupational disease, projects the U.S. Bureau of Labor Statistics.<sup>6</sup> On average, nurses with occupational dermatitis miss six days of work per year,<sup>7</sup> and the average cost to the facility can be several thousand dollars in lost work days.<sup>8</sup>



- » Studies show that the chemical accelerators and other additives commonly used in the production of nitrile, latex and non-latex gloves can cause allergic contact dermatitis (Type IV allergy).<sup>10</sup>

# DERMASSURE GREEN: A NEW ALTERNATIVE NOT MADE WITH CHEMICAL ACCELERATORS.

First there were powder-free surgical gloves. Then there were surgical gloves made without natural rubber latex. Now there is Medline DermAssure Green—an advanced surgical glove made without natural rubber latex, without powder and without chemical accelerators to enhance performance and promote safety during double gloving.

## Advancing comfort and tactile sensitivity

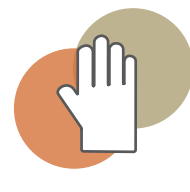
DermAssure Green is manufactured with a technologically advanced formulation that is not made with chemical accelerators, but still provides the outstanding comfort and performance you expect and need.

DermAssure Green is made with next-generation synthetic materials for a soft feel and enhanced tactile sensitivity. The secret to DermAssure's success is a new polychloroprene formulation that provides an enhanced fit and flexibility to reduce hand fatigue and allow for more natural movement compared to current accelerator-free and synthetic gloves.

### The Next Evolution in Surgical Gloves



**1947**  
First surgical glove to contain powder, natural rubber latex and chemical accelerators<sup>11</sup>



**1983**  
First powder-free surgical glove but still contains natural rubber latex and chemical accelerators<sup>12</sup>



**1990s**  
First surgical glove not made with powder and natural rubber latex, but still contains accelerators<sup>13</sup>



**2016**  
Medline introduces next-generation surgical glove not made with powder, natural rubber latex and chemical accelerators

● POWDER ● LATEX ● ACCELERATORS

#### + Universal application.

Ideal for general surgery as an underglove or by itself, as well as utilized in any surgery where staff members may have chemical accelerator sensitivities.



#### + Excellent tactile sensitivity.

Durable yet thinner than traditional surgical gloves, DermAssure provides outstanding tactile sensitivity to help maintain manual dexterity throughout the procedure.



#### + No cuff rolldown.

Designed with ARC (Anti-Rolldown Cuff) technology to reduce cuff rolldown common with many surgical gloves.

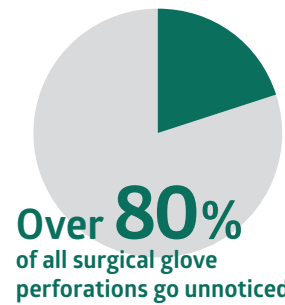


#### + Outstanding comfort.

New, advanced polychloroprene formulation gives DermAssure flexibility and softness, making it comfortable to wear, even during lengthy procedures. DermAssure is also made with an improved former design to enhance comfort.

# DOUBLE GLOVING WITH DERMASSURE GREEN: THE IDEAL UNDERGLOVE.

The risk of exposure to bloodborne pathogens is a major concern for surgeons and operating room staff. Often undetectable to the human eye, microperforations in surgical gloves are large enough to allow pathogens to pass between the glove wearer and the patient and cause infection.



The incidence of glove microperforations increases with duration of wear.<sup>15</sup>

- » Double gloving can reduce the risk of exposure to blood and bodily fluid by as much as 87% if the outer glove is punctured.<sup>17</sup>
- » In one study, more than three-fourths (77%) of 582 glove wearers who wore a color-coded double-glove system detected glove perforations.<sup>16</sup>

## Fits like one glove

Despite the proven effectiveness of double gloving, some surgeons and staff still have their doubts. Two of the most common deterrents to using two gloves are:

- 1) The outer glove sliding off the underglove causing potential grip and control problems.
- 2) Less tactile sensitivity and dexterity since a second glove can feel bulky.

DermAssure Green addresses both of these issues, and more.

### + Easily identified.

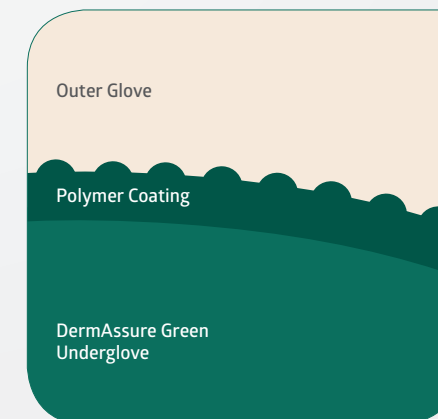
DermAssure's dark green hue makes it easily seen when there is a perforation in the lighter-color outer glove.

### + Less bulky.

Thinner than many other traditional surgical gloves, DermAssure does not feel bulky or thick when used as an underglove to enhance tactile sensitivity and manual dexterity.

### + Bonds with outer glove.

Made with a proprietary polymer coating on the outer surface of the glove, DermAssure bonds with the outer glove to feel like you're wearing just one glove for enhanced performance.



## Which Glove Has a Perforation?\*

### Medline's See Green for Safety Underglove Program

Let Medline put double gloving into action at your facility with our **See Green for Safety** double-gloving system. This provides staff and surgeons with the techniques necessary to not only lower the incidence of glove perforations they encounter, but also quickly identify perforations should they occur.

At no cost to your facility, Medline will provide a day's worth of green under gloves, such as our DermAssure Green gloves not made with chemical accelerators. The **See Green for Safety** program provides a great opportunity to educate your staff on how they can decrease cross contamination and exposure to bloodborne pathogens.

\* They both do.

(Left) Punctured glove—double gloving with a dark green underglove | (Right) Punctured glove— double gloving using two standard cream-colored surgical gloves

# DERMASSURE GREEN EXCEEDS INDUSTRY QUALITY STANDARDS.

Surgeons and staff can feel confident knowing that Medline DermAssure Green surgical gloves are 100% inspected for pinholes, tears and visual defects. Medline's AQL 0.65 exceeds EN455-1 requirements of 1.5. Medline's testing meets or exceeds, ASTM, EN and ISO standards.

## Chemo-tested

Medline's DermAssure Green has been tested for use with the following chemotherapy drugs.

Drug	Drug Minimum Breakthrough Detection Time
*Carmustine (BCNU), 3.3 mg/ml (3,300ppm)	30.6 Minutes (30.6, 30.6, 30.8**)
Cisplatin, 1.0 mg/ml (1,000ppm)	Up to 240 Minutes
Cyclophosphamide (Cytoxan), 20 mg/ml (20,000ppm)	Up to 240 Minutes
Dacarbazine (DTIC), 10.0 mg/ml (10,000ppm)	Up to 240 Minutes
Doxorubicin Hydrochloride, 2.0 mg/ml (2,000ppm)	Up to 240 Minutes
Etoposide (Toposar), 20.0 mg/ml (20,000ppm)	Up to 240 Minutes
Paclitaxel (Taxol), 6.0 mg/ml (6,000ppm)	Up to 240 Minutes
Fluorouracil, 50.0 mg/ml (50,000ppm)	Up to 240 Minutes
*Thiotepa, 10.0 mg/ml (10,000ppm)	31.2 Minutes (31.2, 60.8, 61.3**)
Vincristine Sulfate, 1.0 mg/ml (1,000ppm)	Up to 240 Minutes

\* Note that the following drugs have low permeation times: Carmustine (BCNU) 30.6 minutes, Thiotepa 31.2 minutes

\*\*Specimen 1/2/3

## Ordering Information

Item No.	Size	Pkg.
MSG6555I	5 ½	200 pair/cs
MSG6560I	6	200 pair/cs
MSG6565I	6 ½	200 pair/cs
MSG6570I	7	200 pair/cs
MSG6575I	7 ½	200 pair/cs
MSG6580I	8	200 pair/cs
MSG6585I	8 ½	200 pair/cs
MSG6590I	9	200 pair/cs

For more information please contact your sales representative or visit us [www.medline.com/uk](http://www.medline.com/uk).



Medline Industries Ltd  
No 5 Booths Park  
Chelford Road  
Knutsford - Cheshire  
WA168GS - England  
Tel: +44 844 334 5237  
Fax: +44 844 334 5238

[www.medline.com/uk](http://www.medline.com/uk)  
[uk-customerservice@medline.com](mailto:uk-customerservice@medline.com)

REFERENCES 1. Division of Oral Health, National Center for Chronic Disease Prevention and Health Promotion. Available at: <http://www.cdc.gov/oralhealth/infectioncontrol/faq/latex.htm>. 2. Gardner N. Accelerator free fact or fiction. Health & Safety International. October 2008. Available at: [http://www.shieldscientific.com/include/USER\\_FileUpload/files/Press%20Release/HSInt-Accelerator-free-%20gloves-Oct-08.pdf](http://www.shieldscientific.com/include/USER_FileUpload/files/Press%20Release/HSInt-Accelerator-free-%20gloves-Oct-08.pdf). Accessed December 17, 2015. 3. Michael Zedalis, PhD, and Patty Taylor, RN, BA. Uncovering the Mystery of Type IV Allergies. *Infection Control Today*. April 5, 2012. Available at: <http://www.infectioncontroltoday.com/articles/2012/04/uncovering-the-mystery-of-type-iv-allergies.aspx>. Accessed December 17, 2015. 4. CDC, NIOSH. Effects of skin contact with chemicals. Guidance for occupational health professionals and employers, page 1. Available at: <http://www.cdc.gov/niosh/docs/2011-200/pdfs/2011-200.pdf>. Accessed November 18, 2015. 5. Heese, A, Hintzenstern, J, Peters, K, Uwe Koch, H, Hornstein, O. Allergic and irritant reactions to rubber gloves in medical health services. *Journal of the American Academy of Dermatology*. November 1991, Volume 25, Issue 5, Part 1, Pages 831-839. Available at: [http://www.jaad.org/article/S0190-9622\(08\)80977-2/abstract](http://www.jaad.org/article/S0190-9622(08)80977-2/abstract). Accessed December 17, 2015. 6. Jacob, Sharon E., MD; Steele, Tace. Contact Dermatitis & Workforce Economics; Seminars in Cutaneous Medicine & Surgery 25: 105-109. 2006. Available at: <https://www.deepdyve.com/lp/elsevier/contact-dermatitis-and-workforce-economics-qm8VqqgSyj>. Accessed December 17, 2015. 7. As referenced in Jacob, Sharon E., MD; Steele, Tace. Contact Dermatitis & Workforce Economics; Seminars in Cutaneous Medicine & Surgery 25: 105-109. 2006. 8. Bureau of Labor Statistics. Occupational Outlook Handbook. Registered Nurses. Available at: <http://www.bls.gov/ooh/healthcare/registered-nurses.htm>. Accessed November 24, 2015. 9. AORN Allergy Management Survey Results, April 2010. 10. Allergic reactions to glove materials. Available at: <http://www.research.northwestern.edu/ors/safety/general/ppe/documents/allergic-reactions-to-gloves.pdf>. Accessed December 17, 2015. 11. Pfiedler Enterprises. Powdered surgical gloves: Is it time for a change? Available at: <http://www.pfiedler.com/ce/1289/files/assets/basic-html/page8.html>. Accessed November 24, 2015. 12. Mölnlycke Health Care website. Available at: <http://www.molnlycke.us/knowledge/staff-patient-safety/powder-free-surgical-gloves1>. Accessed December 17, 2015. 13. Thomas, S, Agarwala, M, Mehtab, G. Intraoperative glove perforation—single versus double gloving in protection against skin contamination. *Post Graduate Medical Journal*. 2001;77:458-460 doi:10.1136/pmj.77.909.458. Available at: <http://pmj.bmj.com/content/77/909/458.full>. Accessed December 18, 2015. 14. Partecke, Lars Ivo, Anna-Maria Goerd, Inga Langner, Bernd Jaeger, Ojan Assadian, Claus-Dieter Heidecke, Axel Kramer, and Nils-Olaf Huebner. "Incidence of microperforation for Surgical Gloves Depends on Duration of Wear." *Infection Control and Hospital Epidemiology* 30.5 (2009): 409-14. 15. Guterl, Gail, The Powerful Case for Double Gloving. *Outpatient Surgery Magazine*. September 2013. Available at: <http://www.outpatientsurgery.net/surgical-facility-administration/personal-safety/the-powerful-case-for-double-gloving--10-13&pg=2>. Accessed December 17, 2015. 16. Berguer R & Heller PJ. Preventing sharps injuries in the operating room. *Journal of the American College of Surgeons*. 2004; (199)3:462-467.

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