

Ansell

» Leading the way with skin-friendlier glove solutions

## PI-KARE™ SKIN-FRIENDLY PI TECHNOLOGY

### PI-KARE™ Technology enables the elimination of standard chemical accelerators from polyisoprene (PI) gloves known to cause chemical Type IV allergies and sensitivities, making them safer to use

As non-latex PI gloves continue to grow in popularity, there is a growing need to deliver on its comfort and sensitivity without compromising on its durability while further minimizing the risk of glove allergies.

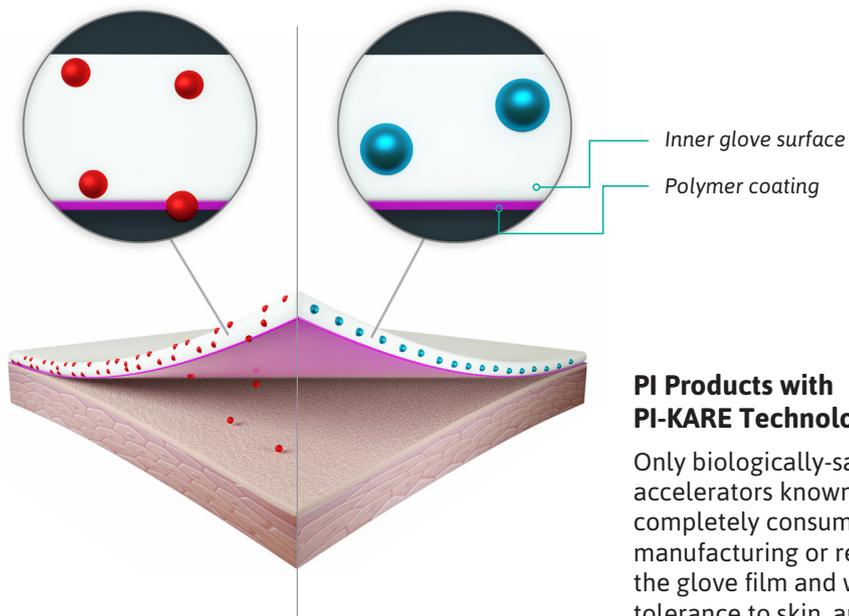
Chemical Type IV allergies, caused by standard chemical accelerators used in the manufacture of PI gloves, are on the rise with up to 82% of reported glove-associated allergic contact dermatitis attributed to chemical accelerators.<sup>1,2</sup> Since the mid-1990s, the sensitization frequency of thiurams appear to be on the decline, while there are an increasing

number of patch test reactions among healthcare workers to diphenylguanidine (DPG) and standard carbamate mixes including zinc diethyldithiocarbamate (ZDEC) and zinc dibutyldithiocarbamate (ZDBC).<sup>3</sup>

Ansell's R&D team have engineered our next generation, skin-friendlier PI surgical range featuring PI-KARE Technology so O.R. staff can choose PI gloves that are even more durable and 'stretchier' with improved comfort, fit and feel to deliver heightened sensitivity and dexterity so they can perform at their best.

#### Traditional PI Products

Standard chemical accelerators may not remain within the glove film and its residue, upon contact with skin, could result in Type IV chemical allergies and sensitivities.



#### PI Products with PI-KARE Technology

Only biologically-safer chemical accelerators known to either be completely consumed during manufacturing or remain within the glove film and with better tolerance to skin, are used.

*This is a simplified illustration of the chemical accelerators within the glove film.*

More O.R. staff around the world prefer Ansell surgical gloves than any other brand.<sup>5</sup>

 **PI-KARE™**  
Skin-friendly PI Technology

## THE SCIENCE BEHIND PI-KARE TECHNOLOGY

Chemical accelerators act as a catalyst for the cross-linking process in the manufacture of gloves. With PI-KARE Technology, the standard short chain carbamates and mercaptobenzothiazoles known to cause Type IV allergies and sensitivities have been eliminated and replaced with biologically-safer chemical accelerators.

- Xanthates, a chemical completely consumed during manufacturing, leaves no residue on the glove surface

- Zinc Dialkyldithiocarbamate, a long side chain carbamate, which has better tolerance to skin, is solubilized within the glove film. *It is one of two carbamates approved in Germany to be used in baby teats and children's toys due to its safety profile<sup>4</sup>*

As with previous Ansell PI gloves, this next generation PI range does not contain diphenylguanidine (DPG) or cetylpyridinium chloride (CPC).

### Only biologically-safer chemical accelerators are used

Chemical accelerators	Before	PI-KARE Technology
Zinc Diethyldithiocarbamate (ZDEC)	Yes	Eliminated
Zinc Dibutyldithiocarbamate (ZDBC)	Yes	Eliminated
Sodium Dibutyldithiocarbamate (SCBC)	Yes	Eliminated
Zinc Mercaptobenzothiazole (ZMBT)	Yes	Eliminated
Diphenylthiourea (DPTU)	Yes	Eliminated
Xanthates (AS100)	Yes	Yes
Zinc Dialkyldithiocarbamate (ZDiNC)	No	Yes

### Featured Products



**GAMMEX® Non-Latex PI**



**GAMMEX® Non-Latex PI Underglove**



**GAMMEX® Non-Latex PI Textured**



**GAMMEX® Non-Latex PI Ortho**



**GAMMEX® Non-Latex PI Green**



**GAMMEX® Non-Latex PI Micro**



**GAMMEX® PI Ergo-Fit**

For more information on PI-KARE Technology, visit [www.ansell.com/healthcare](http://www.ansell.com/healthcare) or contact us at [customersolutionsus@ansell.com](mailto:customersolutionsus@ansell.com) or 1-855-868-5540

#### References:

1. Higgins C, Palmer A, Cahill J, Nixon R. Occupational skin disease among Australian healthcare workers: a retrospective analysis from an occupational dermatology clinic, 1993-2014. *Contact Dermatitis*. 2016;75(4):213-22.
2. Heese A, van Hintzenstem J, Peters KP, Koch HU, Hornstein OP. Allergic and irritant reactions to rubber gloves in medical health services. Spectrum, diagnostic approach, and therapy. *J Am Acad Dermatol*. 1991;25 (5 Pt 1):831-839.
3. Approved by the German BfR (Bundesinstitut für Risikobewertung: Federal Institute for Risk Assessment) for use in the manufacture of baby teats, toys and toy balloons, as listed under Special Category section 2.5.3.2.2.2.
4. Uter W, Warburton K, Weisshaar E, Simon D, Ballmer-Weber B, Mahler V, Fuchs T, Geier J, Wilkinson M. Patch test results with rubber series in the European Surveillance System on Contact Allergies (ESSCA) 2013/14 *Contact Dermatitis* 2016; 75:342-52.
5. Based on largest volume of surgical gloves sold. Data on file.