



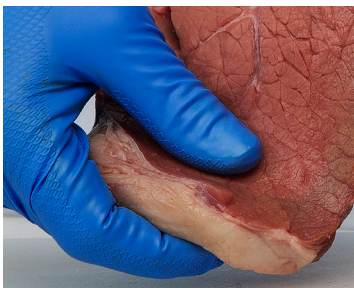
EXTENDED-USE NITRILE GLOVES – THE OPTIMAL OPTION

by Anthony Di Giovanni, *Vice President of Global Marketing*

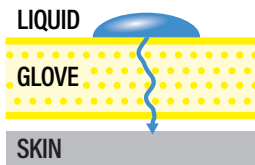
Barrier glove technology has changed dramatically over the last 10 years as glove demand has increased. Gone are the days where rough hands or stained fingers defined what we did for a living.

Today, everyone is sensitive to the effects of skin disease brought on by **exposure to solvents, greases** and even seemingly benign **industrial cleaning solutions**. More recently, the stronger enforcement of gloves usage in industries where food products are handled has also increased the need for better gloves.

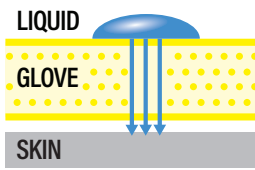
While the need continues to increase, so does the availability of evermore inexpensive alternatives. One way of stripping out the cost when producing gloves is to play with thickness by **claiming a specific mil**, but delivering a product that is slightly less. Then there's the long-standing practice of promoting disposable gloves by count, but then packaging and selling them by weight – **allowing for less than the acceptable count**. Less obvious and more confusing is the **lack of transparency with glove AQL** (Acceptable Quality Level), which indicates the number of defects that may be accepted in a production lot of disposable gloves. Finally, perhaps the least obvious of all is to **increase the number of fillers** in the formulation of the nitrile or latex being used to make the gloves. This results in a glove that may look like any other, but whose durability is not even close. Fillers break down faster when exposed to oily solvents or even animal proteins resulting in gloves cracking or bloating and allowing for the penetration or permeation of liquids.



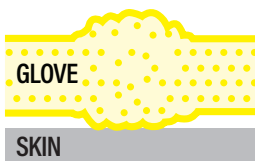
PERMEATION



PENETRATION



DEGRADATION



If we stop to think about it, **choosing low-cost barrier gloves ends up costing more** – not just because of overuse and skin exposure, but due to the **productivity loss** associated with change-outs. As we all know, change-outs sometimes provide workers with an opportunity for a quick break. However, the more damaging effect of using low-cost disposable gloves may be the **waste factor** associated with overall inventory and cost. These gloves end up costing more since they don't last as long, therefore more gloves are used causing more gloves to end up in landfills.

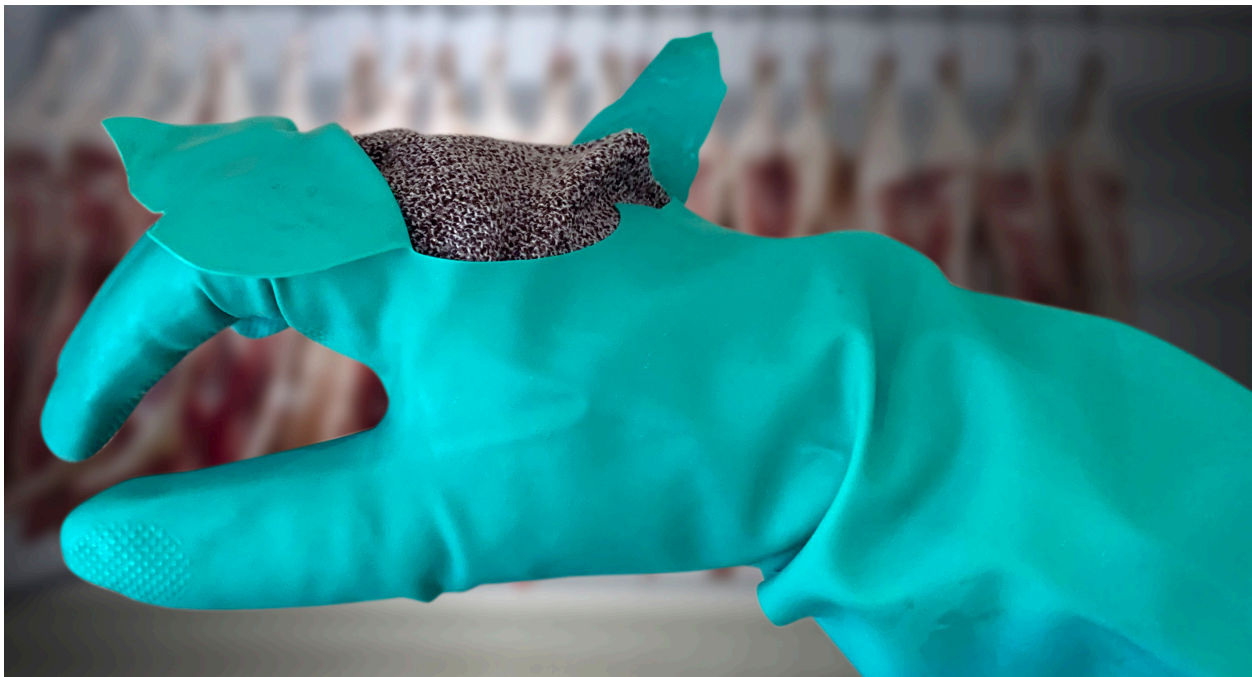
When we look at the explosion in the use of these barrier gloves and the fact that they are mostly rubber – natural or synthetic OR some other polymer like neoprene or PVC – we can't help but ask ourselves, **how can we stay protected but still reduce waste?** We hope to help answer this question in this blog.

Let's begin with disposable gloves or the more commonly used moniker **"single-use" gloves**, which very much reflects how they are used in industrial and mechanical operations. They are often donned when a worker is required to apply grease or touch dirty or contaminated parts. Sometimes they are used as barrier gloves when engaging in the industrial cleaning of parts or large equipment. The thinking is, "As long as I don't feel the liquid penetrating my skin, I am protected."

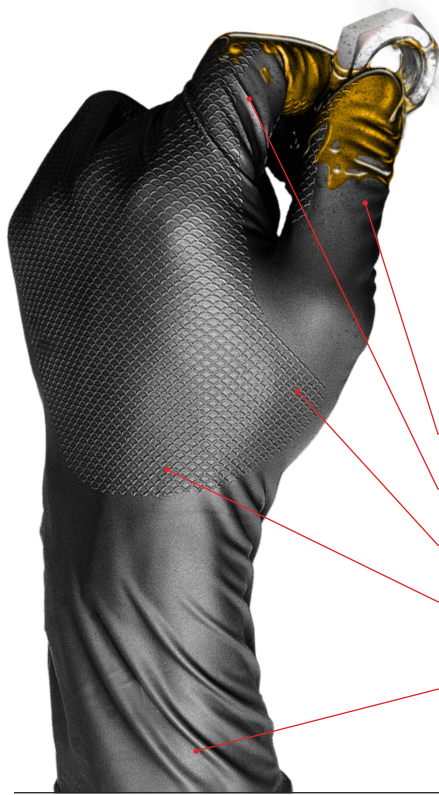


The fact is that a single-use disposable glove that is typically between 2.5 to 5 mils does not serve either of these applications well. When used to apply grease or handle parts, they offer no grip and often end up snagging and easily ripping in very little time. When used in cleaning applications, there is no assurance that the chemical is not permeating the glove because of pinholes, fissures or just the fact that the length of the glove barely makes it past the wrist.

Now let's look at **reusable gloves**, often referred to as chemical gloves in industrial applications or canners and unsupported nitrile gloves in the food industry. These barrier gloves range from 11 to 20 mils and some even have a liner on the inside for easy donning and doffing as well as added comfort. In the case of gloves made of PVC, neoprene or nitrile, the original and most common use was for chemical handling. Up until a few years ago, workers were required to dispense and fill hoppers or vats in a production line. Today, advancements in automation have engineered out most human contact with industrial process chemicals by way of closed-loop systems. In food processing, workers struggle with oversized gloves that are uncomfortable and offer little or no grip. These gloves are often latex canners or unsupported nitrile. While canners may offer better flexibility and fit over unsupported nitrile gloves, they tend to swell when used in continuous contact with liquids and workers may also have allergies related to using the latex material.



We can see that both single-use gloves and reusable gloves have challenges in the manufacturing environment. They are either too thin and not durable enough OR too thick, inflexible and uncomfortable. This is the problem that the developers of Grippaz™ technology aimed to solve. By selecting a special formulation of NBR (nitrile butadiene rubber) and designing a glove with a patented and unique fish scale design that is on both the outside and inside of the glove – they basically invented a new category of barrier glove: the **extended-use glove**.



Industrial and Mechanical Operations

The extended-use glove is becoming the glove of choice in both examples outlined above. In situations where industrial MRO technicians and mechanics struggle in grasping oily and greasy parts and end up chucking out an average of 6 to 8 pairs of disposable gloves a day, switching to an extended-use glove allows them to **work more productively** without the glove ripping with every snag or disintegrating when coming in contact with chemical degreasers. Extended-use gloves are **2 to 3 mils thicker** and, in the case of extended-use gloves with Grippaz™ technology, the patented fish scale and rotated thumb design **grips better AND is more comfortable for the wearer**.

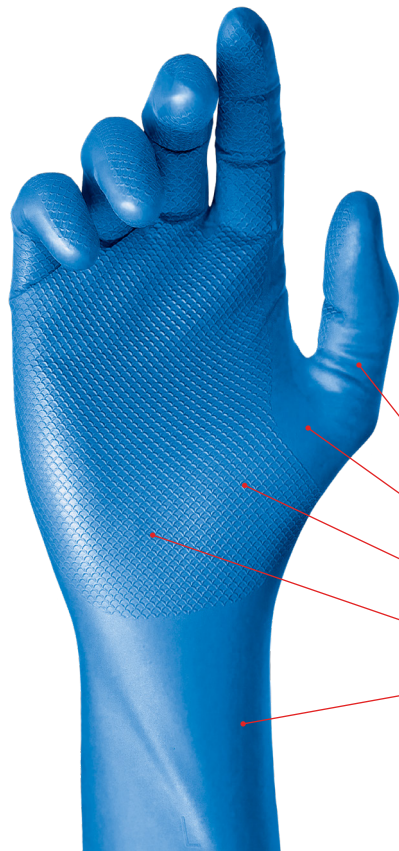
ROTATED THUMB GRIP FOR MAXIMUM DEXTERITY AND RANGE OF MOVEMENT

INTERNAL GRIP MINIMIZES SLIPPAGE AND REDUCES HAND FATIGUE

PROPRIETARY NITRILE BLEND RESISTANT TO A RANGE OF CHEMICALS TESTED TO EN 374

HOLDS UP AGAINST HYDRAULIC FLUIDS, ENGINE OIL AND OTHER CAUSTIC LIQUIDS COMMONLY FOUND IN INDUSTRIAL APPLICATIONS

SILICONE-FREE



Food Plants

Extended-use gloves are also becoming widely popular with food plants, replacing disposable gloves as well as canners and unsupported nitrile gloves. Notwithstanding changes-outs as outlined by the FDA, extended-use gloves, such as those with Grippaz™ technology, provide workers **much better grip** particularly with high protein meats like poultry and fish. The fish scale grip helps workers grab slippery parts securely, allowing for **faster yet safer processing**. The proprietary NBR formulation also **withstands breakdown** significantly better than latex while providing the worker with a more **comfortable and flexible** glove.

CAN BE WORN WITH CUT-RESISTANT LINER

UNIQUE RIP-STOP DESIGN PREVENTS GLOVE PIECES FROM CONTAMINATING FOOD

SOFT-STRETCH NITRILE BLEND MOLDS TO HAND FOR EXCELLENT DEXTERITY

PATENTED FISH SCALE GRIP OFFERS OPTIMAL GRIP AGAINST SLIPPERY PROTEINS

PROPRIETARY NITRILE COMPOUND RESISTS DEGRADATION FROM ANIMAL FATS AND PROTEIN COMPOUNDS

Since launching the Grippaz™ line of gloves, PIP® has seen a whole new category of use. Customers have described Grippaz™ as being **the optimal choice for their work applications**, outlasting single-use gloves and providing better coverage and protection. Workers require fewer change-outs and have come to rely on the superior grip of wet and oily parts that the unique Grippaz™ design offers, as outlined in a case study conducted with several industrial companies where barrier gloves are used. As a result, the demand from both safety managers and workers has been high. In food processing, the Grippaz™ technology has been adopted by a major global pork producer, where sustainability and worker preference are well documented in another case study. Circling back to the question of how we can stay protected but still reduce waste, it's simple: Grippaz™ extended-use gloves are the optimal option. By designing a glove that falls somewhere between a single-use disposable and reusable, PIP® has introduced a revolutionary new hand protection solution that helps workers perform their job better by increasing productivity and reducing waste. ◀