



EVALUATING THE BENEFITS OF

MAXIFLEX® ULTIMATE™ 34-874
REUSABLE COATED GLOVES
OVER DISPOSABLE GLOVES



PROTECTIVE INDUSTRIAL PRODUCTS, INC.
BRINGING THE BEST OF THE WORLD TO YOU®



INTRODUCTION

This case study looks at a comparison between disposable gloves and reusable coated seamless knit gloves for general work applications in industrial and construction site settings.

As many are aware, the 2020 COVID-19 pandemic created an unprecedented demand for disposable gloves, resulting in exponentially rising costs and supply shortages. Many companies returning to work defaulted to disposable gloves as an effective solution to mitigate the transmission of germs.

Intuitively, natural or synthetic rubber disposable gloves seem like the most logical choice for protection against shared surface contact. However, a closer look will demonstrate that disposable gloves are best suited for medical and frontline applications, the prevention of food contamination in food safety and quick jobs in industrial applications that require protection from oils or chemicals.

This case study demonstrates that the use of disposable gloves in industrial and construction work environments actually increases overall PPE cost per use, produces excess waste and has a larger environmental footprint. More importantly, there are potential risks related to lack of mechanical protection and even productivity loss due to lack of grip and general discomfort. For a full analysis, [click here](#).

This case study is based on the actual experience of a large utility company with numerous national locations. It will demonstrate that there is a more sustainable solution to protecting workers from occupational hazards while allowing them to work more effectively and confidently. It will further demonstrate that when coupled with the CDC's recommended hand hygiene program, a coated seamless knit reusable glove can offer protection from work hazards as well as help mitigate the spread of surface contaminants.

THE ANALYSIS

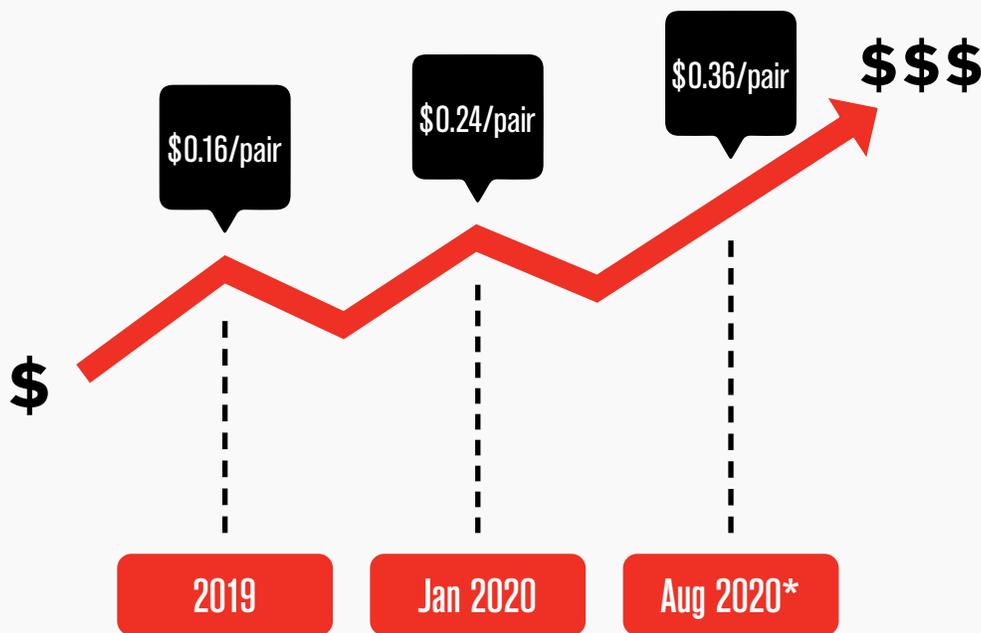
In preparation for the restart phase of the 2020 COVID-19 pandemic, a division of a national telecommunications company based in the Midwest connected with one of PIP's distributor partners regarding the potential use of disposable gloves for their field technicians. The utility company's technicians were not using disposable gloves prior to the pandemic; however, the company's safety managers recognized the new hazards associated with shared surface contact and the need to protect their workers.

Field technicians are required to travel on-site to support the installation and maintenance of local area networks and wide area network devices, landlines and cabling in both commercial and residential areas – as well as respond to and resolve incident tickets. On average, workers would respond to calls to administer service or maintenance at different residences or buildings four times per day. To perform installation or maintenance, technicians also handle specialized tools and equipment.

Responding to that many different locations per day require technicians to touch shared surfaces and equipment which would call for them to wear gloves that protect them from surface and item contact. Field technicians also require a glove that allows for enough manual dexterity to manipulate tools and small parts for installation and maintenance.

In response to the 2020 COVID-19 pandemic, safety managers were looking to supply 1000 field technicians with disposable gloves to wear during work applications. The customer's projected annual usage for disposable gloves was estimated to be more than 2.9 million pairs, which would amount to approximately \$700,800 annually.

With disposable gloves in such high demand, PIP® had already seen an initial increase in prices. It was also estimated that additional price increases would be incurred based on future pricing, causing the customer's annual expenditure to rise to potentially over \$1.1 million per year – representing a staggering increase of more than 56%.



COST INCREASE OF DISPOSABLE GLOVES

*Based on future pricing from Asia with continued increasing demand and possible second wave of pandemic.

THE PLAN

In April 2020, in preparation for “re-opening” following the Covid pandemic, PIP® was called in by a national distributor in the Midwest to provide an analysis of glove use and protection from the spread of germs. The safety manager had developed a clear safety protocol for testing employees, requiring the use of face coverings and gloves at station locations as well as on field calls, in addition to adhering to social distancing protocols. The immediate need was for 224,000 pairs per month of disposable gloves.

The PIP® Regional Sales Manager reviewed the need and determined that disposable gloves were not the answer based on the job’s operation, worker needs and expected price increases. An analysis using PIP’s Cost-of-Use Calculator was conducted – carefully evaluating the real cost of use that included potential injury, productivity and waste. The hazards assessed were related to abrasion, lift force and the risk of contagion from shared surfaces at locations calling for service.

It was determined that cut was not a risk and that gloves were primarily needed to protect against possible abrasion, prevent soiling, help alleviate lifting force and

pressure with a secure grip while providing a barrier against direct contact with shared surfaces, equipment and work tools. Initial discussions focused on grip and dexterity. If PIP® demonstrated that a good coating could ensure that equipment was carried more securely and that a high-gauge liner would provide the dexterity needed to manipulate small parts for installation and maintenance, it would lead to the worker being more productive. Additionally, if PIP® demonstrated that the coating offered a uniform barrier against direct contact with equipment and shared surfaces, it would provide workers with more confidence to perform their job. However, it was carefully reiterated that as outlined by the CDC, only a proper hand hygiene program has been proven to be effective in helping mitigate the spread of contagion by way of hands.

PIP's recommendation was to opt for an all-in-one glove that would be more comfortable and even outperform the disposables option in cost per use. MaxiFlex® Ultimate™ **34-874** was recommended as a high-performance, general-purpose seamless knit nylon/lycra® glove with a MicroFoam nitrile coated grip on the palm and fingers. It was selected as a reusable alternative to disposable gloves. Its proprietary nitrile coating and 15 gauge advanced nylon liner makes it ideal for high dexterity jobs while preventing direct contact with shared surfaces or items. These premium gloves are long-lasting and can be washed up to six times depending on the use of the glove.

As in any work situation, worker protection and comfort needed to be addressed. MaxiFlex® Ultimate™ **34-874** coated seamless knit gloves are form-fitting with a breathable liner, helping eliminate the risk of skin irritation or infection and discomfort due to excess perspiration that can occur with prolonged use of disposable gloves. Having the proper fit and breathability also reduces the risk of workers removing gloves due to irritation, discomfort or lack of dexterity. These gloves are ergonomically designed to fit better and help reduce worker fatigue that is often associated with bulkier, low-cost gloves.



63-332 Disposable Glove



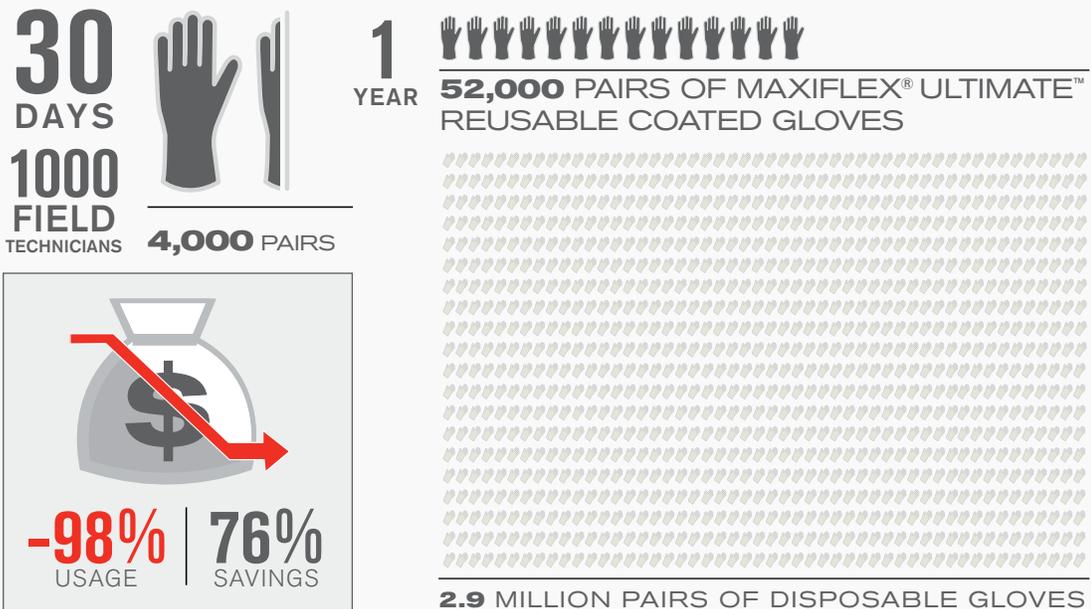
34-874 Reusable Coated Glove

TRIAL

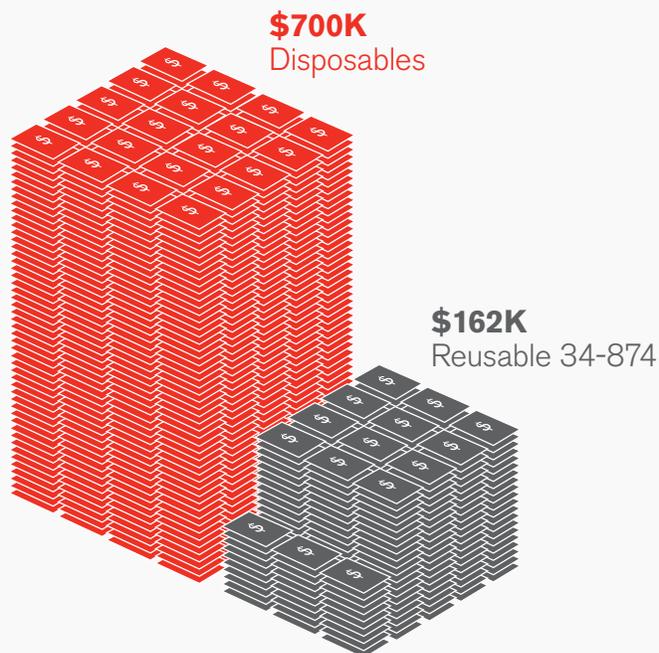
The customer agreed to engage in a trial test, outfitting a controlled group of 78 employees in three locations. After two weeks, it was quickly determined that reusable seamless knit gloves offered a remarkable improvement in comfort, dexterity and protection. Field technicians were found to prefer the MaxiFlex® Ultimate™ **34-874** over disposable gloves with no reports of irritation or discomfort due to extended wear.

ADOPTION

The trial period was cut short due to the convincing results which caused the focus to turn to numbers. It was determined that employees used one complete pair of gloves every seven days for a total of 4,000 pairs of gloves per month. When prorated, this volume would be estimated at 52,000 pairs of gloves over a full year across all Midwest locations. Compared to disposable gloves, opting for the MaxiFlex® Ultimate™ **34-874** reusable glove would completely eliminate the disposable option that would have required 2.8 million pairs of gloves each year. Waste would be cut by the same amount, but the sustainability aspect was a big benefit for management.



When prorating the customer's annual cost with the MaxiFlex® Ultimate™ **34-874** coated seamless knit glove, it was calculated they would save more than 76%. Considering that the customer's annual spend on disposable gloves was an estimated \$700,800, this clearly presented immense savings. These savings come despite the fact that one pair of reusable MaxiFlex® Ultimate™ **34-874** gloves cost over ten times more than a single pair of disposable gloves. By confronting the issues that disposable gloves presented in this work application head-on, this customer was able to achieve significant savings.



ANNUAL COST OF REUSABLE & DISPOSABLE GLOVES

Why was the difference so dramatic? The liners of seamless coated knits are typically made of nylon or polyester blends which are much more durable than any disposable glove on the market. In addition, the resilient MicroFoam nitrile coating retains efficacy in grip and surface contact protection for up to six washes. Currently, the company is considering laundering as an option for additional savings.

ADDITIONAL BENEFITS

Avoids Future Rising Costs and Shortages of Disposable Gloves

PIP® market analysts and product managers are forecasting an exponential rise in the future prices of disposable gloves. There have already been price increases from manufacturers that reflect this increase taking effect by the end of the summer. By choosing to equip field technicians with reusable gloves over disposables, the customer is potentially saving more than 86% annually, equating to more than \$937,000.

Protects Worker Health and Saves Company Money

While the reusable MaxiFlex® Ultimate™ **34-874** keeps hands dry and comfortable, it was found that prolonged use of disposable gloves can incur costs in other ways. Skin irritation from prolonged use of disposable gloves due to lack of air circulation and the build-up of sweat and bacterium can lead to serious conditions such as contact dermatitis, which is one of the most commonly reported occupational diseases, according to ISHN. OSHA calculates that a single case of contact dermatitis can cost more than \$11,000 in employer-paid expenses.

On-Hand Inventory

The significant reduction in usage also allowed this company to reduce the number of resources they had tied to their on-hand inventory. A two-week supply of disposable gloves equated to more than 112,000 pairs, with the inventory cost exceeding \$26,000.

Conversely, a two-week supply of the MaxiFlex® Ultimate™ **34-874** reusable gloves totaled 2,000 pairs, with the cost of this inventory just reaching \$1,220. The difference: The customer effectively reduced funds tied up in their on-hand inventory by more than 95%, while clearing over three pallets from their storage area.



COMPARISON OF TWO WEEK SUPPLY

PRODUCT DISPOSAL

In addition to clearing space and cost within their on-hand inventory, the customer also reduced their costs for disposing of the used products. A 20-yard dumpster can essentially hold ten pallets worth of gloves. The reduction in usage means the customer eliminated up to eight dumpster disposals annually.

SUMMARY

As we summarize all of the data shared, it becomes easier to see just how impactful it was for this customer to make the decision to find a better option to disposable gloves to help protect their workers from direct contact with shared surfaces or items. The combination of a coated seamless knit glove used in conjunction with the CDC's proper hand hygiene regimen is proven to help mitigate the spread of contaminants in the workplace.

It is important to note that the calculated cost of use does **not include the hidden costs of disposable gloves related to lowered productivity, or any cost related to treating work injuries or skin conditions related to disposables.**

The right glove for the application still needs to be held at the same priority level as protecting workers from surface contact and switching to a higher quality reusable glove shows a positive impact on worker health and productivity, waste and cost-savings.

	DISPOSABLE GLOVES	MAXIFLEX [®] ULTIMATE™ 34-874	SAVINGS
Annual Product Usage	2.9 million pairs	52,000 pairs	2.8 million pairs
Number of Employees	1,000	1,000	-
Number of Change-Outs	8 pairs per day	1 pair per week	55,000 pairs per week
Annual Product Spending	\$700,800	\$162,760	\$538,040
On-Hand Inventory - Units	112,000 pairs	2,000 pairs	110,000 pairs
Dumpster Disposable Frequency	9 disposals per year	1.2 disposals per year	7.8 disposals per year

SUMMARY OF SAVINGS

ABOUT PIP®

Protective Industrial Products, Inc. (PIP®) is a leading supplier of Hand Protection and General Safety Products to wholesalers and distributors worldwide. PIP® strengthens its value proposition by also offering its products in the most efficient and flexible manner, while building long-term relationships with its distributors.

Additional information about PIP® is available at www.pipusa.com, or by contacting Anthony Di Giovanni at 518-595-1234 or adigiovanni@pipusa.com

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6/2020