



EVALUATING THE BENEFITS OF

PIP® 33-115 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 study will demonstrate that disposable gloves are best suited for medical and frontline applications, for the prevention of food contamination in food safety and for 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 negatively affects overall PPE costs, 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](#).

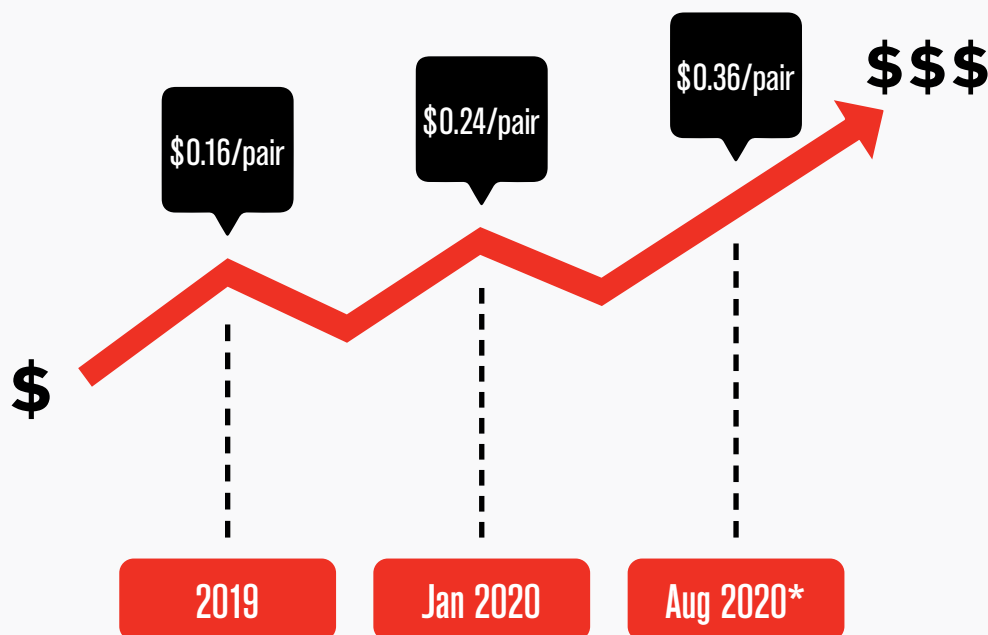
This case study is based on the actual experience of a large U.S. based fashion retailer with numerous national locations. It will demonstrate how reusable work gloves are more suited to protect working hands from occupational hazards and allows workers to operate more effectively and confidently. It will further demonstrate that 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 to mitigate the spread of germs.

THE ANALYSIS

In preparation for the restart phase of the 2020 COVID-19 pandemic, a division of a large fashion retailer connected with one of PIP's distributor partners regarding concerns of the shortages and rising costs of disposable gloves. The retailer was using disposable gloves at all of the return locations of their distribution centers since these locations handled multiple items including those that may have been worn or handled repeatedly. Their process required physical evaluation, relabeling and repacking. Gloves were worn because workers needed to work with products that were handled by multiple people to prevent soiling items during processing. These workers needed gloves that allowed for enough manual dexterity to manipulate clothing in the functions of tagging, buttoning, zipping, hooking and snapping, without being impeded by perspiration or improper fit.

In total, they had 3000 employees wearing disposable gloves to perform their work applications. The customer's annual usage for disposable gloves was estimated to be over 4.3 million pairs, which amounted to more than \$1 million annually.

With disposable gloves in such high demand, the customer had already experienced an initial increase in costs from its distributors. It was also estimated that additional cost increases would be incurred based on future pricing, causing their annual expenditure to spike to over \$1.5 million per year – representing a 50% increase.



COST INCREASE OF DISPOSABLE GLOVES

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

THE PLAN

In May 2020, in preparation for “re-opening” following the Covid pandemic, PIP® was called in by a key West Coast distributor partner to provide an analysis on glove use and protection against the spread of germs. The safety manager had developed a clear safety protocol that included testing employees, requiring the use of face coverings and gloves, in addition to adhering to social distancing protocols. The immediate need was for 350,000 pairs of disposable gloves per month.

The PIP® Regional Sales Manager reviewed their needs and determined that disposable gloves were not the answer based on the job operations, worker needs and expected price increases. An analysis using PIP's Cost-of-Use Calculator tool was conducted – carefully evaluating the task requirements, risks and real costs. The hazards assessed were related to abrasion, lift force and the remote risk that the returned merchandise may be contaminated with germs.

It was determined that cut was not a risk and that gloves were mostly 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 returned merchandise, shared surfaces and work tools. The initial discussions were centered on grip. If PIP® demonstrated that a good coating could ensure that loads were carried more securely and without risk of slipping, it would lead to the worker being more productive. Additionally, if PIP® demonstrated that the coating offered a uniform barrier against direct contact with the merchandise and shared surfaces, it would give workers 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 germs by way of hands.

PIP's recommendation was to opt for an all-in-one glove that was comparable in cost of use to that of disposable gloves. PIP's **33-115** was recommended as an economically priced, general purpose seamless knit polyester glove with a polyurethane-coated grip on the palm and fingers. It was selected as a reusable alternative to disposable gloves. Its impermeable polyurethane coating makes it ideal for most high dexterity jobs and for preventing direct contact with shared surfaces or items. The glove pairs are individually packaged and can be laundered up to four times depending on the use of the glove. The PU coating is abrasion resistant and provides a secure grip while helping protect the skin when handling bulky items.

As in any work situation, worker protection and comfort needed to be addressed. PIP's **33-115** coated seamless knit is form-fitting with a breathable polyester 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 and discomfort. Lastly, it also helps enhance worker productivity and efficiency by reducing hand fatigue that results from using the necessary force that's needed to lift bulky and slippery objects.



63-332 Disposable Glove



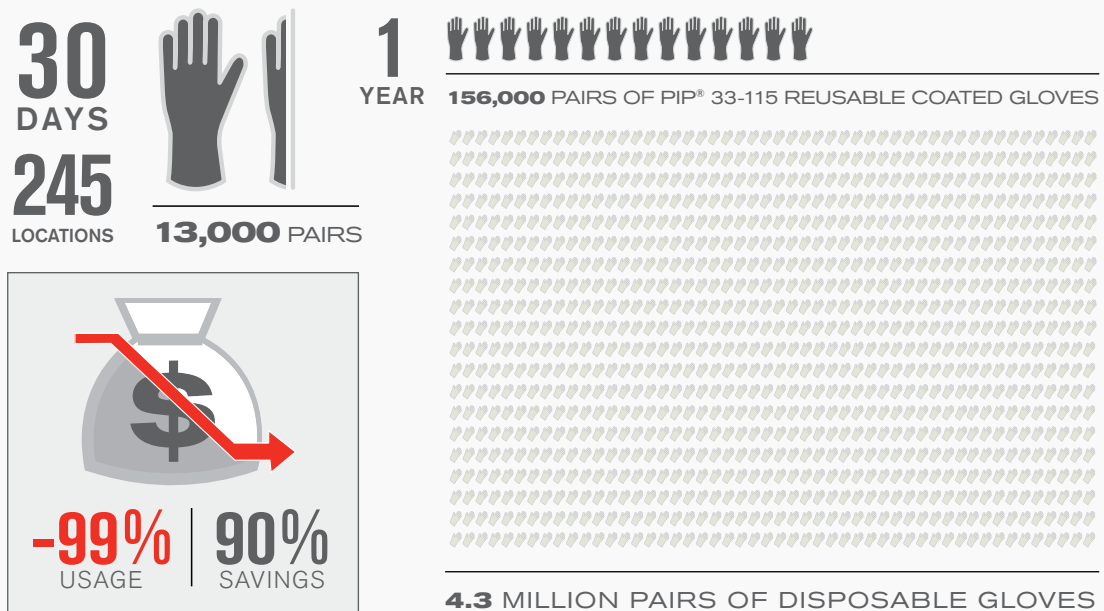
33-115 Reusable Coated Glove

TRIAL

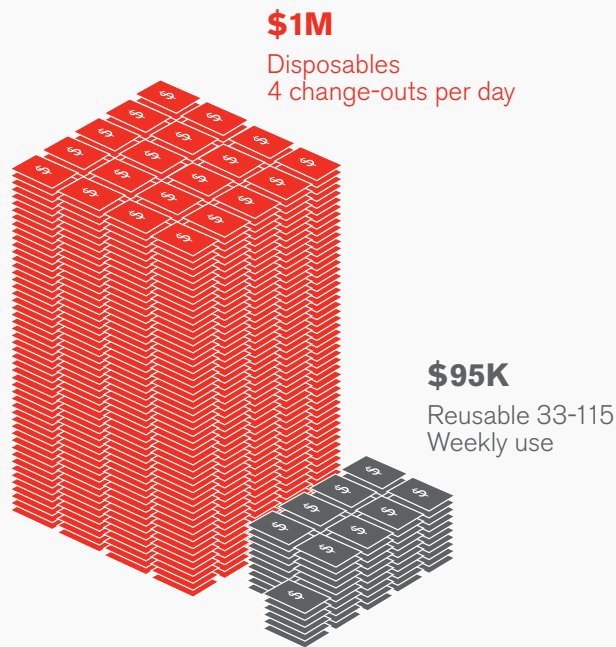
The customer agreed to engage in a trial test, outfitting a controlled group of two hundred employees in two locations. After two weeks, it was quickly determined that reusable seamless knit gloves offered a remarkable improvement in comfort, dexterity and protection. Warehouse workers were found to prefer the PIP® **33-115** over disposable gloves and there were no reports of irritation or discomfort due to extended wear.

ADOPTION

The trial period was cut short due to the convincing results and now the focus turned to numbers. It was determined that employees used one complete pair of gloves every seven days for a total of 13,000 pairs of gloves per month. When prorated, this volume would be estimated at 156,000 pairs of gloves over a full year across all national locations. Compared to disposable gloves, switching to PIP's **33-115** reusable gloves would reduce product usage by a staggering 4.2 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 PIP® coated seamless knit glove, it was calculated they would save more than 90%. Considering that the customer's annual spend on disposable gloves would be in excess of \$1 million, this clearly presented immense savings. These savings come despite the fact that one pair of reusable PIP® **33-115** gloves cost nearly two and a half times more than a pair of disposable gloves. By addressing the issue of shortages and rising costs head-on, this customer was able to achieve significant savings.

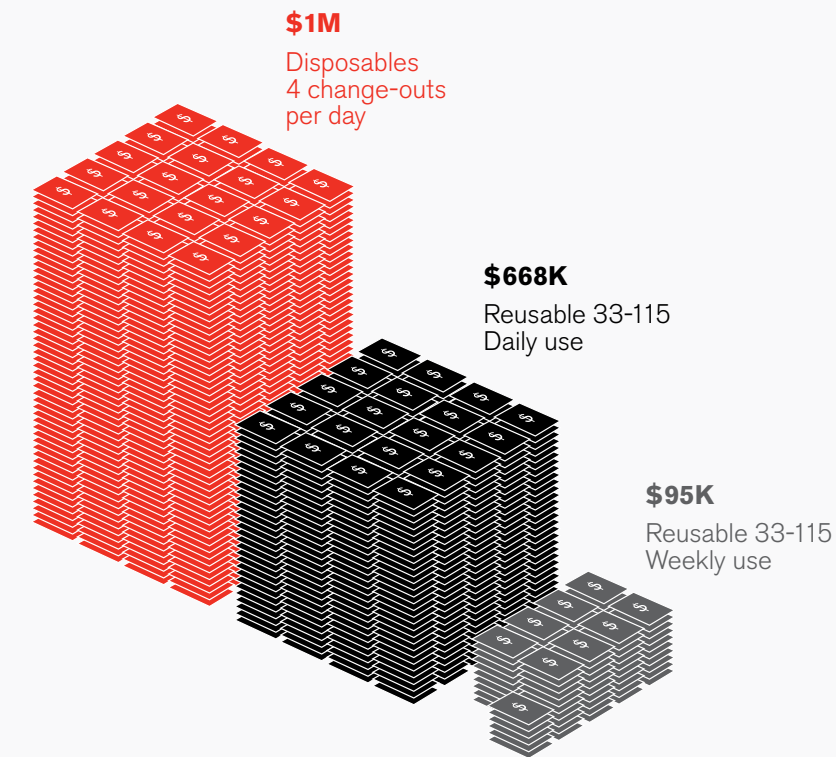


ANNUAL COST OF REUSABLE & DISPOSABLE GLOVES

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 polyurethane coating retains efficacy in grip and surface contact protection for up to four washes.

ADDITIONAL BENEFITS

Some industries have heavy-duty working conditions where, at the end of each day, the glove used cannot be laundered and reused. For those instances, the PIP's **33-115** can be treated as a daily disposable and still come out ahead on cost. Using our case study as an example, cost savings would average almost \$400,000 annually compared to disposable gloves. Currently, the company is considering laundering as an option for additional savings.



ANNUAL COST OF REUSABLE & DISPOSABLE GLOVES

PROTECTS WORKER HEALTH AND SAVES COMPANY MONEY

While the reusable **33-115** 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 168,000 pairs, with the inventory cost exceeding \$40,000.

Conversely, a two-week supply of the **33-115** reusable glove totaled 6,000 pairs, with the cost of this inventory just reaching \$3,660. The difference: The customer effectively reduced funds tied up in their on-hand inventory by over 90%, while clearing one and a half 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 the used products. A 20-yard dumpster can essentially hold ten pallets worth of gloves. The reduction in usage means the customer eliminated ten dumpster disposals per year.

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 while helping protect 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	PIP® 33-115 REUSABLE GLOVES	SAVINGS
Annual Product Usage	4.3 million pairs	156,000 pairs	4.1 million pairs
Number of Employees	3,000	3,000	-
Number of Change-Outs	4 pairs per day	1 pair per week	81,000 pairs per week
Annual Product Spending	\$1 million	\$95K	\$905K
On-Hand Inventory - Units	168,000 pairs	6,000 pairs	162,000 pairs
Dumpster Disposable Frequency	12 disposals per year	1.5 disposals per year	10.5 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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