



EXPLORING EXTENDED USE GLOVES VS SINGLE-USE GLOVES IN INDUSTRIAL APPLICATIONS



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



EVALUATING THE BENEFITS OF

Extended Use Gloves

vs. Standard Nitrile Single-Use Gloves

This case study will show how PIP was able to save costs while also improving worker productivity, safety and waste reduction.



INTRODUCTION

This case study compares disposable glove and new extended use glove usage in industrial settings. There is extensive use of single-use gloves in industrial workplaces from light to heavy manufacturing to the oil, gas and mining industries. Disposable gloves are used by workers to prevent direct skin contact with common industrial oils, chemicals and cleaners. Due to the COVID-19 pandemic, many industrial companies have now mandated disposable gloves to prevent direct contact with shared items or surfaces. This has resulted in supply issues and higher prices due to the increased demand for gloves.

During the pandemic many of our larger industrial customers saw usage skyrocket, so they started looking for other glove options for cost savings and approached PIP® for a solution. This case study will show how PIP was able to save costs while also improving worker productivity, safety and waste reduction. These improvements resulted from their use of new extended-use gloves across multiple applications where they were previously using single-use gloves.

THE ANALYSIS

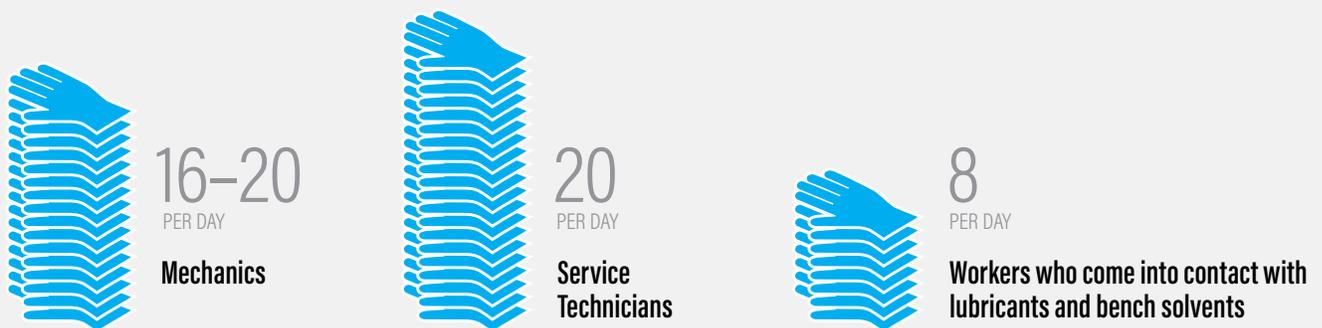
The companies we worked with had several areas where there was a high usage rate of single-use gloves. This ranged from workstations and labs within a factory to service and fleet maintenance departments. PIP investigated to understand their applications and average glove usage.

In the manufacturing setting, there were many workstations where workers had contact with lubricants, grease and common solvents to spot clean parts. Workers used disposable gloves because they said “they did not want dirty fingernails like their grandfathers” and the safety manager did not want them to absorb any dangerous chemicals into their skin. Disposables were ubiquitous within the company lab, as the engineers and lab technicians conducted quality control testing and research and development work. It was difficult to get an average usage number of disposable gloves at the workstations and lab because they were so varied. However, workers who had contact with lubricants and bench solvents typically had a minimum of four changeouts, or 8 gloves, per day.

A few of the companies had active service departments to support repair and maintenance of their products. The technicians that make service calls have a large demand for disposable gloves. Their work environments are ever-changing, so using single-use gloves ensures their hands stay clean. This also gives the service technicians an extra layer of protection and confidence when working off site and with dirty equipment and parts. The technicians can easily use one box of 100 single-use gloves per week.

Also encountered were companies with vehicle fleets that require maintenance. They were typically equipped with onsite mechanics’ shops to support their company cars, vans and trucks. Mechanics need high dexterity, but are in constant contact with grease, oil, dirt and grime, so barrier gloves are a must. We found that the mechanics used an average of 16 to 20 gloves per day, so almost one box of 100 gloves per week.

SINGLE-USE GLOVE USAGE BY APPLICATION



THE TRIAL



GLOBALLY PATENTED
FISH SCALE DESIGN

PIP worked with the servicing distributors and company safety managers to devise plans to test the new PIP Grippaz® Extended Use gloves in the key areas of factory workstations, labs, service and fleet maintenance. Several small control groups trialed the Grippaz gloves over a multi-week period across the four identified work environments.

PIP Grippaz Extended Use gloves were chosen for the trial because they are a whole new glove category designed for light to heavy duty applications. They have a globally patented fish scale design and internal grip pattern that provides the best grip against grease and oils while creating better traction and significantly reducing hand fatigue. The proprietary nitrile formulation provides comfort and protection against oils, proteins and incidental chemical contact. A rip-stop design is engineered into the gloves to reduce contamination and protect users from exposures. Ultimately, the thicker mil and proprietary formulation allow Grippaz Extended Use gloves to last up to 5 times longer than regular disposable gloves in industrial applications.

At the conclusion of the trials, PIP found that the trial groups preferred the Grippaz gloves due to several key pain points with single-use gloves that were consistent across all the companies and work areas. First, the trial group realized that the disposable nitrile gloves that they used were not well suited for their industrial applications. Single-use gloves are designed for light duty applications and not for all day or heavy use as most of these workers needed. The disposables often ripped or tore and exposed the workers to contamination. The trial group also complained about poor grip with disposable gloves. For some, disposable glove use had caused repetitive stress disorders. They also had safety concerns due to their lack of secure purchase on the objects they worked with. Lack of grip slowed their productivity and sometimes caused injuries. They had sustainability concerns as they were constantly disposing of gloves throughout the workday. They noticed that the lack of durability of single-use gloves was generating an ongoing waste stream that was greatly reduced when using Grippaz gloves. Finally, the trial groups unanimously agreed that they no longer had to make compromises to wear disposable gloves to have the dexterity and tactile sensitivity that they needed on the job.



	DISPOSABLE GLOVES	GRIPPAZ®
Average Price per Box:	\$18/box 100/ea*	\$23/box 50/ea
Average Price per Pair:	\$0.36	\$0.92
Total Number of Employees:	3,000	3,000
Weekly Average Cost:	\$28,846 at 4 change-outs per employee per day	\$13,800 at 1 change-out per employee per day
Monthly Average Cost:	\$125,000	\$59,800
Annual Average Cost:	\$1.5 million	\$717,600
TOTAL SAVINGS		
Weekly Average Savings:	\$15,046	
Monthly Average Savings:	\$65,200	
Annual Average Savings:	\$782,000	
% of Savings by Switching to Extended Use Over Disposable:	48%	

*Calculations based 3,000 employees and the current costs of disposable nitrile gloves

The safety managers looked at the results and saw that conversion to Grippaz across the various work areas could provide significant cost savings. One company in particular saved almost 50% or over \$750,000 annually by converting to extended use gloves. That cost analysis along with the strong trial wearer support meant easy adoption and high worker compliance for the new extended use gloves.

ADOPTION & BENEFITS

Since the introduction of Grippaz across all the identified work areas, companies have seen great benefits from converting from single-use gloves.

The extended use of the Grippaz gloves is the top benefit because their disposables often tore and the quality was inconsistent. Due to the COVID-19 pandemic, this has become more prevalent as many manufacturers use more fillers and produce even thinner gloves to save on high demand materials. Mechanics were the biggest complainers about their single-use glove issues, so they prefer the thicker nitrile and enhanced grip. They can now work a full day without a concern of their gloves ripping or tearing.

Safety managers and site managers have also noticed that the patented fish scale grip improves worker productivity with fewer injuries. Wearers of Grippaz have more throughput when handling numerous parts per day as having an improved grip allows them to work faster with less fatigue. Service workers, technicians and general factory workers prefer Grippaz for its durability, comfort and superior grip. In the lab, wearers like the quality and

security of the 1.5 AQL. They also appreciate the excellent wet and dry grip on beakers and instruments.

The durability of these slightly thicker extended use nitrile gloves means lower cost of use compared to 3 or 4 mil disposable gloves. Disposable gloves tend to rip and tear when donning or split from rubbing on a bench edge or tool. This is due to the thinner mil and because the 4.0 AQL allows for more defects compared to the Grippaz 1.5 AQL. The Grippaz gloves have been specifically engineered with a patented fish scale pattern that provides a rip-stop effect to protect from rips and tears.

Grippaz gloves ultimately reduce the waste generated by single-use gloves as they last on average 5 times longer. As more companies like these focus on sustainable operations, using less gloves means less waste and lowered costs to dispose of their gloves.

EXAMPLE SUMMARY OF BENEFITS

	DISPOSABLE GLOVES	GRIPPAZ®	SAVINGS
Annual Usage	4.2 million pairs	0.8 million pairs	3.4 million pairs
Change-Outs	4 pairs/day	1 pair/day	3 pairs/day/worker
Annual Cost	\$1.5 million	\$0.7 million	\$0.8 million

Based on 3,000 total wearers

SUMMARY

This case study demonstrated how PIP is converting disposable glove users to Grippaz Extended Use gloves to improve worker productivity and safety while providing cost savings and waste reduction. These new gloves:

- Allow wearers to work more confidently and effectively due to the superior durability and grip with equal dexterity to disposable nitrile gloves
- Keep workers' hands safe due to the proprietary nitrile blend, unique rip-stop design pattern to reduce skin exposure and superior AQL
- Protect users against oils, chemicals and cleaners
- Improve worker productivity and efficiency with enhanced grip and less doffing and donning to replace broken disposable gloves
- Are more cost-effective in use because the gloves last up to 5 times longer than standard disposable nitrile gloves
- Generate cost savings from extended use while offering a more sustainable alternative to disposable gloves