

# MAXIMIZING EFFICIENCY

MANAGING WASTE & COST



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



AN INCREDIBLE AMOUNT OF TIME AND EFFORT IS OFTEN SPENT REVIEWING PRODUCT PRICING OVER OTHER CONSIDERATIONS THAT IMPACT A COMPANY'S BOTTOM LINE.

Don't read that the wrong way; while pricing remains important and a price reduction does produce immediate savings, it doesn't always translate as the best solution for cost reduction. One of the most overlooked opportunities for cost reduction is the management of product usage and waste.

The existence of waste (in one form or another) has been a major factor throughout the industrial era. It's even led to the development of multi-million dollar industries and businesses. Whether it's ultimately managing costs or increasing productivity, the reduction of waste in this day and age should be among any organization's top priorities.

To demonstrate just how effective the difference can be when addressing waste, we've chosen to use a recent conversion at an American-based company, regarded as one of the world's largest metal producers (over \$5 billion in sales annually), as a case study.

## THE ANALYSIS

---

In 2015, a customer reached out to one of our distributors expressing concern about their glove usage. The customer was using cotton canvas gloves in three of their factories. Within these factories, the company refines, converts, and packages finished goods.

In total, there were approximately 600 employees wearing the cotton canvas gloves to perform their respective tasks. The annual usage for 2014 was 434,700 pairs of gloves, which amounted to over \$190,000 annually.

## THE PLAN

---

Following a site survey with our distributor, we suggested a switch to the **MaxiFlex® Ultimate™** as a high quality alternative and set the parameters for the test period. The customer agreed to convert one of their three factories as a test facility to the MaxiFlex® Ultimate™ for a 60-day period. In order to isolate and record results as accurately as possible, a total changeover was requested for the duration of the testing period. This meant that only the MaxiFlex® Ultimate™ was made available to the 200 workers at this site.



COTTON CANVAS GLOVES



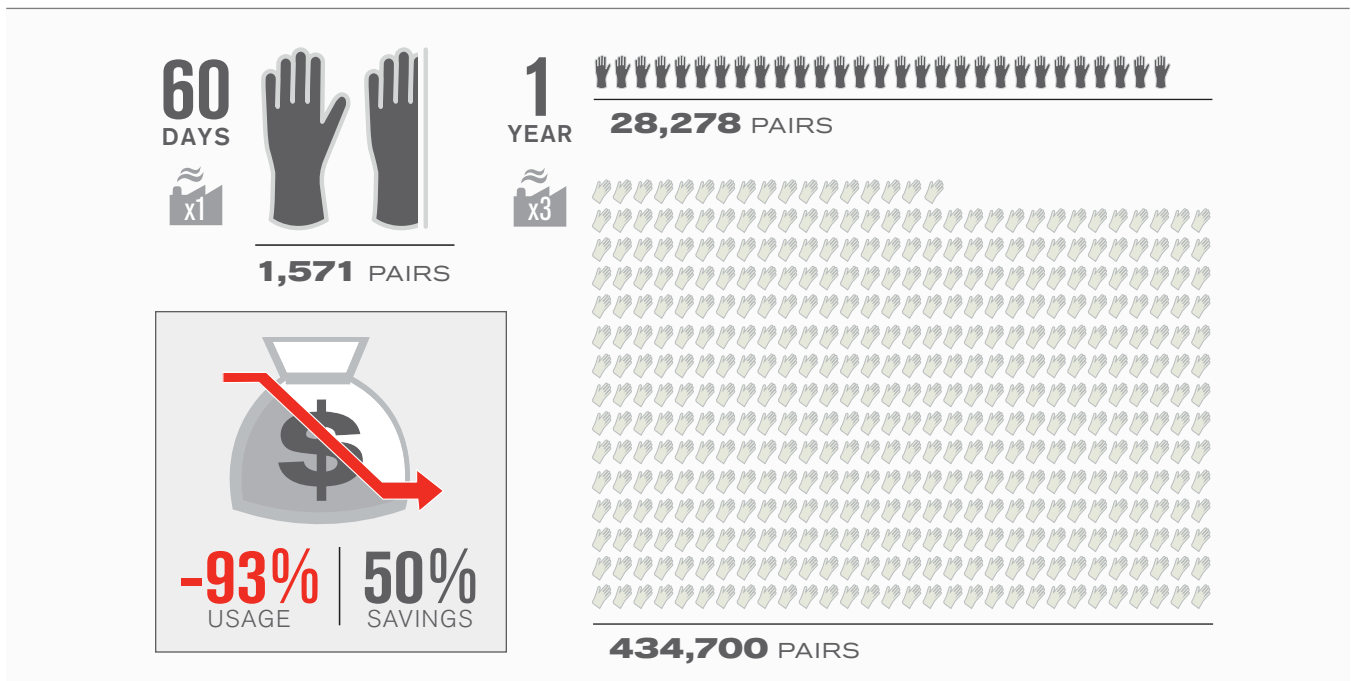
MAXIFLEX® ULTIMATE™

## THE RESULTS

---

Throughout the 60-day testing period, the test facility used 1,571 pairs of gloves. When prorated, this volume would be estimated at 28,278 pairs of gloves over a full year across all three factories. Based on their 2014 usage report, the customer was using 434,700 pairs of cotton canvas gloves each year. A switch to the MaxiFlex® Ultimate™ would **reduce their product usage by over 93%, or 406,422 pairs of gloves per year!**

When prorating their annual cost with the MaxiFlex® Ultimate™, the customer calculated they would **save nearly 50%**. Considering that the customer's annual spending on cotton canvas gloves was in excess of \$190,000, this is clearly an immense savings! This savings comes despite the fact that one pair of the MaxiFlex® Ultimate™ cost nearly 8 times more than a pair of the cotton canvas gloves.



By addressing the product consumption issue head-on, this particular customer was able to achieve significant savings, far beyond what a simple price adjustment would have produced. **Even a straight 10% discount, which would have made a meaningful impact, would have only produced about \$19,000 in annual savings, or nearly 80% less than these actual results.**

Why was the difference so dramatic? Seamless coated knits are typically made of nylon or polyester blends which are much more durable than cotton. In addition, the incredibly resilient nitrile microfoam coating we recommended can withstand up to 18,000 cycles on the Martindale Abrasion Test.

## ADDITIONAL BENEFITS

---

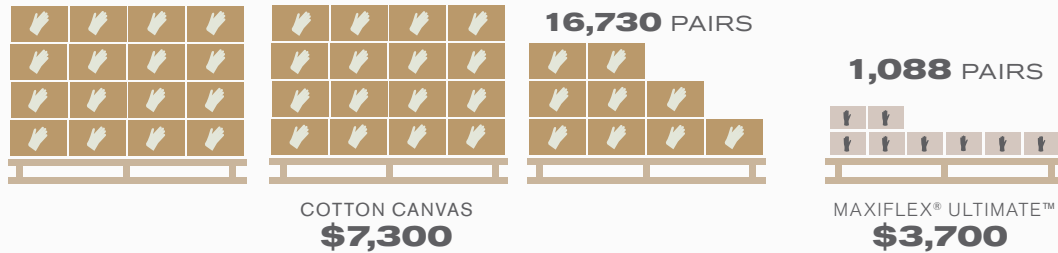
In addition to the product savings, the following are a few added benefits that that were results of this conversion.

### ON-HAND INVENTORY

The significant reduction in usage also allowed this company to reduce the amount of resources they had tied to their on-hand inventory. A two week supply of the cotton canvas gloves equated to 16,720 pairs (or over 2 pallets). The cost of this inventory exceeded \$7,300.

Conversely, a two week supply of the MaxiFlex® Ultimate™ is 1,088 pairs (or just 7-8 cases). The cost of this inventory is just over \$3,700. The difference: **the customer effectively reduced funds tied up in their on-hand inventory by nearly 50%**, while clearing over two pallets from their storage area.

### COMPARISON OF A TWO WEEK SUPPLY



The distributor also benefited in this aspect, as they were able to clear over 1,500 square feet of warehousing space as a result of the conversion. It took four of the distributor's workers several hours to unload each delivery for cotton canvas gloves – a 20 foot container – and put the product into inventory. This occurred 2-3 times each year.

### REDUCING DOWNTIME

Recalling a previously reported result, this conversion reduced the customer's annual usage by 406,422 pairs of gloves per year. The time it takes a worker to remove their gloves, dispose of them, go to the supply area to get a new pair, put them on, and get back on the job can be 5 minutes on average.

When these numbers are expanded annually, the **reduction in waste would create a time savings of 2,032,110 minutes**. This is the equivalent of over 33,868.5 hours, or over 4,233 eight-hour shifts. That's like adding the production of 17 full-time, fully trained employees to the staff!

### PRODUCT DISPOSAL

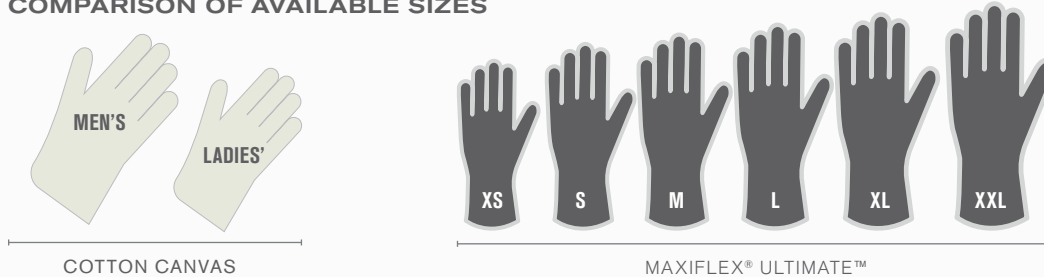
In addition to clearing space and cost within their on-hand inventory, the customer also reduced their costs for disposing the used products. A 20 yard dumpster can essentially hold 10 pallets worth of gloves. The reduction in usage means **the customer eliminated a dumpster disposal every 2 - 3 months**.

## BETTER FIT, FORM AND FUNCTION FOR A SAFER SOLUTION

Finally, when transitioning from an uncoated glove to a coated glove, one of the obvious benefits for the wearer is an enhanced grip. In general, the coating will enhance a glove's grip by providing friction between the glove and what the worker is holding, significantly reducing slippage. Different coatings work better given the working conditions, and the nitrile microfoam coating provided by the MaxiFlex® Ultimate™ was the ideal solution for the customer's applications.

Additionally, as we reviewed the customer's usage reports for both the cotton canvas gloves and the MaxiFlex® Ultimate™, another benefit presented itself. When the customer was buying cotton canvas gloves, the only two sizes available to them were men's and women's. The MaxiFlex® Ultimate™ is available in a variety of sizes and the customer had their employees using everything from XS to XXL, to achieve the proper fit (the MaxiFlex® Ultimate™ is available in sizes XXS-XXXL).

### COMPARISON OF AVAILABLE SIZES



### THE IMPORTANCE OF PROPER FIT

First, **a better fit means a safer product.** When the glove is too loose, the wearer can experience less tactile sensitivity and control. This could lead to injuries and subsequent costs. If the glove is too tight, it can wear faster and provide less durability while putting additional strain on the wearer's hands. The poor fit, in either case, could encourage workers to remove their gloves for certain precision handling tasks. And the only time a glove can provide the protection it's designed to deliver is when it's being worn!

Second, **a better fit will lead to increased productivity.** Again, when the glove is too loose, less control can lead to more distractions and a slower process. A glove that's too tight could lead to discomfort and hand fatigue, potentially resulting in the wearer needing to remove their gloves more frequently. The better fit with the MaxiFlex® Ultimate™ allowed crane operators – responsible for moving loads in excess of 200 pounds – to manipulate buttons on the controls, without removing their gloves.

Third, **a better fit increases comfort.** A properly fitting glove can reduce hand fatigue and be easier to work with. This can result in workers wearing their gloves more frequently, if not continuously. Among those who appreciated the change most during the test period were several individuals who suffered from pre-existing arthritic conditions. Reinforcing the first point, gloves that are worn and are worn more frequently can increase the protection of the worker.

## 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 reduce their product usage, as opposed to negotiating price.

	COTTON CANVAS	MAXIFLEX ULTIMATE	SAVINGS
Annual Product Usage	434,700 pairs	<b>28,278 pairs</b>	<b>406,422 pairs</b>
Annual Product Spending	Over \$190,000	<b>Over \$95,000</b>	<b>~\$95,000</b> (about 50%)
On-Hand Inventory - Units	16,720 pairs (or over two pallets)	<b>1,088 pairs</b> (or 7-8 cases)	<b>15,632 pairs</b> (over two pallets)
Dumpster Disposal Frequency	5 disposals per year	<b>0.6 disposals per year</b>	<b>Over 4 disposals per year</b>
Product Changeover Downtime	36,225 hours	<b>2,357 hours</b>	<b>33,868 hours</b>

Comparatively, while a price negotiation would have taken less time and delivered a known outcome, **a 10% price reduction would have only saved \$19,000.**

## ABOUT PIP

---

Protective Industrial Products, Inc. (PIP) is a leading supplier of Hand Protection and General Safety Products to wholesalers and distributors worldwide. PIP's mission statement of "Bringing the Best of the World to You<sup>®</sup>" is fulfilled every day by providing users with best-in-class personal protective equipment. 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](http://www.pipusa.com), or by contacting Anthony Di Giovanni at 518-595-1234 or [adigiovanni@pipusa.com](mailto:adigiovanni@pipusa.com)

Neither this document nor any other statement made herein by or on behalf of Protective Industrial Products, Inc. should be construed as a warranty of merchantability or that any Protective Industrial Products, Inc product is fit for a particular purpose. Protective Industrial Products, Inc assumes no responsibility for the suitability or adequacy of an end user's selection of gloves for a specific application. Users are encouraged to always use caution and care when handling sharp materials or in potentially dangerous environments. See [www.pipusa.com](http://www.pipusa.com) for important product safety information.



**MAXIMIZING  
EFFICIENCY**  
MANAGING WASTE & COST

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

© Copyright 2016 Protective Industrial Products, Inc. – All Rights Reserved

12/2016