



KEVLAR

DUPONT

CASE HISTORY

GLOVES OF 100% KEVLAR® BRAND FIBER DROVE INJURIES DOWN 50% AT U.S. AUTO ASSEMBLY PLANT

In a recent U.S. Department of Labor study, injuries to fingers and hands ranked highest in workplace accidents—more than 27%. Plus, hand and finger accidents ranked highest in preventable injuries. And in terms of lost workdays, injuries to hands and fingers ranked second only to back and neck injuries.

The Bureau of Labor Statistics found that a vast majority of employees who suffered hand injuries were not wearing gloves at the time. They also found that many of those injured were wearing the wrong kind of gloves. In another study, the Bureau of Labor Statistics found that non-use of gloves was associated with increasing hand injuries more than two-and-a-half times.

The escalating price tag on medical services and disability claims has made reducing the cost of

health care a priority for company leaders. The cost of a single injury multiplies as the employee misses workdays to recover. A National Safety Council study reports that the cost of just one disabling hand or finger injury varies from \$540 to \$26,000 per patient. And a serious upper extremity trauma can cost as much as \$730,000 per incident. According to a recent Occupational Safety and Health Administration (OSHA) study, 70.9% of arm and hand injuries could have been prevented with personal protective equipment (PPE), specifically safety gloves.

At a major U.S. automobile assembly plant, for example, the body shop workers regularly handle sharp-edged metal parts. About 90% of the disabling injuries there were hand and arm cuts. Plant officials estimated that the average cost per injury was \$2,100.

Cotton and leather gloves were the standard hand protection for the body shop workers. With such a high hand and arm injury rate, it was apparent to plant management that the cotton and leather gloves being used were not effective in preventing injuries to the workers during the normal course of their activities.

Hand protection is vital. Safety gloves have to provide freedom of movement, comfort, durability and above all—protection. A safety executive at the assembly facility had heard of the high level of protection of gloves made of a DuPont material called KEVLAR®. He suggested a trial with the workers wearing knit gloves of 100% DuPont KEVLAR® brand fiber.



Only gloves made exclusively of DuPont KEVLAR® brand fiber, which meet DuPont's exacting quality standards, are eligible to carry this distinctive yellow and black label.

Light in weight, yet five times as strong as steel on an equal weight basis, KEVLAR® brand fiber is found in applications as demanding as bullet-

resistant vests, firefighters' boots and protective apparel. Gloves made of KEVLAR® offer exceptional cut, slash and heat resistance, substantially reducing the hand and finger injury risks in handling metal and glass.

A comparison study was set up at the auto assembly plant for a 10-week period, measuring durability, protection and cost of gloves of KEVLAR® versus leather and cotton gloves. The results were dramatic.

The gloves of KEVLAR® cost approximately \$6 a pair, while the leather gloves were \$1.60 and cotton only 80¢ a pair. To be cost-effective, KEVLAR® would need to outlast the leather gloves by four times and the cotton by eight times. Despite the higher purchase price, gloves made with KEVLAR® performance technology tested measurably better on all fronts. The total cost for the gloves of KEVLAR® during the 10-week trial was \$2,187, while the combined cost for the cotton and leather gloves used was \$2,904 — a savings of 25% in total cost. And, most important, there

were no hand injuries during the period to workers who were protected by gloves made of KEVLAR®

Two years later at the same facility, a year-long protection study showed that body shop workers protected by gloves of KEVLAR® (nearly 75% of the total employees in the shop) experienced no (zero) laceration injuries. In fact, the shop's total hand and arm injuries were reduced from a previous total of 52 down to only 26.

"In the three years of use here, we've yet to register a single serious laceration injury to a worker wearing these gloves," the safety engineer said. "In my opinion, they are an investment that offers a payout to everyone."

It was clearly demonstrated that KEVLAR® helped workers at the assembly plant avoid the pain and suffering of hand and arm injuries while increasing their productivity. "And, the plant cut tens of thousands of dollars from its body shop injury and medical costs," the safety executive said. "In that respect, it's like finding a new profit center."

For more information on hand protection of DuPont KEVLAR®, call 1-800-4-KEVLAR® (1-800-453-8527) or visit www.kevlar.com.

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For information about other DuPont Protective Apparel such as NOMEX®, TYVEK®, TYCHEM® and SONTARA®, please call 1-877-797-5907 or visit www.dupontprotectiveapparel.com.

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