



# “ With Kevlar<sup>®</sup>, Michelin quadruples the durability of protective gloves ”

## SUMMARY

- Leather gloves used in the exchange of blades in Itatiaia (Rio de Janeiro) made workers' hands numb
- The durability of that PPE was seven days; with the introduction of Kevlar<sup>®</sup> technology, durability increased to 27 days
- In addition to greater protection against cuts, abrasion and high temperatures, DuPont PPE guaranteed a 68% cost reduction

Michelin, one of the world's leading manufacturers and traders of tires, detected in early 2019 a challenge in regards to workplace safety. The company realized that factory employees at the Itatiaia (Rio de Janeiro) facilities, responsible for changing cutting blades in a rubber extrusion equipment, were not satisfied with the protective gloves they were using. Besides the risk of cuts, abrasion and contact with items at temperatures as high as 100 °C, the PPE (Personal Protective Equipment) also lacked malleability and did not enable the dexterity needed to carry out the task. The company even registered work accidents affecting equipment operators and maintenance professionals who suffered slight cuts on their fingers when handling items despite the use of gloves. One of the main problems detected was the fact that, in order to change the blades, operators needed a second set of gloves, made of leather, without thermal resistance and very stiff in the articulation of the fingers.

These gloves even left operators with numbness in their hands at the end of the workday. DuPont™ Kevlar<sup>®</sup> was the conclusive solution to that problem. In April 2020, Michelin started using a seamless safety glove knitted in a single piece, made of DuPont™ Kevlar<sup>®</sup> and DuPont™ Kevlar<sup>®</sup> Black, with leather palms and leather cuffs. The durability of Kevlar<sup>®</sup> was a welcome surprise for Michelin: the innovative DuPont glove has an average durability of 27 days, without showing signs of structural tear, while the old PPE only lasted 7 days. In other words, the new equipment quadrupled the durability of the protection, while also being more cost-effective for Michelin. The company's calculations

indicate that the annual cost of the previous gloves was \$ 9,554.15, against an estimated \$3,096.60 for the Kevlar<sup>®</sup> gloves. This means a cost reduction of R\$ 6,457.55, or 68%, in the long term, all this while providing greater safety and comfort for workers.



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