

Personal Protective Equipment

Innovations in Hybrid Chemical and Cut Protection Solutions

Brought To You by Ansell | Mar 03, 2020

As many of the world's major economies experience an upturn, the chemical industry stands poised to grow, with U.S. chemistry production volume expected to increase by 3.7 percent in 2018^[1]. With this expansion comes a powerful workforce and evolution among the chemical industry as a whole.

Demand for innovations and efficiencies is growing – making automated machinery and technology increasingly common in the workplace, and the need to multitask and quickly change from a chemical setting to a mechanical setting more constant than ever. Ultimately, workers are being challenged to move more quickly and efficiently between tasks for better productivity and performance.

^[1] Source: American Chemistry Council

Naturally, increasingly complex chemical work means a greater challenge in outfitting workers with proper personal protective equipment (PPE). Aside from chemical hazards, workers who are regularly handling automated machinery or advanced equipment are also frequently exposed to cut hazards, posing an increased risk of injury, poor comfort and loss of productivity.

All these factors challenge safety managers and workers to find safety solutions that provide comfort and performance without compromising chemical or cut protection. Chemical and cut protection often come at the expense of grip, comfort or dexterity. In order to find the right balance of protection for workers, safety managers must first consider and understand existing worker needs.

Chemical-resistant gloves come in a wide variety of barrier materials, thicknesses and designs to combat any of the 60 million-plus^[1] chemicals that can be present in a work space. However, glove selection becomes more complex with the addition of cut risks, as the glove's fabrication needs to not only protect against permeation breakthroughs of chemicals, but also stand up to cuts and abrasions to ensure workers are protected against other possible risks.

^[1] Source: Chemical Abstract Service registry

In addition to identifying worker PPE needs, disrupting current bad habits that are engrained in workers is essential to protecting against both chemicals and cuts. With inadequate protection, workers have developed inefficient and dangerous shortcuts to fit their glove needs or get the job done. Without multipurpose gloves that protect against all possible risks, some workers don gloves that offer only chemical or cut protection, but not both, leaving them only partially protected. Doubling up on protection is not necessary, either; double gloving with a mechanical glove and a chemical glove sacrifices comfort and performance. Two gloves can be uncomfortable and stiff, decreasing the dexterity and tactility needed to complete daily tasks.

Innovations in PPE are finally bridging the gap between chemical and cut protection, providing workers with an all-encompassing safety solution. For example, advancements in nitrile, yarns and fabrics allow for gloves that protect workers from frequently used chemicals while still providing long-last snag, puncture and abrasion resistance. Cut-resistant technologies and materials provide lightweight liners that can be added to chemical gloves, offering exceptional levels of cut protection in a chemical glove without losing comfort or ease of donning and doffing.

Workers are speaking loud and clear – with increased cut risks abundant in today's machinery-heavy

work spaces, cut protection is as critical a factor as chemical protection. Since chemical workers are continually faced with greater demands and challenges that come with larger safety risks, PPE must keep up. Furthermore, it's up to safety managers to seek innovative products to ensure workers are sufficiently protected to handle their unique set of tasks at hand.

For more information on hand protection options from Ansell, please visit [MSCDirect.com](https://www.mscdirect.com).

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