



What is the difference between cut resistance and cut protection and how do I select the right protective glove for my application?

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Cut resistance is a material property defined by the amount of energy or force required to cut through a material using a moving blade. It is often the only factor considered when selecting gloves for cut protection because it can be readily measured using standard test methods and devices. The most common test for cut resistance in the U.S. is ASTM F1790 which, along with ANSI/ISEA glove selection criteria, provides a convenient rating scale for cut resistance ranging from 0 to 5. While this rating system is useful for comparing the cut resistance of products, it alone is not enough to truly predict the level of cut protection offered by a product.

The challenge with cut testing is that laboratory tests may not adequately simulate on-the-job conditions. Factors such as the profile of the cutting edge, the magnitude of forces involved in the test, and environmental conditions will all affect the measured cut resistance. In addition, cut protection goes beyond a simple measure of a material's cut resistance and is influenced by many other factors some related to other material properties and product attributes and others to workplace conditions. When selecting gloves for cut protection, it is important to consider all the requirements of an application, not just cut resistance.

Cut hazards are as prevalent at the end of a shift as at the start, so it is important to consider the abrasion resistance and durability of a product when making a glove selection, especially when gloves will be worn all day or reused for many days. Some gloves may provide excellent protection initially, but this may diminish as the glove is worn and abraded or when exposed to degrading environments such as high temperatures or chemicals.

Dexterity is essential for applications where workers handle small, sharp objects and comfort is important when gloves must be worn for extended periods of time. Since a glove is only effective when it is worn, dexterity and comfort are also important for ensuring compliance. If a worker must remove a glove because of discomfort or interference with job function, the risk of cut injury significantly increases regardless of the level of protection offered by the glove.

Handling sharp objects and tools is a common hazard, and without a sure grip those objects and tools are prone to slip, which can lead to serious cut injuries. Gloves with enhanced grip provide workers with more handling control and dexterity and can help prevent these slippage cuts. Enhanced grip has also been shown to significantly decrease the force required during handling, which further reduces the risk of cut injury. Environmental factors such as temperature, moisture, and lubricants can significantly affect grip and should also be considered when selecting gloves for cut protection.

Glove selection is just one component of a hand protection program, and other factors not related to gloves such as machine guards, workplace set-up, lighting, worker experience, and training are also important. Sleeves and aprons may be required to protect other parts of the body and, in some applications, workers may require protection from other hazards such as chemicals, electricity, or high temperatures in addition to cut protection.

Workers should keep in mind that gloves claiming cut resistance or cut protection do not completely prevent or eliminate the potential for cuts and are not intended for use near powered blades or other rotating equipment. Individuals should always exercise caution when handling any sharp object and be alert to their surroundings.

For more information Ansell's cut protective and/or resistant products, call 800.800.0444 or visit www.ansellpro.com.