



Back of Hand Protection

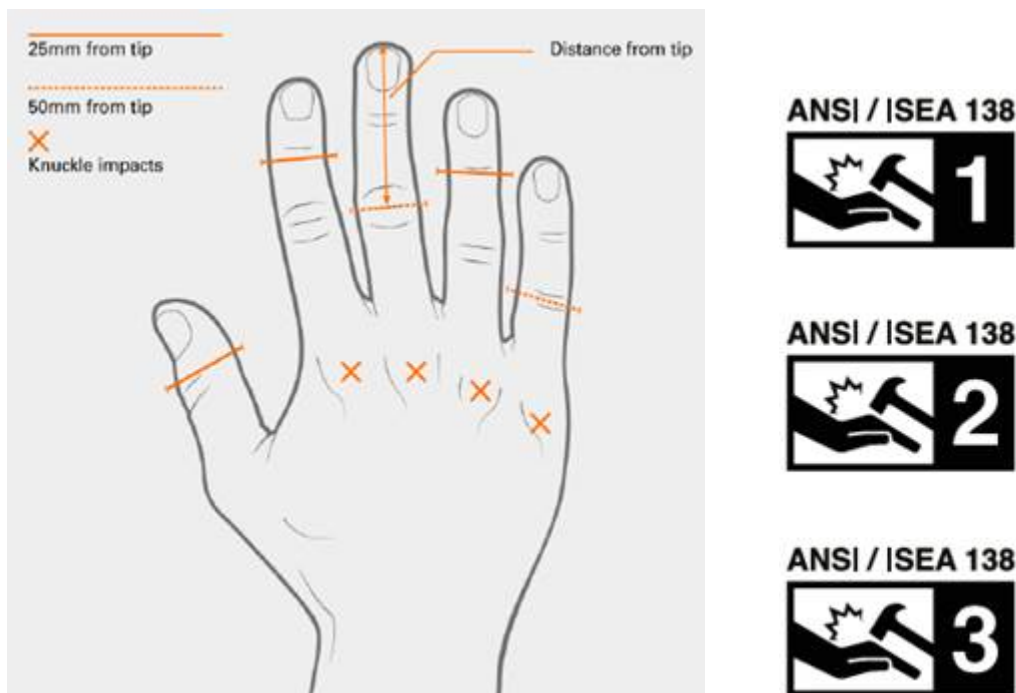
We are all familiar with both U.S. and European standards for industrial gloves that protect against cuts, punctures, abrasion, and chemical exposure, allowing you to properly compare products to find the best match for your application. Until recently, there had been no criteria to help us assess the performance of gloves designed to reduce the risk of back-of-hand (dorsal) impact injuries. This scenario changed in 2016 when the European hand protection standard (EN 388) was updated to include impact for the first time. Nothing occurred in the U.S. until ISEA (International Safety Equipment Association) recently established testing, classification, and labeling requirements for products that offer dorsal impact protection. This new voluntary standard is known as ANSI/IEA 138, and ISEA expects the final published version to be completed by 1st quarter of 2019.

While not an OSHA type requirement, this standard will allow glove manufacturers to standardize what they are offering and end-users to begin comparing products on the level they are rated at. ANSI/IEA 138 is designed to establish minimum performance, classification, and labeling requirements for hand protection products designed to protect the knuckles and fingers from impact forces, while performing occupational tasks. The goal is to evaluate compliant gloves for their capability to dissipate impact forces on the knuckles and fingers, and then to classify them accordingly.

There are three performance levels specified by the standard, which offer a numerical representation for the impact protection a glove will offer (ranging from a level one for the lowest protection to a three for the highest protection

from transmitted forces). The overall performance level of a glove reflects the lowest performance level recorded during the test, so that if the fingers and thumb only meet level one criteria, but the knuckles get a level two rating, the glove will still be rated as performance level one.

The standard also outlines test requirements, equipment, and method, including preparation of samples and conditioning of the gloves. It defines specific test sites for the knuckles and fingers and thumbs, and requires that the sites be marked on the outside and back side of the glove. The standard focuses on packaging, labeling, and product marking on the glove directly. Gloves will be marked with a pictogram at level one, two, or three. Sites impacted during product performance testing are shown below. The hand chart shows distribution of impacts over knuckles and fingers/thumb.



The bones and tissues in the back of the hand are all vulnerable to impact injuries, which are common in construction, mining, manufacturing, offshore oil and gas, warehousing, and transport industries. Impact-related injuries may be anything from a bump to a bruise to the knuckles, pinching fingers between two pieces of equipment, to a severe bone fracture and everything in between. Experts have said that the two main problems are:

Fingertips: Very commonly injured because they are the part that is universally in contact with everything.

Big Knuckles: Frequently impacted by things such as wrenches slipping or people catching their hands under the hood of a car.

In the near future, we anticipate having a variety of impact-resistant gloves to meet all the listed classifications.

09/25/2018