

Updated ANSI Standard for Cut Resistance

ANSI/ISEA 105 (2016 edition)

The American National Standards Institute (ANSI) has released a new edition of the ANSI/ISEA 105 standard (2016 ed.). The changes include **new classification levels**, which includes a new scale to determine cut score (commonly referred to as the ANSI cut score), and a **revised method for testing gloves to the standard**.

[Who is ANSI?](#)

[Purchase a copy of the new ANSI/ISEA 105-2016 standard](#)



New Scale to Determine Cut Scores

The new ANSI standard now features **nine cut levels** significantly reducing the gaps between each level and better defining protection levels for the cut resistant gloves and sleeves with the highest gram scores.

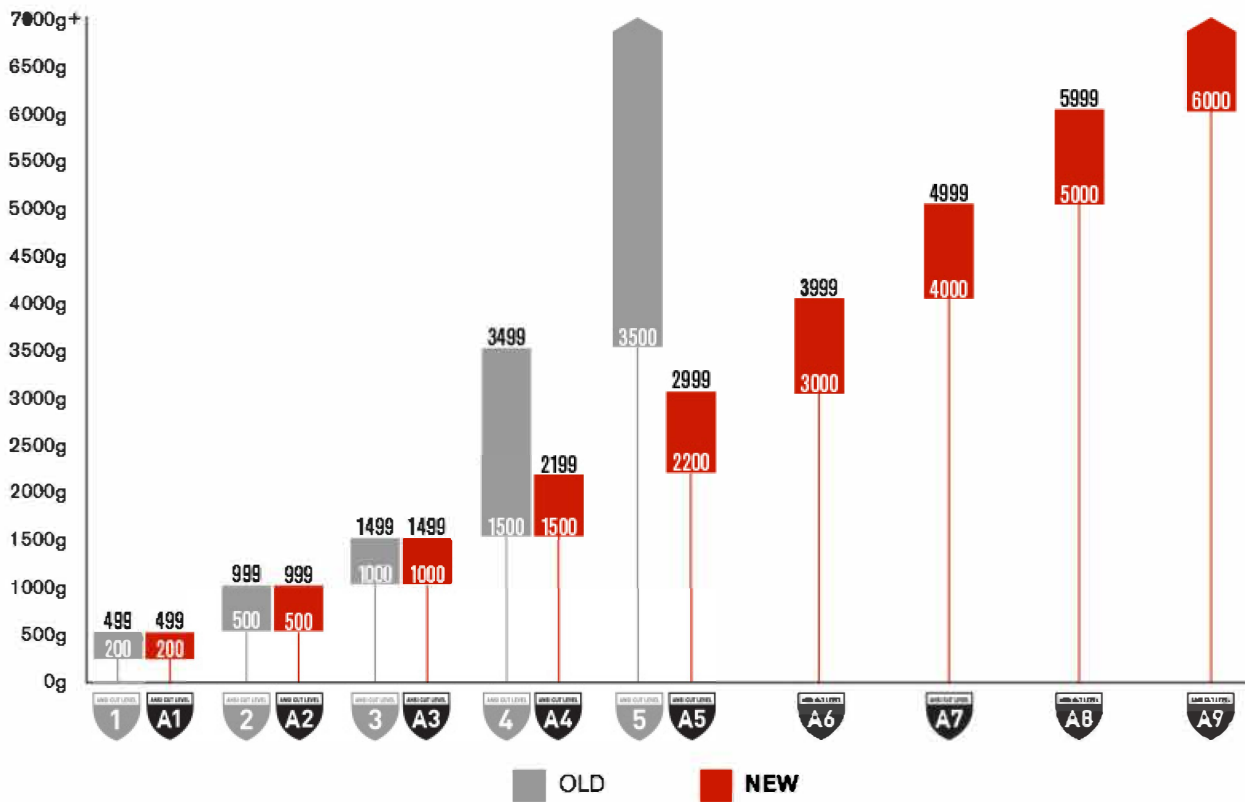
The graph below shows the differences between the old scale and the new scale. **New ANSI cut scores will feature an "A" in front of the score.**



Old PIP Shield Icon



New PIP Shield Icon



New Testing Standard

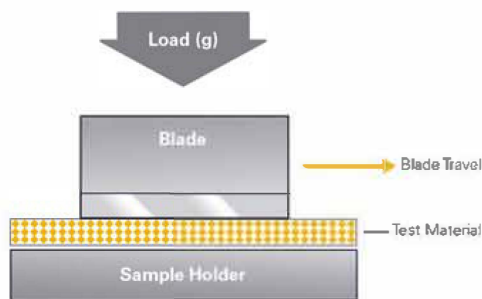
The new edition of the ANSI/ISEA 105 Standard (2016 ed.) also outlines a new test method for determining the new cut scores. The new ASTM F2992-15 test method allows for **only one type** of machine to be used, the TDM-100. Under the previous ANSI standard, the old test method ASTM F1790-05, the testing could be performed on either the TDM-100 machine or the CPPT machine. By ensuring uniform testing with one machine, it is easier to compare gram scores for a given material.



TDM-100 MACHINE



CPPT MACHINE



Understanding ASTM F2992-15 Test Methods

The sample is cut by a straight-edge blade, under load, that moves along a straight path. The sample is cut five times each at three different loads with a new blade for each cut and the data is used to determine the required load to cut through the sample at a specified reference difference. This is referred to as the cutting force, which is then equated to a cut level.

What Changes Can We Expect?

For all PIP products with cut scores printed on them, we will have a rolling change with new production orders, replacing the old ANSI cut score with the new ANSI cut score. The new ANSI cut score is easy to identify as it now includes the letter "A" in front of the score.

Depending on the products, this process could take several months before these changes are seen in the field. For that reason, it's important to refer to the manufacturer spec sheets in order to obtain this information.

Because all PIP cut resistant gloves and sleeves have been tested using the TDM-100 machine, which is compliant with the new test method, by March 1st, we will have all of our spec sheets and our website updated to reflect the new ANSI cut score. To help with the transition, we will also be displaying the old ANSI cut score on both our website and the spec sheets simultaneously.



The screenshot displays the PIP (Protective Industrial Products) website. The top navigation bar includes links for ABOUT US, MANUFACTURING, DISTRIBUTION TOOLS, REP FINDER, TRACK SHIPMENT, CONTACT, and a PRODUCT SEARCH bar. Below this, the main content area is titled 'HAND PROTECTION' and features a 'COATED GLOVES WITH DYNEEMA DIAMOND' section. A large image of a white glove with black palms and fingers is shown. To the left of the glove, two ANSI cut level shields are displayed: 'ANSI CUT LEVEL A3' and 'ANSI CUT LEVEL 3'. To the right of the glove, a 'SPECIFICATION SHEET 19-D322' is visible, which includes a detailed description of the 'Great White 3GX' glove, its features, applications, and care instructions. The specification sheet also includes a small image of the glove and a technical data section. The website's footer is not visible.

How do these changes impact the performance of the product?

Since 2005, PIP has been testing all of our cut resistant gloves and sleeves with the TDM-100 machine. As such, the gram score for our gloves comply with the new ANSI standard and will be applied accordingly under the new scale.

Can gloves and sleeves that comply with the old ANSI/ISEA 105 standard continue to be sold?

Although the use of the ANSI/ISEA selection criteria is not mandatory, most safety managers strive to provide the latest and most up to date products for protection for their employees. Manufacturers are expected to begin the process of transitioning from ANSI/ISEA 105-11 standard to the revised ANSI/ISEA 105-16 standard that was adopted in February 2016. The new cut test method in the ANSI/ISEA 105-16 is ASTM F2992. Because of long lead times and inventory in the pipeline, it is highly likely that there will be a mix of identifications of cut resistance in the marketplace for the next little while. It is, however, important to reiterate to your customers that all current PIP gloves have been tested using the TDM-100 machine, as described in the new ASTM F2992 test method, for the last 10 years. Our Spec Sheets and literature are being converted to reflect the new ASTM F2992 cut score scale as we speak.

More questions?

Please contact your PIP representative, or call (800)262-5755.