PRO CHOICE SAFETY GEAR

SAFETY BYTES

THE ASTM F2878 TEST METHOD FOR NEEDLESTICK PUNCTURE RESISTANCE

The ANSI/ISEA 105 is the American National Standard for Hand Protection. It outlines the classification of items covering the hand or a portion of the hand that provide resistance or protection against specific hazards.

In 2016 the standard was updated to include the ASTM F2878 Needlestick Puncture Test to determine hypodermic needlestick resistance.

Before the ASTM F2878 existed, the EN388 and ANSI/ISEA 105 Blunt Puncture Testing method were the only tests available for assessing puncture resistance.

This new standard acknowledges needlestick injuries as a commonplace in industries such as law enforcement, medical, recycling and sanitation.

TESTING PROCEDURE

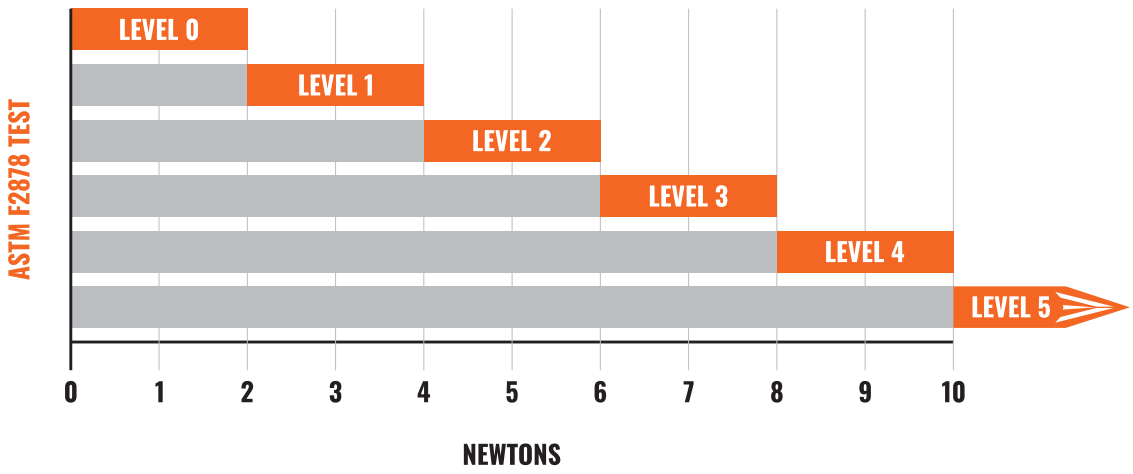
The ASTM F2878 test measures the amount of force (in Newtons) required to puncture through the testing material using a 21-, 25- or 28-gauge needle.

The testing material is secured by two plates either side it in a sample holder. The needle is forced on the fabric at 500mm/min at a 90-degree angle.

In order to determine the classification level 12 tests must be completed.

A rating scale of 1-5 is used to determine the results of this test measuring from 2-10 Newtons (see below chart).

NEW NEEDLE RESISTANCE LEVELS



STANDARD LABELLING ON PRODUCTS

The product's test score from level 1-5 must be present on the packaging label or glove branding. It is not mandatory for manufacturer to label the needle puncture score in Newtons however this is sometimes added.

THE DIFFERENCE BETWEEN THE ASTM F2878 & THE EN388, ANSI/ISEA 105 PUNCTURE TESTS

It is important to note that while many gloves will be tested to the EN388 and ANSI/ISEA Puncture Standard Test, this does not necessarily mean the product has needlestick resistance. This puncture test uses a blunt probe to simulate a puncture whereas the ASTM F2878 uses a needlestick with a sharp head to force through the testing material.

LARGE NAILS, SPIKES, RODS

1mm FLAT TIP
EN 388 STANDARD

HYPODERMIC NEEDLES

21, 25 OR 28ga NEEDLE
ASTM F2878-10

IMPORTANCE OF WEARING THE CORRECT PROTECTION

Workers who are at risk of a needlestick injury need to ensure they are wearing gloves that are designed to specially protect against this hazard.

Estimating the likelihood of transmission following a needlestick injury is difficult as there are many factors which contribute to the risk. However, some reports have provided the following needlestick injury statistics:

-In Australia, there are around 18,000 'sharps' incidents reported each year.(1)

-At least 20 pathogens can be transmitted via sharps accidents including HIV and Hepatitis B & C.(2)

The statistics of being infected that pose the greatest concern are:

-Hepatitis B – approx. 2 in 5 chance.

-HIV – approx. 1 in 300 chance.

References:
(1) AIHW National Hospital Morbidity Database, Separation statistics by principal diagnosis, Australia 2007-08.
(2) Needlestick Injuries, Canada's National Occupational Health & Safety Resource – www.ccohs.ca.

SHARP SHIELD

SHARP SHIELD NEEDLE RESISTANT GLOVES BY PRO CHOICE SAFETY GEAR

Pro Choice Safety Gear SHARP SHIELD gloves have a very high hypodermic needle puncture resistance on the palm and fingers. The SHARP SHIELD gloves surpass level 5 measuring at a 28 Newton (2.8 kg) force needed to puncture the palm of the glove.

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