



Body Armor Safety & Program Refinements from NIJ

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For more than 35 years, criminal justice professionals in the United States have looked to the National Institute of Justice (NIJ) and its Compliance Testing Program (CTP) to give them confidence that the body armor they wear while performing their duties will afford them protection against on-the-job threats. The CTP, on behalf of NIJ, oversees the testing of body armor model designs by certified laboratories and verifies that those models also meet specific workmanship and labeling requirements.

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NIJ, with assistance from Special Technical Committees (STCs) comprised of criminal justice professionals, subject-matter experts and laboratory staff, is presently engaged in revising the standards against which ballistic-resistant and stab-resistant body armor models are tested, with draft documents expected to be released for public comment during 2017. NIJ also recently introduced a program to add the NIJ Certification Mark to body armor models that have successfully passed the CTP testing protocols.

Addressing Real-World Stab and Slash Threats

Inmates are creative and inventive in fashioning improvised stab weapons from everyday objects or materials—even objects as simple as toothbrushes. They use these weapons to attack each other, and they also use them to attack officers. To help officers obtain the protection they need against those threats, NIJ is updating *Stab Resistance of Personal Body Armor*, NIJ Standard-0115.00, adapted in 2000 from a United Kingdom standard that addressed the threat from commercially made knives. The end result will be a standard that will be more applicable to the environments in which many corrections officers work, without burdening them with protection against non-applicable threats. The standard will also maintain the commercial threat protection level for officers who work in uncontrolled environments.

The draft NIJ Standard 0115.01 addresses protection against the types of knife and spike threats that corrections officers face on a daily basis, and adds testing specific to female body armor models. An STC that includes corrections practitioners from multiple agencies worked diligently over an extended period to review the research and provide real world input.

NIJ Standard 0115.01 will provide two performance categories for stab/slash-resistant armor:

- Commercially made weapons, typically found by corrections officers in facility intake and public areas and in uncontrolled areas.
- Improvised or inmate-made weapons, typically encountered inside controlled access areas of jails, detention centers, and prisons.

Both commercial and improvised tests will include knife and spike tests identified by the STC as representing prevalent threats, and female armor will be tested to ensure any stitching or forming of the bust cups continues to meet the same required level of protection afforded by unshaped armor. The test blades presently used for testing will continue to be used as test weapons for commercial threats, and the Justice Technology Information Center's technical experts worked closely with academia to develop additional test weapons based on the types of improvised weapons confiscated or found within correctional facilities.

The standard also covers conditioning (tumbling the armors for many days) prior to testing to ensure they

continue to work as intended after being subjected to sustained mechanical damage, along with simple tests for label legibility and durability. The ability to continue to read the label as the armor is worn and used over time is significant for a number of reasons, including needing to know pertinent information such as model number (in the event of a recall) and the protection level.

Clarifying Threat Levels, Refining Ammunition Types, Adding Female Armor Testing

In February 2013, an STC began meeting to discuss revisions needed to *Ballistic Resistance of Body Armor*, NIJ Standard-0101.06, and plans call for a draft of Standard 0101.07 to be released for public comment in 2017. The latest revision will consist mainly of refinements and clarifications, many of which will impact only test labs and the CTP. Changes impacting criminal justice

Enforcement and Corrections Technology Center [NLECTC] System. For more details and to apply to obtain access, visit https://justnet.org/NIJ_ASTM_Standards_Portal.html.

Registered NIJ Certification Mark Indicates Compliance with Program Standards

As of March 2017, the CTP requires the addition of the NIJ Certification Mark to the labels of ballistic-resistant body armor models certified by the NIJ CTP. Registered by the U.S. Patent and Trademark Office, the NIJ Mark indicates that a specific model of ballistic-resistant body armor has been tested by the NIJ CTP and found to comply with the current version of the NIJ ballistic-resistant body armor standard and the NIJ CTP program requirements. By placing the NIJ Mark on the label, a manufacturer clearly communicates that the armor is constructed

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professionals fall mainly in the areas of protection levels, types of ammunition used in testing, vocabulary refinements, and testing of female armor.

Details on those changes include:

- Development of a test protocol specific to female armors, based on input from several focus groups of female officers.
- Introducing the use of 7.62 x 39 mild steel core (MSC) or an equivalent threat round and 5.56 mm M855 ammunition into hard armor plate testing.
- Revisiting protection level names of both hard armor plates and soft armor vests, with a goal of ensuring clarity through nomenclature that instantly identifies the type of protection offered and provides demarcation between the new standard and previous iterations.
- Retiring Level IIA, the lowest level of soft armor protection.
- Reducing confusion caused by manufacturers, labs, practitioners and government agencies all using the same term to mean different things, or using different terms to describe the same thing, by including only a truncated section of definitions and additionally referencing the newly released *ASTM E3005-15 Standard Terminology for Body Armor*. (As a service to the criminal justice community, NIJ provides free access to this and other ASTM standards through a portal on JUSTNET, the website of the National Law

in the same manner as the original test items evaluated as compliant by the CTP, and that armor was assembled under the CTP's surveillance program that periodically inspects and tests production samples.

Prior to implementation of the NIJ Mark, manufacturers indicated participation in the NIJ CTP by using the following NIJ CTP statement of compliance on their labels: "This model of armor has been determined to comply with NIJ Standard-0101.xx by the NIJ Compliance Testing Program and is listed on the NIJ Compliant Product List." The CTP began phasing out use of that statement in October 2016, and all armor manufactured after March 1, 2017, must carry the Mark rather than the statement.

For more information on the CTP, to check the Compliant Product Lists of compliant stab- and ballistic-resistant armors, and to get the latest information on the progress of the standards revisions, visit www.justnet.org or call 800-248-2742. ■

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