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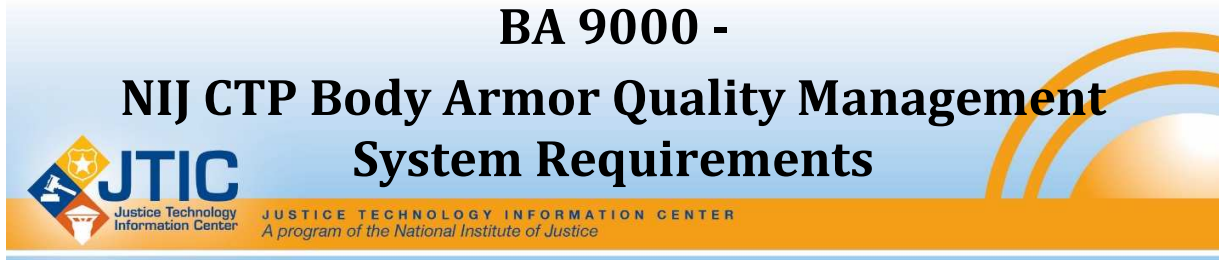


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Introduction

The Justice Technology Information Center (JTIC) is a program of the U.S. Department of Justice (DOJ), Office of Justice Programs (OJP), National Institute of Justice (NIJ).

The JTIC program administers the NIJ Compliance Testing Program (NIJ CTP), a voluntary product conformity assessment program administered by JTIC staff members with NIJ oversight. The NIJ CTP mirrors ISO/IEC 17065.

The NIJ CTP includes surveillance of manufacturing locations to provide confidence that newly manufactured products continue to satisfy requirements. Body armor manufacturers that choose to operate management systems compliant with this document provide additional confidence in consistency of products between surveillance inspections. The NIJ CTP may then utilize this to reduce the frequency of surveillance inspections.

The NIJ CTP does not receive any compensation from applicants, test laboratories or inspection bodies.

Users of this document are advised to consult the NIJ Standards and Testing Program web page, accessed from <https://justnet.org/law-enforcement/LE-ba-9000.html>, on a regular basis to determine whether it has been revised or superseded.

This document follows International Organization for Standardization (ISO) conventions regarding the following verbal forms:

- *Shall* indicates a requirement.
- *Should* indicates a recommendation.
- *May* indicates a permission.
- *Can* indicates a possibility or a capability.

Information marked as “**Note**” is for guidance in understanding or clarifying the associated paragraph.

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1 Scope

1.1 BA 9000 is a sector-specific quality management system dependent on ISO 9001:2015. It specifies both additional quality management system requirements and methods for applying ISO 9001:2015 to the manufacture of ballistic-resistant body armor for criminal justice practitioners.

1.2 Although demonstration of conformity of a quality management system with BA 9000 also demonstrates compliance with ISO 9001, conformity of a quality management system with ISO 9001 does not of itself demonstrate compliance with BA 9000.

2 References

The following publications are referenced in this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

- 2.1** ASTM D6193, *Standard Practice for Stitches and Seams*.
- 2.2** ISO 10393, *Consumer product recall – Guidelines for suppliers*.
- 2.3** ISO 4915, *Textiles – Stitch types – Classification and terminology*.
- 2.4** ISO 4916, *Textiles – Seam types – Classification and terminology*.
- 2.5** ISO 9000:2015. *Quality management systems - Fundamentals and vocabulary*.
- 2.6** ISO 9001:2015. *Quality management systems - Requirements*.
- 2.7** ISO/IEC 17000:2004. *Conformity assessment – Vocabulary and general principles*.
- 2.10** ISO/IEC 17025:2005. *General requirements for the competence of testing and calibration laboratories*.
- 2.11** ISO/IEC 17065:2012. *Conformity assessment - Requirements for bodies certifying products, processes and services*.

3 Terms and Definitions

If not defined here, the terms and definitions given in ISO/IEC 9000, ISO/IEC 17065 or ISO/IEC 17000 shall apply in that order of precedence.

3.1 armor panel

see panel

3.2 armor plate

see plate

3.3 body armor

an item of personal protective equipment typically consisting of armor panels and/or plates held in place by an armor carrier and intended to protect the wearer from threats that may include ballistic threats, stabbing, fragmentation, or blunt impact

3.4 construction

physical characteristics of an actual product sample

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Note: With regard to ballistic body armor, construction includes, but is not limited to key features, layup of materials, actual shape and actual size.

3.5 design

documented plan that defines the intended physical characteristics of a product

Note: With regard to ballistic-resistant body armor, design includes, but is not limited to key features, layup of materials, intended shapes, intended sizes and any processes necessary to achieve the desired result.

3.6 flexible body armor

body armor constructed of pliable, textile-based materials such that the complete system is capable of being flexed. Such systems are typically in the form of vests or jackets that provide greater coverage area than rigid plate armor. Generally, these armors provide protection against handgun threats (NIJ Standard-0101.06, 3.20)

Note: Although NIJ Standard-0101.06 uses the term “flexible,” the community is moving away from that to use the term “soft”.

3.7 hard armor or rigid armor

rigid armor systems, plates, inserts, accessories or semi-rigid armor systems constructed with rigid plates that are typically designed to provide protection against rifle threats (NIJ Standard-0101.06, 3.22)

3.8 key feature

key features include, but are not limited to materials of construction (and source), slits, slots, cuts, notches, seams, darts, stitching, overlaps, folds, additional panels or similar features

3.9 manufacturing location

physical location(s) of the production facility where final construction takes place and surveillance inspections are performed

Note: For ballistic-resistant body armor, it is where final assembly, as described on the NIJ CTP Build Sheet, takes place and the mark of conformity is applied.

3.10 panel

component of soft body armor constructed of flexible protective materials enclosed in a non-removable panel cover

3.11 plate

a component of hard body armor consisting of *rigid* or *flexible* protective materials

3.12 soft armor

see flexible body armor

4 Application of ISO 9001

4.1 General

4.1.1 The scope of the quality management system shall include the process of designing and manufacturing ballistic-resistant body armor.

Note: The scope may be limited to soft or hard body armor.

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4.1.2 In order to be compliant with this management system, the requirements must be incorporated into the organization's ISO 9001 compliant management system.

Note: The organization shall maintain documented information to support compliance with this management system and retain documented information to demonstrate compliance.

4.2 Externally Provided Products and Services

4.2.1 The organization shall monitor the performance of both ballistic-resistant materials and materials used for panel covers. Monitoring shall include lot testing of bulk materials to provide greater confidence that production materials are consistent from lot to lot and consistent with the materials used in the models' NIJ CTP initial type testing.

Note: Regular lot testing of bulk materials may be performed by a test laboratory that is internal or external to the organization.

4.2.2 The organization shall annually verify that external test laboratories used for lot testing of bulk materials are accredited to ISO/IEC 17025 by a signatory of the International Laboratory Accreditation Cooperation Mutual Recognition Arrangement (ILAC MRA) for the test method(s) utilized or the organization shall at least annually evaluate each external test laboratories' performance of test methods. Evaluation shall consist of retesting material lots by a test laboratory that is accredited to ISO/IEC 17025 by a signatory of the ILAC MRA for the test method(s). This shall be done for all test methods each non-accredited laboratory performs for the organization. The organization shall compare the results and evaluate the acceptability of the unaccredited test laboratory.

Note: This also applies to external test laboratories that are internal to the material supplier.

4.2.3 Test reports provided by test laboratories accredited to ISO/IEC 17025 by a signatory of the ILAC MRA must bear the mark of the test laboratory's accrediting body and the tests reflected in the report must be within the scope of the laboratory's accreditation.

4.3 Monitoring and Measurement Activities

4.3.1 Test laboratories used for lot testing of bulk materials that are internal to the organization shall be accredited to ISO/IEC 17025 by a signatory of the ILAC MRA for the test method(s) utilized or the test laboratory's performance of test methods shall be evaluated at least annually. Evaluation shall consist of retesting material lots by a test laboratory that is accredited to ISO/IEC 17025 by a signatory of the ILAC MRA for the test method(s). This shall be done for all test methods the internal test laboratory performs for lot testing of bulk materials. The organization shall compare the results and evaluate the acceptability of the internal test laboratory.

4.3.2 Organizations that manufacture soft armor panels shall implement the following monitoring and measurement activities on two completed panels (one armor) at least once every month that production takes place:

a) Water Infiltration:

- 1) Panels shall be hung vertically in a water bath for at least 30 minutes, without any folds or bends, with the top edge of the armor at least 100 mm below the surface of the water, and with at least 50 mm clearance around the panel. For armors that are buoyant, weights shall be attached to the bottom edge of the armor with clothespins or similar clips to allow the armor to hang vertically.

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2) The water in the bath shall be clean and shall be either potable tap or demineralized water. The water shall be replaced anytime there are visible impurities in the water.

3) Immediately after removal from the water, the panels shall be wiped down to dry the exterior and a determination shall be made if water has infiltrated the panel cover.

Note: Determination is typically made by comparing the before and after weight of the panel or carefully slitting the cover with a razor to inspect the panel and interior of the cover.

b) Construction Inspection: Panels shall be removed from the covers and inspected to verify that the construction is in compliance with maintained documented information.

5 Additional Requirements

5.1 Recall

The organization shall maintain documented information for a product recall process that is proportional in nature and timeliness to the risks involved and includes:

- a) recall policy;
- b) list of the documentation and records that will be created and maintained;
- c) list of the legal, industry and regulatory requirements;
- d) identification and explanation of the roles and responsibilities of the recall management team;
- e) description of the training and exercise requirements for members of the recall management team;
- f) guidance on how product incidents will be investigated and a decision made on whether a recall is necessary;
- g) identification of the resources required and processes used to implement a recall.

Note: This subclause has been adapted from ISO 10393:2013, which contains additional suggestions concerning product recall.

5.2 Stitches and Seams

The organization shall maintain documented information defining and describing the stitches and seams it uses in the construction of body armor.

Note: The organization may consider referencing ASTM D6193 or ISO 4915 and ISO 4916.

6 Revision History

6.1 Revision 1.0

Initial release.

6.2 Revision 2.0

Document revised to align with ISO 9001:2015.