



Designation: E3315 – 21

Standard Specification for Certification of Metallic Materials¹

This standard is issued under the fixed designation E3315; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This specification covers the requirements for material certifications, specifically including materials under the jurisdiction of Committee E29, as well as defining terminology related thereto.

1.2 The values stated in inch-pound units are to be regarded as standard. No other units of measurement are included in this standard.

1.3 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.4 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 *ASTM Standards:*²

[A478 Specification for Chromium-Nickel Stainless Steel Weaving and Knitting Wire](#)

[E1638 Terminology Relating to Sieves, Sieving Methods, and Screening Media](#)

[E2016 Specification for Industrial Woven Wire Cloth](#)

2.2 *SAE Document:*³

[AS9100 Quality systems — Aerospace — Model for quality assurance in design, development, production, installation, and servicing](#)

¹ This specification is under the jurisdiction of ASTM Committee E29 on Particle and Spray Characterization and is the direct responsibility of Subcommittee E29.01 on Sieves, Sieving Methods, and Screening Media.

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

³ Available from SAE International (SAE), 400 Commonwealth Dr., Warrendale, PA 15096, <http://www.sae.org>.

3. Terminology

3.1 *Definitions*—For definitions of related terms, refer to Terminology [E1638](#).

3.2 *Definitions of Terms Specific to This Standard:*

3.2.1 *as reported, v*—information based on a prior processing certification.

3.2.1.1 *Discussion*—Applicable to chemistry, mechanical, or other properties or processes.

3.2.2 *as tested, v*—information based on actual testing of the current processed material.

3.2.2.1 *Discussion*—Parameters to be tested must be specified.

3.2.3 *certificate of compliance, n*—an attestation document in accordance with [5.1.1](#).

3.2.3.1 *Discussion*—Informally also known as *certificate of conformance* or *C of C*.

3.2.3.2 *Discussion*—While generally these terms are considered synonymous and used interchangeably, there is also argument that compliance is a more binding term when used in reference to an external specification (for example, wire in accordance with Specification [A478](#)), while conformance may be used in reference to an internal specification (for example, quality system in accordance with AS9100).

3.2.4 *country of melt origin, n*—the country where the original raw material was melted/smelted.

3.2.4.1 *Discussion*—Just the term country of origin is a vague clause subject to interpretation without qualification; see Defense Federal Acquisition Regulation Supplement (DFARS), Supplementary Requirements section.

3.2.5 *DFARS, n*—Defense Federal Acquisition Regulation Supplement.

3.2.6 *heat number, n*—traceable reference as established by the original melt mill.

3.2.6.1 *Discussion*—For some products it is common that multiple heats of material may be used in their manufacture.

3.2.7 *inspection report, n*—a document that states dimensional inspection result data.

3.2.8 *lot number, n*—traceable reference used by any processor of the material.

3.2.8.1 *Discussion*—This is also known as batch, charge,

roll, work, etc., number, but not in lieu of heat number if traceability is required.

3.2.9 *material certification, n*—an attestation document in accordance with 5.1.2 and if applicable 5.1.3.

3.2.10 *melt mill certification, n*—a chemical attestation document from the original melt mill for the heat number.

3.2.10.1 *Discussion*—Just the term *melt mill certification* is a vague clause subject to interpretation without qualification; for example; certifications from rolling, wire, weaving, or other processing mills (see *traceability*).

3.2.11 *revision level, n*—the designation given to a specification document to define the last change(s) approved.

3.2.11.1 *Discussion*—If a specification is designated as a certification requirement, any requirement for a specific revision level shall be communicated to the supplier; if no revision level is communicated, the supplier may certify to a material appropriate revision level.

3.2.12 *traceability, n*—the ability to provide documentation regarding the key production information (chemistry) for the material.

3.2.12.1 *Discussion*—Basic traceability is contingent on certifications as reported from a previous supplier; while full traceability is contingent on certifications for “full chain of custody” from all suppliers of the material since melt.

4. Ordering Information

4.1 Description of the item (for example, woven wire cloth).

4.2 Material specification (for example, Stainless Steel 304 in accordance with Specification A478 for S30400).

4.3 Product specification (for example, 20 × 20 mesh plain, 0.016 in. wire diameter).

4.4 Technical requirements (for example, woven in accordance with Specification E2016).

4.5 Other as agreed between purchaser and supplier.

5. Certification

5.1 Certifications shall be supplied as follows:

5.1.1 The certification shall include ordering information as in accordance with Section 4 and the following:

5.1.1.1 Customer name, address, and purchase order number;

5.1.1.2 Vendor name, address, and order number;

5.1.1.3 Vendor lot number; and

5.1.1.4 Vendor authorization name and date.

5.1.2 If specified at the time of ordering, the certification in addition to the requirements of 5.1.1, shall also include the following conformance statements:

5.1.2.1 Chemical analysis of the material (as established in accordance with basic traceability),

5.1.2.2 Original melt mill heat number(s), and

5.1.2.3 Country of melt origin.

5.1.3 If specified at the time of ordering, the certification in addition to the requirements of 5.1.1 and 5.1.2, shall also include the following conformance statements:

5.1.3.1 Mechanical properties (specified as pre-transformed or finished product).

NOTE 1—The original mechanical properties of the material may be unrelated to the post manufacturing material (that is, due to work hardening). If mechanical properties are specified, they would normally be the material (that is, the wire) as supplied prior to manufacturing. Post manufacturing mechanical properties must be as negotiated. Mechanical properties should be specified as a minimum, a maximum, or a range.

5.1.4 Certification statements in addition to 5.1.1 – 5.1.3 must be explicitly agreed to; for example:

5.1.4.1 Sited clause for DFARS compliance (for example, 252.225.7009),

5.1.4.2 Sample verification of material chemistry (for example, handheld X-ray fluorescence (XRF) analysis),

5.1.4.3 Specific technical requirements test data (for example, air flow/permeability),

5.1.4.4 Original melt mill certification with heat number,

5.1.4.5 Full traceability documentation (full chain of custody to original melt), and

5.1.4.6 Sample verification of material by independent laboratory (in accordance with specified test method).

6. Keywords

6.1 certificate of compliance; heat number; material certification; melt mill certification; traceability; woven wire cloth

SUPPLEMENTARY REQUIREMENTS

S1. Special Government Requirements

S1.1 *Terminology*:

S1.1.1 *Definitions of Terms Specific to This Standard*:

S1.1.1.1 *Defense Federal Acquisition Regulation Supplement (DFARS) compliant, n*—an incomplete clause not properly defining a requirement while referencing a Department of

Defense requirement; further clarification must be stated to be used in a certification, for example “melt origin compliant in accordance with DFARS 252.225.7009.”