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## American National Standards

### Call for comment on proposals listed

This section solicits public comments on proposed draft new American National Standards, including the national adoption of ISO and IEC standards as American National Standards, and on proposals to revise, reaffirm or withdraw approval of existing American National Standards. A draft standard is listed in this section under the ANSI-accredited standards developer (ASD) that sponsors it and from whom a copy may be obtained. Comments in connection with a draft American National Standard must be submitted in writing to the ASD no later than the last day of the comment period specified herein. Such comments shall be specific to the section(s) of the standard under review and include sufficient detail so as to enable the reader to understand the commenter's position, concerns and suggested alternative language, if appropriate. Please note that the ANSI Executive Standards Council (ExSC) has determined that an ASD has the right to require that interested parties submit public review comments electronically, in accordance with the developer's procedures.

#### Ordering Instructions for "Call-for-Comment" Listings

1. **Order from the organization indicated for the specific proposal.**
2. **Use the full identification in your order, including the BSR prefix; for example, Electric Fuses BSR/SAE J554.**
3. **Include remittance with all orders.**
4. **BSR proposals will not be available after the deadline of call for comment.**

Comments should be addressed to the organization indicated, with a copy to the Board of Standards Review, American National Standards Institute, 25 West 43rd Street, New York, NY 10036. Fax: 212-840-2298; e-mail: psa@ansi.org

\* Standard for consumer products

## Comment Deadline: July 31, 2018

### Call for Comment Deadline Extension

The following InfoComm proposal appeared in the 5/25/2018 Standards Action with a deadline of 7/9/2018 has been extended to 7/31/2018

#### InfoComm (InfoComm International)

##### *New Standard*

BSR/AVIXA A103.01-201x, Sound System Spectral Balance in Listener Areas (Originally filed PINS as Equalization Optimization) (new standard)

This Standard defines the parameters for characterizing spectral balance in audiovisual sound systems. The intent is to prevent unsatisfactory listener experiences due to unacceptable variations in frequency response across the audience seating area. This Standard defines a measurement and verification process to ensure that sound systems reproduce an acceptable spectral balance, also known as a uniform frequency response. This is accomplished by documenting the frequency response from the sound system across a specified bandwidth within a low- to high-frequency range within the listening area.

Single copy price: \$75.00 (USD) (non-members); free (InfoComm International members)

Obtain an electronic copy from: <http://www.avixa.org/standards>

Order from: Michelle Truong, (703) 273-7200, [mtruong@avixa.org](mailto:mtruong@avixa.org)

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## Comment Deadline: August 5, 2018

#### ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)

##### *Addenda*

BSR/ASHRAE Addendum d to BSR/ASHRAE Standard 15-201x, Safety Standard for Refrigeration Systems (addenda to ANSI/ASHRAE Standard 15 -2016)

This addendum modifies portions of Standard 15 to incorporate refrigerants with a 2L flammability classification as defined in ASHRAE Standard 34 -2016. Addendum d proposes new requirements for high-probability systems used for human comfort applications. This proposal does not change how ASHRAE Standard 15 deals with Class 2L refrigerants in industrial or commercial applications or machinery rooms. Those applications are expected to be handled in separate addenda.

[Click here to view these changes in full](#)

Send comments (with copy to [psa@ansi.org](mailto:psa@ansi.org)) to: <https://osr.ashrae.org/default.aspx>

#### ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)

##### *Addenda*

BSR/ASHRAE Addendum p to BSR/ASHRAE Standard 34-201x, Designation and Safety Classification of Refrigerants (addenda to ANSI/ASHRAE Standard 34-2016)

This addendum adds the azeotropic refrigerant blend R-515B in Table 4-2 and Table D-2.

[Click here to view these changes in full](#)

Send comments (with copy to [psa@ansi.org](mailto:psa@ansi.org)) to: <https://osr.ashrae.org/default.aspx>

#### ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)

##### *Addenda*

BSR/ASHRAE/ICC/USGBC/IES Addendum 189.1g-201x, Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/USGBC/IES Standard 189.1-2017)

This addendum replaces the current defined term of "design professional" from Standard 90.1 with "registered design professional," which is consistent with the terms used in the 2015 International Green Construction Code.

[Click here to view these changes in full](#)

Send comments (with copy to [psa@ansi.org](mailto:psa@ansi.org)) to: Online Comment Database at <http://www.ashrae.org/standards-research--technology/public-review-drafts>

#### ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)

##### *Addenda*

BSR/ASHRAE/ICC/USGBC/IES Addendum 189.1h-201x, Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/USGBC/IES Standard 189.1-2017)

This addendum clarifies that it is the alternate on-site sources of water or municipally reclaimed water are not required to be "acceptable" because it is given that anything not disallowed by an AHJ is acceptable.

[Click here to view these changes in full](#)

Send comments (with copy to [psa@ansi.org](mailto:psa@ansi.org)) to: Online Comment Database at <http://www.ashrae.org/standards-research--technology/public-review-drafts>

#### ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)

##### *Addenda*

BSR/ASHRAE/ICC/USGBC/IES Addendum 189.1f-201x, Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/USGBC/IES Standard 189.1-2017)

This addendum replaces the current definition of "construction documents," which references Standard 90.1, with a definition that is consistent with the 2015 International Green Construction Code.

[Click here to view these changes in full](#)

Send comments (with copy to [psa@ansi.org](mailto:psa@ansi.org)) to: Online Comment Database at <http://www.ashrae.org/standards-research--technology/public-review-drafts>

#### ASME (American Society of Mechanical Engineers)

##### *New Standard*

BSR/ASME NM-3-201x, Nonmetallic Materials - Part 1: Thermoplastic Material Specifications; Part 2: Thermoset Material Specifications; Part 3: Properties (new standard)

This standard includes specifications for non-metallic materials (except wood, non-fibrous glass and concrete); and in conformance with the requirements of the individual construction codes, methodologies, design values, limits, and cautions on the use of materials.

[Click here to view these changes in full](#)

Send comments (with copy to [psa@ansi.org](mailto:psa@ansi.org)) to: Colleen O'Brien, (212) 591-7881, [obrienc@asme.org](mailto:obrienc@asme.org)

**NSF (NSF International)****Revision**

BSR/NSF 350-201x (i29r1), Onsite residential and commercial, water reuse treatment systems (revision of ANSI/NSF 350-2017a)

Contains minimum requirements for onsite residential and commercial graywater treatment systems. Systems may include Graywater reuse treatment systems having a rated treatment capacity up to 5,678 L/d (1,500 gal/d) or Commercial graywater reuse treatment systems: This applies to onsite commercial reuse treatment systems that treat combined commercial facility graywater with capacities exceeding 5,678 L/d (1,500 gal/d) and commercial facility laundry water only of any capacity. Management methods and end uses appropriate for the treated effluent discharged from graywater residential and commercial treatment systems meeting this Standard are limited to subsurface discharge to the environment only.

[Click here to view these changes in full](#)

Send comments (with copy to [psa@ansi.org](mailto:psa@ansi.org)) to: Jason Snider, (734) 418-6660, [jsnider@nsf.org](mailto:jsnider@nsf.org)

**NSF (NSF International)****Revision**

BSR/NSF 350-201x (i33r1), Onsite residential and commercial, water reuse treatment systems (revision of ANSI/NSF 350-2017a)

This Standard contains minimum requirements for onsite residential and commercial graywater treatment systems. Systems may include Graywater reuse treatment systems having a rated treatment capacity up to 5,678 L/d (1,500 gal/d); or Commercial graywater reuse treatment systems: This applies to onsite commercial reuse treatment systems that treat combined commercial facility graywater with capacities exceeding 5,678 L/d (1,500 gal/d) and commercial facility laundry water only of any capacity. Management methods and end uses appropriate for the treated effluent discharged from graywater residential and commercial treatment systems meeting this Standard are limited to subsurface discharge to the environment only.

[Click here to view these changes in full](#)

Send comments (with copy to [psa@ansi.org](mailto:psa@ansi.org)) to: Jason Snider, (734) 418-6660, [jsnider@nsf.org](mailto:jsnider@nsf.org)

**UL (Underwriters Laboratories, Inc.)****Reaffirmation**

BSR/UL 563-2017 (R201x), Standard for Ice Makers (reaffirmation of ANSI/UL 563-2017)

Revise Installation and Operating Instructions, Section 64, by adding Requirements Covering Electronic Media Instructions; and revise the control requirements in Sections 19A, Motor Protection; 20, Switches and Controllers; and 21, Transformer Protection.

[Click here to view these changes in full](#)

Send comments (with copy to [psa@ansi.org](mailto:psa@ansi.org)) to: Alan McGrath, (847) 664-3038, [alan.t.mcgrath@ul.com](mailto:alan.t.mcgrath@ul.com)

**UL (Underwriters Laboratories, Inc.)****Revision**

BSR/UL 1277-201X, Standard for Safety for Electrical Power and Control Tray Cables with Optional Optical-Fiber Members (revision of ANSI/UL 1277-2017)

Addition of 1000 V rating for tray cable and alternate aging time and temperature for 60 degree C oil rating (Proposals dated 7/6/18).

[Click here to view these changes in full](#)

Send comments (with copy to [psa@ansi.org](mailto:psa@ansi.org)) to: Linda Phinney, (510) 319-4297, [Linda.L.Phinney@ul.com](mailto:Linda.L.Phinney@ul.com)

**Comment Deadline: August 20, 2018****ADA (American Dental Association)****Reaffirmation**

BSR/ADA Standard No. 1067-2013 (R201x), Electronic Dental System Standard - Functional Requirements (reaffirmation of ANSI/ADA Standard No. 1067-2013)

The scope of this document is the functional requirements for the dental health care domain, consisting of information system support for direct and indirect dental services, supporting functions, and functions of the electronic dental system infrastructure.

Single copy price: \$45.00

Obtain an electronic copy from: [wardm@ada.org](mailto:wardm@ada.org)

Order from: [wardm@ada.org](mailto:wardm@ada.org)

Send comments (with copy to [psa@ansi.org](mailto:psa@ansi.org)) to: Paul Bralower, [bralowerp@ada.org](mailto:bralowerp@ada.org)

**ADA (American Dental Association)****Withdrawal**

ANSI/ADA Standard No. 1040-2008 (R2013), Dental Extension to the ASTM Continuity of Care Record (withdrawal of ANSI/ADA Standard No. 1040-2008 (R2013))

This standard provides a means for one dental practitioner or system, to aggregate all of the pertinent data about a patient and forward it to another practitioner or system to support the continuity of care. The major sections of ADA Standard No. 1040 (Header, Body, and Footer) conform to the same sections of ASTM E2369-05, Standard Specification for Continuity of Care Record, 2007.

Single copy price: \$45.00

Obtain an electronic copy from: [wardm@ada.org](mailto:wardm@ada.org)

Order from: [wardm@ada.org](mailto:wardm@ada.org)

Send comments (with copy to [psa@ansi.org](mailto:psa@ansi.org)) to: Paul Bralower, [bralowerp@ada.org](mailto:bralowerp@ada.org)

**ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)****Addenda**

BSR/ASHRAE Addendum h to BSR/ASHRAE Standard 15-201x, Safety Standard for Refrigeration Systems (addenda to ANSI/ASHRAE Standard 15-2016)

This addendum proposes to allow Group A2L refrigerants in applications requiring machinery rooms. This proposal does not change how ASHRAE Standard 15 deals with Group A2L refrigerants in high-probability systems for human comfort, industrial applications, or refrigerated rooms. Those topics are expected to be handled in separate addenda proposals.

Single copy price: \$35.00

Obtain an electronic copy from: [https://osr.ashrae.org/Public%20Review%20Draft%20Standards%20Lib/15-2016\\_addendum\\_h\\_2L-PPR3-ISC\\_2018-06-29\\_2018\\_machinery\\_room\\_editorial\\_after\\_meeting.docx](https://osr.ashrae.org/Public%20Review%20Draft%20Standards%20Lib/15-2016_addendum_h_2L-PPR3-ISC_2018-06-29_2018_machinery_room_editorial_after_meeting.docx)

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Send comments (with copy to [psa@ansi.org](mailto:psa@ansi.org)) to: <https://osr.ashrae.org/default.aspx>

**ASME (American Society of Mechanical Engineers)****Revision**

BSR/ASME BPVC Section V-201x, Nondestructive Examination (revision of ANSI/ASME BPVC Section V-2017)

Section V of the ASME Boiler & Pressure Vessel Code contains requirements and methods for nondestructive examination (NDE) which are referenced and required by other Sections of the Code. These NDE methods are intended to detect surface and internal imperfections in materials, welds, fabricated parts and components. The following NDE methods are addressed: radiography, ultrasonics, liquid penetrant, magnetic particle, eddy current, visual, leak testing, and acoustic emission.

Single copy price: Free

Obtain an electronic copy from: <http://cstools.asme.org/publicreview>

Order from: Mayra Santiago, ASME; [ansibox@asme.org](mailto:ansibox@asme.org)

Send comments (with copy to [psa@ansi.org](mailto:psa@ansi.org)) to: Carlton Ramcharran, (212) 591-7955, [ramcharranc@asme.org](mailto:ramcharranc@asme.org)

**ASTM (ASTM International)****New Standard**

BSR/ASTM F1533-201x, Specification for Deformed Polyethylene (PE) Liner (new standard)

[http://www.astm.org/ANSI\\_SA](http://www.astm.org/ANSI_SA)

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**ASTM (ASTM International)****New Standard**

BSR/ASTM F2968-201x, Specification for Black Crosslinked Polyethylene (PEX) Pipe, Fittings and Joints For Gas Distribution Applications (new standard)

[http://www.astm.org/ANSI\\_SA](http://www.astm.org/ANSI_SA)

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**ASTM (ASTM International)****New Standard**

BSR/ASTM WK57078-201x, Specification for MRS-Rated Metric- and Inch-Sized Crosslinked Polyethylene (PEX) Pipe (new standard)

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**ASTM (ASTM International)****New Standard**

BSR/ASTM WK61891-201x, Practice for the One-Step (Solvent Cement Only) Method of Joining Poly (Vinyl Chloride) (PVC) or Chlorinated Poly (Vinyl Chloride) (CPVC) Pipe and Piping Components with Tapered Sockets (new standard)

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**ASTM (ASTM International)****Reaffirmation**

BSR/ASTM D2564-2017 (R201x), Specification for Solvent Cements for Poly (Vinyl Chloride) (PVC) Plastic Piping Systems (reaffirmation of ANSI/ASTM D2564-2017)

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**ASTM (ASTM International)****Reaffirmation**

BSR/ASTM F2206-2017 (R201x), Specification for Fabricated Fittings of Butt-Fused Polyethylene (PE) (reaffirmation of ANSI/ASTM F2206-2017)

[http://www.astm.org/ANSI\\_SA](http://www.astm.org/ANSI_SA)

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**ASTM (ASTM International)****Revision**

BSR/ASTM D2513-201x, Specification for Polyethylene (PE) Gas Pressure Pipe, Tubing, and Fittings (revision of ANSI/ASTM D2513-2016)

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**ASTM (ASTM International)****Revision**

BSR/ASTM D3299-201x, Specification for Filament-Wound Glass-Fiber-Reinforced Thermoset Resin Corrosion-Resistant Tanks (revision of ANSI/ASTM D3299-2010)

[http://www.astm.org/ANSI\\_SA](http://www.astm.org/ANSI_SA)

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**ASTM (ASTM International)****Revision**

BSR/ASTM D3753-201x, Specification for Glass-Fiber-Reinforced Polyester Manholes and Wetwells (revision of ANSI/ASTM D3753-2012)

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**ASTM (ASTM International)****Revision**

BSR/ASTM D4097-201x, Specification for Contact-Molded Glass-Fiber-Reinforced Thermoset Resin Corrosion-Resistant Tanks (revision of ANSI/ASTM D4097-2001 (R2010))

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**ASTM (ASTM International)****Revision**

BSR/ASTM D4726-201x, Specification for Rigid Poly(Vinyl Chloride) (PVC) Exterior-Profile Extrusions Used for Assembled Windows and Doors (revision of ANSI/ASTM D4726-2015)

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**ASTM (ASTM International)****Revision**

BSR/ASTM E2181-201x, Specification for Compacted Mineral-Insulated, Metal-Sheathed, Noble Metal Thermocouples and Thermocouple Cable (revision of ANSI/ASTM E2181-2017)

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**ASTM (ASTM International)****Revision**

BSR/ASTM F402-201x, Practice for Safe Handling of Solvent Cements, Primers, and Cleaners Used for Joining Thermoplastic Pipe and Fittings (revision of ANSI/ASTM F402-2017)

[http://www.astm.org/ANSI\\_SA](http://www.astm.org/ANSI_SA)

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**ASTM (ASTM International)****Revision**

BSR/ASTM F645-201x, Guide for Selection, Design, and Installation of Thermoplastic Water-Pressure Piping Systems (revision of ANSI/ASTM F645-2018)

[http://www.astm.org/ANSI\\_SA](http://www.astm.org/ANSI_SA)

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**ASTM (ASTM International)****Revision**

BSR/ASTM F877-201x, Specification for Crosslinked Polyethylene (PEX) Hot- and Cold-Water Distribution Systems (revision of ANSI/ASTM F877-2018)

[http://www.astm.org/ANSI\\_SA](http://www.astm.org/ANSI_SA)

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**ASTM (ASTM International)****Revision**

BSR/ASTM F1041-201x, Guide for Squeeze-Off of Polyolefin Gas Pressure Pipe and Tubing (revision of ANSI/ASTM F1041-2017)

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Send comments (with copy to [psa@ansi.org](mailto:psa@ansi.org)) to: Same

**ASTM (ASTM International)****Revision**

BSR/ASTM F1563-201x, Specification for Tools to Squeeze-Off Polyethylene (PE) Gas Pipe or Tubing (revision of ANSI/ASTM F1563-2017)

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**ASTM (ASTM International)****Revision**

BSR/ASTM F1734-201x, Practice for Qualification of a Combination of Squeeze Tool, Pipe, and Squeeze-Off Procedures to Avoid Long-Term Damage in Polyethylene (PE) Gas Pipe (revision of ANSI/ASTM F1734-2017)

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**ASTM (ASTM International)****Revision**

BSR/ASTM F1807-201x, Specification for Metal Insert Fittings Utilizing a Copper Crimp Ring for SDR9 Cross-linked Polyethylene (PEX) Tubing and SDR9 Polyethylene of Raised Temperature (PE-RT) Tubing (revision of ANSI/ASTM F1807-2017)

[http://www.astm.org/ANSI\\_SA](http://www.astm.org/ANSI_SA)

Single copy price: Free

Obtain an electronic copy from: [cleonard@astm.org](mailto:cleonard@astm.org)

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Send comments (with copy to [psa@ansi.org](mailto:psa@ansi.org)) to: Same

**ASTM (ASTM International)****Revision**

BSR/ASTM F2098-201x, Specification for Stainless Steel Clamps for Securing SDR9 Cross-Linked Polyethylene (PEX) Tubing to Metal Insert and Plastic Insert Fittings (revision of ANSI/ASTM F2098-2017)

[http://www.astm.org/ANSI\\_SA](http://www.astm.org/ANSI_SA)

Single copy price: Free

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**ASTM (ASTM International)****Revision**

BSR/ASTM F2159-201x, Specification for Plastic Insert Fittings Utilizing a Copper Crimp Ring for SDR9 Cross-Linked Polyethylene (PEX) Tubing and SDR9 Polyethylene of Raised Temperature (PE-RT) Tubing (revision of ANSI/ASTM F2159-2018)

[http://www.astm.org/ANSI\\_SA](http://www.astm.org/ANSI_SA)

Single copy price: Free

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**ASTM (ASTM International)****Revision**

BSR/ASTM F2618-201x, Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Pipe and Fittings for Chemical Waste Drainage Systems (revision of ANSI/ASTM F2618-2017)

[http://www.astm.org/ANSI\\_SA](http://www.astm.org/ANSI_SA)

Single copy price: Free

Obtain an electronic copy from: [cleonard@astm.org](mailto:cleonard@astm.org)

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Send comments (with copy to [psa@ansi.org](mailto:psa@ansi.org)) to: Same

**ASTM (ASTM International)****Revision**

BSR/ASTM F2620-201x, Practice for Heat Fusion Joining of Polyethylene Pipe and Fittings (revision of ANSI/ASTM F2620-2017)

[http://www.astm.org/ANSI\\_SA](http://www.astm.org/ANSI_SA)

Single copy price: Free

Obtain an electronic copy from: [cleonard@astm.org](mailto:cleonard@astm.org)

Order from: Corice Leonard, (610) 832-9744, [accreditation@astm.org](mailto:accreditation@astm.org)

Send comments (with copy to [psa@ansi.org](mailto:psa@ansi.org)) to: Same

**ASTM (ASTM International)****Revision**

BSR/ASTM F2623-201x, Specification for Polyethylene of Raised Temperature (PE-RT) SDR 9 Tubing (revision of ANSI/ASTM F2623-2017)

[http://www.astm.org/ANSI\\_SA](http://www.astm.org/ANSI_SA)

Single copy price: Free

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Send comments (with copy to [psa@ansi.org](mailto:psa@ansi.org)) to: Same

**ASTM (ASTM International)****Revision**

BSR/ASTM F2769-201x, Specification for Polyethylene of Raised Temperature (PE-RT) Plastic Hot and Cold-Water Tubing and Distribution Systems (revision of ANSI/ASTM F2769-2016)

[http://www.astm.org/ANSI\\_SA](http://www.astm.org/ANSI_SA)

Single copy price: Free

Obtain an electronic copy from: [cleonard@astm.org](mailto:cleonard@astm.org)

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**ASTM (ASTM International)****Revision**

BSR/ASTM F2785-201x, Specification for Polyamide 12 Gas Pressure Pipe, Tubing, and Fittings (revision of ANSI/ASTM F2785-2018)

[http://www.astm.org/ANSI\\_SA](http://www.astm.org/ANSI_SA)

Single copy price: Free

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**ASTM (ASTM International)****Revision**

BSR/ASTM F2829-201x, Specification for Metric- and Inch-Sized Crosslinked Polyethylene (PEX) Pipe Systems (revision of ANSI/ASTM F2829-2017)

[http://www.astm.org/ANSI\\_SA](http://www.astm.org/ANSI_SA)

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**ASTM (ASTM International)****Revision**

BSR/ASTM F2945-201x, Specification for Polyamide 11 Gas Pressure Pipe, Tubing, and Fittings (revision of ANSI/ASTM F2945-2017)

[http://www.astm.org/ANSI\\_SA](http://www.astm.org/ANSI_SA)

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Send comments (with copy to [psa@ansi.org](mailto:psa@ansi.org)) to: Same

**ASTM (ASTM International)****Revision**

BSR/ASTM F3123-201x, Specification for Metric Outside Diameter Polyethylene (PE) Plastic Pipe (DR-PN) (revision of ANSI/ASTM F3123-2018)

[http://www.astm.org/ANSI\\_SA](http://www.astm.org/ANSI_SA)

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**ASTM (ASTM International)****Revision**

BSR/ASTM F3128-201x, Specification for Poly(Vinyl Chloride) (PVC) Schedule 40 Drain, Waste, and Vent Pipe with a Cellular Core (revision of ANSI/ASTM F3128-2017)

[http://www.astm.org/ANSI\\_SA](http://www.astm.org/ANSI_SA)

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**ASTM (ASTM International)****Revision**

BSR/ASTM F3253-201x, Specification for Crosslinked Polyethylene (PEX) Tubing with Oxygen Barrier for Hot- and Cold-Water Hydronic Distribution Systems (revision of ANSI/ASTM F3253-2017)

[http://www.astm.org/ANSI\\_SA](http://www.astm.org/ANSI_SA)

Single copy price: Free

Obtain an electronic copy from: [cleonard@astm.org](mailto:cleonard@astm.org)

Order from: Corice Leonard, (610) 832-9744, [accreditation@astm.org](mailto:accreditation@astm.org)

Send comments (with copy to [psa@ansi.org](mailto:psa@ansi.org)) to: Same

**AWI (Architectural Woodwork Institute)****New Standard**

BSR/AWI 0620-201x, Finish Carpentry/Installation (new standard)

The AWI 0620 Finish Carpentry/Installation Standard is intended to provide comprehensive guidelines for the installation and finishing of architectural woodwork and related interior products.

Single copy price: Free

Obtain an electronic copy from: [agoodin@awinet.org](mailto:agoodin@awinet.org)

Send comments (with copy to [psa@ansi.org](mailto:psa@ansi.org)) to: [agoodin@awinet.org](mailto:agoodin@awinet.org)

**AWS (American Welding Society)****New Standard**

BSR/AWS D16.6M/D16.6-201x, Specification for Robot Arc Welding Training and Testing Cell (new standard)

This document specifies the recommended design, integration, installation, and use of an arc welding systems used to train and certify operators and technicians under the AWS Certified Robotic Arc Welding (CRAW) program. Robotic and automatic arc welding syst consist of an arc welding power source, arc welding torches and accessories, robot/manipulator, shielding gas delivery system, welding electrode feeding equipment welding circuit, communication control wiring, and system grounding. An example of a Robotic Arc Welding Cell is shown in Figure 1. This document assumes that the robot training and testing will utilize GMAW or FCAW processes.

Single copy price: \$48.00

Obtain an electronic copy from: [pportela@aws.org](mailto:pportela@aws.org)

Order from: Peter Portela, (800) 443-9353, [pportela@aws.org](mailto:pportela@aws.org)

Send comments (with copy to [psa@ansi.org](mailto:psa@ansi.org)) to: Same

**AWS (American Welding Society)****New Standard**

BSR/AWS D20.1/D20.1M-201x, Specification for Fabrication of Metal Components using Additive Manufacturing (new standard)

This specification provides the general requirements for fabrication of metal components using additive manufacturing. It provides contractual guidance for the interaction between the Engineer and the Contractor. It includes the design, qualification, fabrication, inspection, and acceptance of additively manufactured components. A commentary for the specification is included.

Single copy price: 105.00 (Non-Members)/\$79.00 (AWS Members)

Obtain an electronic copy from: [pportela@aws.org](mailto:pportela@aws.org)

Order from: Peter Portela, (800) 443-9353, [pportela@aws.org](mailto:pportela@aws.org)

Send comments (with copy to [psa@ansi.org](mailto:psa@ansi.org)) to: Same

**BICSI (Building Industry Consulting Service International)****New Standard**

BSR/BICSI N1-201x, Installation Practices for Telecommunications and ICT Cabling and Related Cabling Infrastructure (new standard)

This standard describes minimum requirements and procedures for installing the cabling and cabling infrastructure for telecommunications and ICT systems. Additionally, this standard will provide recommendations which may optimize performance or longevity of the cabling and cabling infrastructure and serve as a reference for "neat and workmanlike manner" installation practices.

Single copy price: Free

Obtain an electronic copy from: [jsilveira@bicsi.org](mailto:jsilveira@bicsi.org)

Send comments (with copy to [psa@ansi.org](mailto:psa@ansi.org)) to: [jsilveira@bicsi.org](mailto:jsilveira@bicsi.org)

**ECIA (Electronic Components Industry Association)****Revision**

BSR/EIA 364-20F-201x, Dielectric Withstanding Voltage Test Procedure for Electrical Connectors, Sockets and Coaxial Contacts (revision and redesignation of ANSI/EIA 364-20E-2015)

This standard applies to electrical connectors, sockets and coaxial contacts.

Single copy price: \$78.00

Order from: Global Engineering Documents, (800) 854-7179, [www.global.ihs.com](http://www.global.ihs.com)

Send comments (with copy to [psa@ansi.org](mailto:psa@ansi.org)) to: Ed Mikoski, [emikoski@ecianow.org](mailto:emikoski@ecianow.org)



## IEEE (ASC N42) (Institute of Electrical and Electronics Engineers)

### New Standard

BSR/N42.48-201x, Standard Performance Requirements for Spectrometric Personal Radiation Detectors (SPRDs) for Homeland Security (new standard)

This standard describes design and performance requirements and testing methods for evaluating radiation detection instruments that are typically worn on the body for detection and identification of radioactive materials. These instruments are commonly known as spectrometric personal radiation detectors (SPRDs).

Single copy price: N/A

Obtain an electronic copy from: [j.santulli@ieee.org](mailto:j.santulli@ieee.org)

Send comments (with copy to [psa@ansi.org](mailto:psa@ansi.org)) to: [j.santulli@ieee.org](mailto:j.santulli@ieee.org)

## IIAR (International Institute of Ammonia Refrigeration)

### New Standard

BSR/IIAR 6-201x, Standard for Inspection, Testing, and Maintenance of Closed-Circuit Ammonia Refrigeration Systems (new standard)

This standard specifies minimum requirements for inspection, testing, and maintenance of closed-circuit ammonia refrigeration systems. This standard is intended to assist individuals responsible for developing and implementing inspection, testing, and maintenance programs for facilities with stationary closed-circuit ammonia refrigeration systems using recognized and generally accepted good engineering practices (RAGAGEP).

Single copy price: Free of charge until public review period is over.

Obtain an electronic copy from: [tony\\_lundell@iiar.org](mailto:tony_lundell@iiar.org)

Order from: Tony Lundell, (703) 312-4200, [tony\\_lundell@iiar.org](mailto:tony_lundell@iiar.org)

Send comments (with copy to [psa@ansi.org](mailto:psa@ansi.org)) to: Same

## NSF (NSF International)

### New Standard

BSR/NSF 455-1-201x (i1r2), Terminology for the NSF 455 Portfolio of Standards (new standard)

Definitions covered by this Standard consist of terminology related the NSF/ANSI 455 portfolio of Standards, including terms describing for dietary supplements, cosmetics/personal care products, over-the-counter drugs, and medical devices. This Standard includes common definitions of terms used throughout the NSF/ANSI 455 portfolio of Standards.

Single copy price: Free

Obtain an electronic copy from: [https://standards.nsf.org/apps/group\\_public/download.php/43394/455-1i1r2%20-%20Terminology%20for%20455%20-%20Cos%20memo%20&%20ballot.pdf](https://standards.nsf.org/apps/group_public/download.php/43394/455-1i1r2%20-%20Terminology%20for%20455%20-%20Cos%20memo%20&%20ballot.pdf)

Send comments (with copy to [psa@ansi.org](mailto:psa@ansi.org)) to: [rbrooker@nsf.org](mailto:rbrooker@nsf.org)

## UL (Underwriters Laboratories, Inc.)

### Revision

BSR/UL 651-201X, Standard for Safety for Schedule 40, 80, Type EB and a Rigid PVC Conduit and Fittings (revision of ANSI/UL 651-2016)

(1) Non-solvent type PVC Fittings (Push-Fit ) for use with PVC conduit. (2) UL 651 Recycled Material Clause 4.1.3 - Removal of reference to withdrawn standard, ASTM D5033.

Single copy price: Free

Obtain an electronic copy from: <http://www.shopulstandards.com>

Send comments (with copy to [psa@ansi.org](mailto:psa@ansi.org)) to: Joshua Johnson, (919) 549-1053, [Joshua.Johnson@ul.com](mailto:Joshua.Johnson@ul.com)

## VITA (VMEbus International Trade Association (VITA))

### New Standard

BSR/VITA 47.1-201x, Common Requirements for Environments, Design and Construction, Safety, and Quality for VITA 47 Plug-In Modules Dot Standard (new standard)

This standard defines the common environments, design and construction, safety, and quality for Plug-In Module requirements common across VITA 47.1, VITA 47.2, and VITA 47.3.

Single copy price: \$25.00

Obtain an electronic copy from: [admin@vita.com](mailto:admin@vita.com)

Send comments (with copy to [psa@ansi.org](mailto:psa@ansi.org)) to: [admin@vita.com](mailto:admin@vita.com)

## VITA (VMEbus International Trade Association (VITA))

### New Standard

BSR/VITA 47.2-201x, Class 2 Requirements for Environments, Design and Construction, Safety, and Quality for VITA 47 Plug-in Modules Dot Standards (new standard)

This standard defines the unique environments, design and construction, safety, and quality for Plug-In Module requirements related to products meant to align with the applications defined in IPC J-STD-001, Class 2.

Single copy price: \$25.00

Obtain an electronic copy from: [admin@vita.com](mailto:admin@vita.com)

Send comments (with copy to [psa@ansi.org](mailto:psa@ansi.org)) to: [admin@vita.com](mailto:admin@vita.com)

## VITA (VMEbus International Trade Association (VITA))

### New Standard

BSR/VITA 47.3-201x, Class 3 Requirements for Environments, Design and Construction, Safety, and Quality for VITA 47 Plug-In Modules Dot Standard (new standard)

This standard documents the unique environments, design and construction, safety, and quality for Plug-In Module requirements related to products meant to align with the applications defined in IPC J-STD-001, Class 3.

Single copy price: \$25.00

Obtain an electronic copy from: [admin@vita.com](mailto:admin@vita.com)

Send comments (with copy to [psa@ansi.org](mailto:psa@ansi.org)) to: [admin@vita.com](mailto:admin@vita.com)

## Comment Deadline: September 4, 2018

Reaffirmations and withdrawals available electronically may be accessed at: [webstore.ansi.org](http://webstore.ansi.org)

## ASME (American Society of Mechanical Engineers)

### Reaffirmation

BSR/ASME MFC-5.1-2011 (R201x), Measurement of Liquid Flow in Closed Conduits Using Transit Time Ultrasonic Flowmeters (reaffirmation of ANSI/ASME MFC-5.1-2011)

This Standard applies to ultrasonic flowmeters that base their operation on the measurement of transit time of acoustic signals. This Standard concerns the volume flow-rate measurement of a single-phase liquid with steady flow or flow varying only slowly with time in a completely filled closed conduit.

Single copy price: \$32.00

Obtain an electronic copy from: <http://cstools.asme.org/publicreview>

For Reaffirmations and Withdrawn standards, please view our catalog at <https://www.asme.org/shop/standards>

Send comments (with copy to [psa@ansi.org](mailto:psa@ansi.org)) to: April Amaral, (212) 591-8402, [AmaralA@asme.org](mailto:AmaralA@asme.org)



## ITI (INCITS) (InterNational Committee for Information Technology Standards)

### **New Standard**

INCITS 534-201x, Information technology - Serial Attached SCSI - 4 (SAS-4) (new standard)

Serial Attached SCSI - 4 is the next generation of Serial Attached SCSI, following SAS-3, SAS-2.1, SAS-2, SAS-1.1, and SAS. The following items should be considered for inclusion in Serial Attached SCSI - 4: (1) at least double the SAS-3 data rate; (2) maintain 6 Gbps and 12 Gbps SAS compatibility; (3) incorporate more efficient signal encoding; and (4) other capabilities that may fit within the scope of this project.

Single copy price: Free

Obtain an electronic copy from: <https://standards.incits.org/apps/org/workgroup/eb/download.php/99554>

Order from: <https://standards.incits.org/apps/org/workgroup/eb/download.php/99554>

Send comments (with copy to [psa@ansi.org](mailto:psa@ansi.org)) to: [comments@standards.incits.org](mailto:comments@standards.incits.org)

## UL (Underwriters Laboratories, Inc.)

### **New Standard**

BSR/UL 969A-201x, Standard for Safety for Marking and Labeling Systems for Cords and Hoses (new standard)

These requirements cover flag-type tags (cord tags) affixed with an adhesive or a securement strap, i.e., cable ties or similar devices and adhesive backed wrap around cord labels affixed directly to a cord or hose. The adhesives may be pressure sensitive, heat activated, or solvent activated. These labels are intended to be applied by the manufacturers at the location they produce their end products.

Single copy price: Contact comm2000 for pricing and delivery options

Obtain an electronic copy from: <https://csds.ul.com/Home/ProposalsDefault.aspx>

Send comments (with copy to [psa@ansi.org](mailto:psa@ansi.org)) to: Megan Monsen, (847) 664-1292, [megan.monsen@ul.com](mailto:megan.monsen@ul.com)

## UL (Underwriters Laboratories, Inc.)

### **New Standard**

BSR/UL 2610-201X, Standard for Commercial Premises Security Alarm Units and Systems (new standard)

UL proposes a first edition of the Standard for Commercial Premises Security Alarm Units and Systems, UL 2610.

Single copy price: Free

Obtain an electronic copy from: <https://csds.ul.com/Home/ProposalsDefault.aspx>

Send comments (with copy to [psa@ansi.org](mailto:psa@ansi.org)) to: Nicolette Weeks, (919) 549-0973, [Nicolette.A.Weeks@ul.com](mailto:Nicolette.A.Weeks@ul.com)

## UL (Underwriters Laboratories, Inc.)

### **Revision**

BSR/UL 325-201x, Standard for Safety for Door, Drapery, Gate, Louver, and Window Operators and Systems (revision of ANSI/UL 325-2017)

This proposal for UL 325 covers: (1) Change to Introduction scope; (2) Direct plug-in devices; (3) Removing type AF and CF wiring, and editorial revision to 15.1.5; (4) Proposal for button battery requirements to be included in UL 325, Reference to Horizontal Standard, UL 4200A; (5) Constant -pressure override capability for gate operators using portable wireless controls; (6) Barrier arm manual release exception; (7) Barrier arm pendulum support; (8) Outdoor use clarification of edge sensor testing; (9) Requirements for lasers; (10) Swing gate entrapment zone definition and instruction; and (11) Edge Sensor Endurance test force clarification.

Single copy price: Free

Obtain an electronic copy from: <https://csds.ul.com/Home/ProposalsDefault.aspx>

Send comments (with copy to [psa@ansi.org](mailto:psa@ansi.org)) to: Amy Walker, (847) 664-2023, [Amy.K.Walker@ul.com](mailto:Amy.K.Walker@ul.com)

## Projects Withdrawn from Consideration

An accredited standards developer may abandon the processing of a proposed new or revised American National Standard or portion thereof if it has followed its accredited procedures. The following projects have been withdrawn accordingly:

### **SCTE (Society of Cable Telecommunications Engineers)**

BSR/SCTE DVS 1346-201x, High Dynamic Range (HDR) Video: System Requirements for Cable Phase 1 Initial Deployment (new standard)

Inquiries may be directed to Kim Cooney, (800) 542-5040, [kcooney@scte.org](mailto:kcooney@scte.org)

## Notice of Withdrawn ANS by an ANSI-Accredited Standards Developer

In accordance with clause 4.2.1.3.2 Withdrawal by ANSI-Accredited Standards Developer of the ANSI Essential Requirements, the following American National Standards have been withdrawn as an ANS.

### **UL (Underwriters Laboratories, Inc.)**

ANSI/UL 466-2004 (R2013), Standard for Safety for Electric Scales

Questions may be directed to: Jonette Herman, (919) 549-1479, [Jonette.A.Herman@ul.com](mailto:Jonette.A.Herman@ul.com)

# Call for Members (ANS Consensus Bodies)

Directly and materially affected parties who are interested in participating as a member of an ANS consensus body for the standards listed below are requested to contact the sponsoring standards developer directly and in a timely manner.

---

## AABC (Associated Air Balance Council)

**Office:** 1518 K Street NW  
Suite 503  
Washington, DC 20005

**Contact:** *Raymond Bert*

**Phone:** (202) 737-0202

**E-mail:** standards@aabc.com

BSR/AABC MN-1-201x, AABC National Standards for Total System Balance, 8th Edition (revision of ANSI/AABC MN-1-2016)

## API (American Petroleum Institute)

**Office:** 1220 L Street, NW  
Washington, DC 20005

**Contact:** *Jacqueline Roueche*

**Phone:** (202) 682-8286

**E-mail:** RouecheJ@api.org

BSR/API Recommended Practice 19D, 2nd Edition-201x, Measuring Conductivity of Proppants (revision and redesignation of ANSI/API RP 19D/ISO 13503-5, 1st Edition-2007)

## CTA (Consumer Technology Association)

**Office:** 1919 South Eads Street  
Arlington, VA 22202

**Contact:** *Veronica Lancaster*

**Phone:** (703) 907-7697

**E-mail:** vlancaster@cta.tech

ANSI/CEA 775-2-A-2008 (R2013), Service Selection Information for Digital Storage Media Interoperability (withdrawal of ANSI/CEA 775-2-A-2008 (R2013))

## ECIA (Electronic Components Industry Association)

**Office:** 2214 Rock Hill Road  
Suite 265  
Herndon, VA 20170-4212

**Contact:** *Laura Donohoe*

**Phone:** (571) 323-0294

**E-mail:** ldonohoe@ecianow.org

BSR/EIA 364-20F-201x, Dielectric Withstanding Voltage Test Procedure for Electrical Connectors, Sockets and Coaxial Contacts (revision and redesignation of ANSI/EIA 364-20E-2015)

## EOS/ESD (ESD Association, Inc.)

**Office:** 7900 Turin Rd., Bldg. 3  
Rome, NY 13440

**Contact:** *Christina Earl*

**Phone:** (315) 339-6937

**E-mail:** cearl@esda.org

BSR/ESD STM4.2-201x, ESD Association Standard Test Method for the Protection of Electrostatic Discharge Susceptible Items - ESD Protective Worksurfaces - Charge Dissipation Characteristics (revision of ANSI/ESD STM4.2-1998 (R2010))

## ITI (INCITS) (InterNational Committee for Information Technology Standards)

**Office:** 1101 K Street, NW  
Suite 610  
Washington, DC 20005-3922

**Contact:** *Barbara Bennett*

**Phone:** (202) 737-8888

**E-mail:** comments@standards.incits.org

INCITS 534-201x, Information technology - Serial Attached SCSI - 4 (SAS-4) (new standard)

## NECA (National Electrical Contractors Association)

**Office:** 3 Bethesda Metro Center  
Suite 1100  
Bethesda, MD 20814

**Contact:** *Melissa West*

**Phone:** (301) 215-4544

**E-mail:** melissa.west@necanet.org

BSR/NECA 331-201x, Standard for Installing Building and Service Entrance Grounding and Bonding (new standard)

## NEMA (ASC C136) (National Electrical Manufacturers Association)

**Office:** 1300 North 17th Street  
Suite 900  
Rosslyn, VA 22209

**Contact:** *Dejan Lenasi*

**Phone:** (778) 386-9190

**E-mail:** dejan.lenasi@signify.com

BSR NEMA ASC C136-201x, Luminaire - Four-Pin Extension Module and Receptacle - Physical and Electrical Interchangeability and Testing (new standard)

**NSF (NSF International)**

**Office:** 789 N. Dixboro Road  
Ann Arbor, MI 48105-9723

**Contact:** Jason Snider

**Phone:** (734) 418-6660

**E-mail:** jsnider@nsf.org

BSR/NSF 350-201x (i29r1), Onsite residential and commercial, water reuse treatment systems (revision of ANSI/NSF 350-2017a)

BSR/NSF 350-201x (i33r1), Onsite residential and commercial, water reuse treatment systems (revision of ANSI/NSF 350-2017a)

BSR/NSF 455-1-201x (i1r2), Terminology for the NSF 455 Portfolio of Standards (new standard)

**NSF International Designations**

In the September 5, 2014 Standards Action, NSF International announced a new family of standards for a program called the Global Retailers and Manufacturers Alliance (GRMA). Since then, BSR/NSF 455-3-201x has been withdrawn from consideration and the designation and title of these PINS have been reassigned. The re-designation of these proposed ANS are as follows:

BSR/NSF 455-1-201x, Glossary of GRMA terminology (PINS to be filed shortly)

BSR/NSF 455-2-201x, Good Manufacturing Practices for Dietary Supplements

BSR/NSF 455-3-201x, Good Manufacturing Practices for Cosmetics

BSR/NSF 455-4-201x, Good Manufacturing Practices for Over the Counter Drugs

**UL (Underwriters Laboratories, Inc.)**

**Office:** 333 Pfingsten Road  
Northbrook, IL 60062-2096

**Contact:** Heather Sakellariou

**Phone:** (847) 664-2346

**E-mail:** Heather.Sakellariou@ul.com

BSR/UL 4600-201x, Standard for Safety for the Evaluation of Autonomous Products (new standard)

**VITA (VMEbus International Trade Association (VITA))**

**Office:** 929 W. Portobello Avenue  
Mesa, AZ 85210

**Contact:** Jing Kwok

**Phone:** (602) 281-4497

**E-mail:** jing.kwok@vita.com

BSR/VITA 47.1-201x, Common Requirements for Environments, Design and Construction, Safety, and Quality for VITA 47 Plug-In Modules Dot Standard (new standard)

BSR/VITA 47.2-201x, Class 2 Requirements for Environments, Design and Construction, Safety, and Quality for VITA 47 Plug-in Modules Dot Standards (new standard)

BSR/VITA 47.3-201x, Class 3 Requirements for Environments, Design and Construction, Safety, and Quality for VITA 47 Plug-In Modules Dot Standard (new standard)

# **Call for Members (ANS Consensus Bodies)**

## **Call for Committee Members**

### **ASC O1 – Safety Requirements for Woodworking Machinery**

Are you interested in contributing to the development and maintenance of valuable industry safety standards? The ASC O1 is currently looking for members in the following categories:

- General Interest
- Government
- Producer
- User

If you are interested in joining the ASC O1, contact WMMA Associate Director Jennifer Miller at [jennifer@wmma.org](mailto:jennifer@wmma.org).

# Final Actions on American National Standards

The standards actions listed below have been approved by the ANSI Board of Standards Review (BSR) or by an ANSI-Audited Designator, as applicable.

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## **ASME (American Society of Mechanical Engineers)**

### ***Revision***

ANSI/ASME A112.18.1-2012/CSA B125.1-2018, Plumbing Supply  
Fittings (revision of ANSI/ASME A112.18.1-2012/CSA B125.1-2012  
(R2107)): 6/22/2018

ANSI/ASME A112.19.1/CSA B45.2-2018, Enamelled Cast Iron and  
Enamelled Steel Plumbing Fixtures (revision of ANSI/ASME  
A112.19.1/CSA B45.2-2013): 6/22/2018

ANSI/ASME B20.1-2018, Safety Standard for Conveyors and Related  
Equipment (revision of ANSI/ASME B20.1-2015): 6/22/2018

## **ASQ (ASC Z1) (American Society for Quality)**

### ***New National Adoption***

ANSI/ASQ ISO 19011-2018, Guidelines for auditing management  
systems (identical national adoption of ISO 19011: 2018 and  
revision of ANSI ISO/ASQ QE19011S-2008): 6/26/2018

# Project Initiation Notification System (PINS)

ANSI Procedures require notification of ANSI by ANSI-accredited standards developers (ASD) of the initiation and scope of activities expected to result in new or revised American National Standards (ANS). Early notification of activity intended to reaffirm or withdraw an ANS and in some instances a PINS related to a national adoption is optional. The mechanism by which such notification is given is referred to as the PINS process. For additional information, see clause 2.4 of the ANSI Essential Requirements: Due Process Requirements for American National Standards.

Following is a list of proposed actions and new ANS that have been received recently from ASDs. Please also review the section in Standards Action entitled "American National Standards Maintained Under Continuous Maintenance" for additional or comparable information with regard to standards maintained under the continuous maintenance option. Use the following Public Document Library url to access PDF & EXCEL reports of approved & proposed ANS.

[List of Approved and Proposed ANS](#)

Directly and materially affected interests wishing to receive more information or to submit comments are requested to contact the standards developer directly within 30 days of the publication of this announcement.

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## **AABC (Associated Air Balance Council)**

Contact: *Raymond Bert, (202) 737-0202, standards@aabc.com*  
*1518 K Street NW, Suite 503, Washington, DC 20005*

BSR/AABC MN-1-201x, AABC National Standards for Total System Balance, 8th Edition (revision of ANSI/AABC MN-1-2016)

Stakeholders: Building owners; consulting engineers; TAB professionals who test, adjust and balance HVAC systems; and organizations or individuals that have an interest in the testing, adjusting and balancing of HVAC systems such as trade associations, code officials, regulatory agencies, and manufacturers of HVAC systems.

Project Need: This is to begin the required 5-year review, and to consider revisions to keep up with the state of practice in the industry.

The Standard covers total system balancing of HVAC components, HVAC systems including the control systems, and systems for airflow (constant and variable volume), supply/return/relief/exhaust fans, energy recovery, hydronics (constant and variable), domestic hot water, kitchens, laboratories (constant and variable volume), and health care; testing of chillers, cooling towers, boilers, steam, capacity, sound, vibration, under-floor air distribution and smoke control (including stair pressurization); interfacing with the commissioning process; how to develop a Total System Balancing Specification; and report verification and analysis.

## **AAFS (American Academy of Forensic Sciences)**

Contact: *Teresa Ambrosius, (719) 453-1036, tambrosius@aafs.org*  
*410 North 21st Street, Colorado Springs, CO 80904*

BSR/ASB Std 065-201x, Standard Test Method for Function and Operability Testing of Firearms (new standard)

Stakeholders: Firearm and tool mark examiners and technicians; forensic service providers that provide firearm and tool mark examination services; judicial system; law enforcement investigators; and general public.

Project Need: This document provides procedures for conducting function testing and operability testing of evidence firearms by forensic firearm and toolmark examiners or technicians. Following these procedures, an examiner or technician will be able to evaluate the mechanical condition and operation of a firearm prior to possible test firing. This document expands and provides greater specificity than current guidelines.

This document provides standard test procedures for conducting function testing including operability testing of a firearm by a forensic firearm and toolmark examiner or technician. This standard includes the preliminary examination of firearms, up to test firing.

## **API (American Petroleum Institute)**

Contact: *Jacqueline Roueche, (202) 682-8286, RouecheJ@api.org*  
*1220 L Street, NW, Washington, DC 20005*

BSR/API Recommended Practice 19D, 2nd Edition-201x, Measuring Conductivity of Proppants (revision and redesignation of ANSI/API RP 19D/ISO 13503-5, 1st Edition-2007)

Stakeholders: Drilling contractors, energy companies, proppant manufacturers.

Project Need: The tests and test apparatus in this standard have been developed to establish standard procedures and conditions for use in evaluating the long-term conductivity of various hydraulic-fracture proppant materials under laboratory conditions. This procedure enables users to compare the conductivity characteristics under the specifically described test conditions. The test results can aid users in comparing proppant materials for use in hydraulic fracturing operations.

This document provides standard testing procedures for evaluating proppants used in hydraulic fracturing and gravel-packing operations. The "proppants" mentioned in this document refer to sand, ceramic media, resin-coated proppants, gravel-packing media, and other materials used for hydraulic fracturing and gravel-packing operations. The objective of this document is to provide consistent methodology for testing procedures used to measure performance on hydraulic-fracturing and/or gravel-packing proppants. The testing procedures in this document are not designed to provide values of proppant conductivity under downhole reservoir conditions. Long-term test data have shown that time, elevated temperatures, fracturing fluid residues, cyclic stress loading, embedment, formation fines, and other factors further reduce fracture proppant pack conductivity. Also, this reference test is designed to measure only the frictional energy losses corresponding to laminar flow within a pack. It is recognized that fluid velocity within an actual fracture can be significantly higher than in these laboratory tests, and can be dominated by inertial effects.

**ASC X9 (Accredited Standards Committee X9, Incorporated)**

Contact: Ambria Frazier, (410) 267-7707, [Ambria.frazier@x9.org](mailto:Ambria.frazier@x9.org)  
275 West Street, Suite 107, Annapolis, MD 21401

BSR X9.100-189-201x, Savings Bond Paying Agent Virtual Stamp (new standard)

Stakeholders: Paying agents to the Bureau of Fiscal Services (redeemers of saving bonds).

Project Need: The current process for redeeming a Savings Bond involves using a rubber stamp to manually stamp and hand-write information on the face of the Savings Bond. The committee is working on legislative changes to allow Financial Institutions to use a Virtual stamp. This will leverage existing technology to automate this part of the process. A standard is necessary to provide consistency and uniformity across all paying agents using the virtual stamp.

This is a proposal to create a Standard that defines a virtual paying agent stamp for Savings Bonds. When a Savings Bond is redeemed, it is hand stamped with a paying agent stamp and the redemption amount and redemption date is hand written on the face of the bond. A virtual stamp would eliminate the manual process of hand stamping the item. A standard to define the requirements of a virtual stamp will ensure the placement, font size, and data elements of the data provided are consistent and appropriate, and will not obscure important data on the bond.

**ASSP (Safety) (American Society of Safety Professionals)**

Contact: Ovidiu Munteanu, (847) 232-2012, [OMunteanu@ASSP.org](mailto:OMunteanu@ASSP.org)  
520 N. Northwest Highway, Park Ridge, IL 60068

BSR/ASSP Z9.6-201x, Exhaust Systems for Grinding, Polishing and Buffing (revision and redesignation of ANSI/AIHA Z9.6-2008)

Stakeholders: Occupational safety and health professionals or those stakeholders designing, operating, or managing power-driven machinery to grind, polish, or buff a product without the use of a liquid coolant.

Project Need: Based upon the consensus of the Z9 Committee, occupational safety and health professionals, and the ASSP leadership.

The requirements and emission and exposure control principles described in this standard represent the minimum criteria intended to protect the health of personnel engaged in and working in the vicinity of grinding, polishing, and buffing operations and to control contaminants generated by those operations.

**ASTM (ASTM International)**

Contact: Laura Klineburger, (610) 832-9696, [accreditation@astm.org](mailto:accreditation@astm.org)  
100 Barr Harbor Drive, West Conshohocken, PA 19428-2959

BSR/ASTM D3681-201x, Standard Test Method for Chemical Resistance of Fiberglass (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe in a Deflected Condition (revision of ANSI/ASTM D3681-2012)

Stakeholders: Reinforced Plastic Piping Systems and Chemical Equipment industries.

Project Need: This test method evaluates the effect of a chemical environment on pipe when in a deflected condition. It has been found that effects of chemical environments can be accelerated by strain induced by deflection. This information is useful and necessary for the design and application of buried fiberglass pipe.

This test method covers the procedure for determining the chemical-resistant properties of fiberglass pipe in a deflected condition for diameters 4 in. (102 mm) and larger. Both glass-fiber-reinforced thermosetting resin pipe (RTRP) and glass-fiber-reinforced polymer mortar pipe (RPMP) are fiberglass pipes.

BSR/ASTM D5365-201x, Standard Test Method for Long-Term Ring-Bending Strain of Fiberglass (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe (revision of ANSI/ASTM D5365-2012)

Stakeholders: Reinforced Plastic Piping Systems and Chemical Equipment industries,

Project Need: This test method determines the long-term ring-bending strain of pipe when deflected under constant load and immersed in a chemical environment. It has been found that effects of chemical environments can be accelerated by strain induced by deflection. This information is useful and necessary for the design and application of buried fiberglass pipe.

This test method covers a procedure for determining the long-term ring-bending strain (S<sub>b</sub>) of "fiberglass" pipe. Both glass-fiber-reinforced thermosetting-resin pipe (RTRP) and glass-fiber-reinforced polymer mortar pipe (RPMP) are "fiberglass" pipes.

BSR/ASTM WK55885-201x, New Practice for Seismic Risk Assessment of Real Estate Portfolios (new standard)

Stakeholders: Whole Buildings and Facilities industries.

Project Need: Proper treatment of the complex variables associated with seismic risk assessments at multi-property portfolios requires a new, separate standard, with an appropriate stakeholder focus, and a more complex computational approach more consistent with (probabilistic) earthquake insurance models, but accommodating structural engineering input. As such, this proposed scope for seismic risk assessments of multi-property Portfolios will generally resemble the scope used for the single building standard (ASTM E2026), however with materially different multi-property components within the same framework.

Real estate portfolios for mortgage lenders and property owners often include many properties distributed across many regions or multiple states. Seismic risk assessment for a group of real estate properties (a portfolio) differs from PML investigations for a single building (as treated in ASTM E2026 and E2557). The geographical diversification of the portfolio is a fundamental characteristic that differentiates it from the investigation of a single site.



**BSR/ASTM WK64005-201x, New Test Method for Flammability and Labeling Requirements for Consumer Tents (new standard)**

Stakeholders: Camping Softgoods industry.

Project Need: This standard applies to consumer tents for outdoor use which provide shelter (including tents intended for both indoor and outdoor use), such as camping tents, backpacking tents, decorative canopy curtain, car canopies, gazebo/canopy, ice-fishing tents, dining shelters, beach shelters, and screen houses. This standard may also be used to evaluate children's toy and juvenile tents, toy-bed canopies and tents, and air-supported play tents.

This standard establishes performance requirements and test methods to evaluate the flammability of tent materials when exposed to a flame under three conditions (as received, after leaching and after weathering). Each fabric or other pliable tent material with a surface area greater than 1,000 cm<sup>2</sup>, based on a length-by-width measurement, is evaluated. This standard also establishes labeling requirements for tents, including fire safety warnings and safe use instructions to mitigate the flammability risk.

**AWWA (American Water Works Association)**

Contact: Paul Olson, (303) 347-6178, polson@awwa.org; vdauid@awwa.org  
6666 W. Quincy Ave., Denver, CO 80235

**BSR/AWWA C651a-201x, Addendum to C651-14 - Disinfecting Water Mains (new standard)**

Stakeholders: Drinking Water Treatment and Supply industry, water utilities, consulting engineers, water treatment equipment manufacturers, etc.

Project Need: The purpose of this addendum is to clarify that the scope of the standard does not apply to building/premise plumbing.

This addendum defines the scope of the standard, to exclude building/premise plumbing. The standard covers the use of high chlorination methods for disinfection of water mains, and these methods are not designed for premise plumbing disinfection.

**BSR/AWWA D115a-201x, Addendum to D115-17, Tendon-Prestressed Concrete Water Tanks (supplement to ANSI/AWWA D115-2017)**

Stakeholders: Drinking Water Treatment and Supply industry, water utilities, consulting engineers, water treatment equipment manufacturers, etc.

Project Need: The purpose of this addendum is to modify the requirements in Section 3.7.4 so that nonprestressed reinforcement, rather than all tank-reinforcing steel, shall meet the requirements of ACI 350.

This addendum describes new requirements for prestressed and nonprestressed steel reinforcement for tendon-type prestressed concrete water storage tanks.

**BICSI (Building Industry Consulting Service International)**

Contact: Jeff Silveira, (813) 903-4712, jsilveira@bicsi.org  
8610 Hidden River Parkway, Tampa, FL 33637

**BSR/BICSI 006-201x, Distributed Antenna System (DAS) Design and Implementation Best Practices (revision of ANSI/BICSI 006-2015)**

Stakeholders: Telecom designers, providers, installers; wireless system manufacturers, all industries utilizing DAS for wireless communication.

Project Need: Changes in the wireless industry, consumer use, governmental policy, and improvements in technology necessitate revision of the current American National Standard.

This standard provides industry and service provider neutral requirements and acceptable best practices for the design and installation of a DAS. For brevity, as used in this document, the terms distributed antenna system or DAS includes other in-building wireless and similar systems, such as radiating cable and small-cell networks.

**CSA (CSA Group)**

Contact: David Zimmerman, (216) 524-4990, david.zimmerman@csagroup.org  
8501 E. Pleasant Valley Road, Cleveland, OH 44131

**BSR Z21.15-201x, Manually Operated Gas Valves for Appliances, Appliance Connector Valve, and Hose End Valves (same as CSA 9.1) (revision and redesignation of ANSI Z21.15-2009 (R2014), ANSI Z21.15a-2012 (R2014), and ANSI Z21.15b-2013 (R2014))**

Stakeholders: Consumers, manufacturers, gas suppliers, certifying agencies.

Project Need: Revise the standard for safety.

Details test and examination criteria for manually operated gas valves, not exceeding 4 inches (102 mm) pipe size, and pilot shut-off devices, except for hose end valves and appliance connector valves, intended to be used as part of a gas-fired appliance.

**BSR Z21.90-201x, Gas Convenience Outlets and Optional Enclosures (same as CSA 6.24) (revision of ANSI Z21.90-2015)**

Stakeholders: Consumers, manufacturers, gas suppliers, certifying agencies.

Project Need: Revise the standard for safety.

Details test and examination criteria for manually operated gas valves, not exceeding 4 inches (102 mm) pipe size, and pilot shut-off devices, except for hose end valves and appliance connector valves, intended to be used as part of a gas-fired appliance.

BSR Z21.104-201x, Manual and Automatic Gas Selector Devices for Use with Gas-Fired Appliances (same as CSA 9.2) (new standard)

Stakeholders: Consumers, manufacturers, gas suppliers, certifying agencies.

Project Need: To provide a standard to address newly produced manually operated metallic gas shut-off valves for use with natural, manufactured, or propane gases for indoor/outdoor installations rated for with 2 psig (14 kPa) or 5 psig (kPa) and includes sizes 1/4- through 4-inch NPS and tubing sizes ¼ in through 1-inch O.D.

This Standard applies to newly produced manually operated metallic gas shut-off valves for use with natural, manufactured or propane gases for indoor/outdoor installations rated for with 2 psig (14 kPa) or 5 psig (kPa) and includes sizes 1/4- through 4-inch NPS and tubing sizes 1/4-inch through 1-inch O.D.

#### **CTA (Consumer Technology Association)**

Contact: *Veronica Lancaster, (703) 907-7697, vlancaster@cta.tech*  
1919 South Eads Street, Arlington, VA 22202

- \* ANSI/CEA 775-2-A-2008 (R2013), Service Selection Information for Digital Storage Media Interoperability (withdrawal of ANSI/CEA 775-2-A-2008 (R2013))

Stakeholders: Consumer, manufacturers, retailers.

Project Need: Withdraw ANSI/CTA 775.2-A-R-2013.

CEA-775-C standardizes the IEEE 1394 High Performance Serial Bus interface for the Digital Television (DTV) receiver. A digital storage device such as a D-VHS or hard-disk digital recorder may be used by the DTV or by another source device such as a cable set-top box to record or time-shift digital television signals.

#### **EOS/ESD (ESD Association, Inc.)**

Contact: *Christina Earl, (315) 339-6937, cearl@esda.org*  
7900 Turin Rd., Bldg. 3, Rome, NY 13440

BSR/ESD STM4.2-201x, ESD Association Standard Test Method for the Protection of Electrostatic Discharge Susceptible Items - ESD Protective Worksurfaces - Charge Dissipation Characteristics (revision of ANSI/ESD STM4.2-1998 (R2010))

Stakeholders: Electronics industry including telecom, consumer, medical, and industrial.

Project Need: The purpose of this standard test method is to aid in determining the ability of ESD protective worksurfaces to dissipate charge from a conductive test object placed on them. This ability may not be revealed through standard resistance measurements as outlined in ANSI/ESD STM4.1.

This document provides a test method that measures the charge dissipation characteristics of worksurfaces. To accomplish this, a conductive test object is charged, placed on the worksurface under test, and then removed. The resultant charge on the test object is an indicator of the ability of the tested worksurface to dissipate charge from the test object placed on it. This is only applicable however for the test object specified within this document. This standard test method is designed for use in a laboratory environment for qualification, evaluation, or acceptance of worksurfaces and not for periodic testing.

#### **HL7 (Health Level Seven)**

Contact: *Karen Van Hentenryck, (734) 677-7777, Karenvan@HL7.org*  
3300 Washtenaw Avenue, Suite 227, Ann Arbor, MI 48104

BSR/HL7 V26 IG CCHD, R1-201x, HL7 Version 2.6 Implementation Guide: Newborn Screening for Critical Congenital Heart Defects, Release 1 (new standard)

Stakeholders: EHRs, PHRs, state and local Departments of Health.

Project Need: Although this project focuses on the transmission of these data to the public health program, that is not the only potential recipient. In fact, extensive work has been done to leverage the HL7 ORU^R01 message standard to target how patient care devices can functionally interoperate. This work has been done predominately under IHE as the family of functional profiles known as PCD (for Patient Care Devices). That effort establishes how actors in a process can use the HL7 message to enable different system actors to participate in such an exchange with fidelity. Specifically, the profile PCD-01 describes the functional profile that could apply to pulse oximetry screening data. In order to allow CCHD screening data to benefit from that extensive body of existing work, we will endeavor to follow the implementation constraints they required.

This guide will focus on standardizing how critical congenital heart defects (CCHD) newborn screening information is transmitted from a point-of-care device to an interested consumer such as public health.

BSR/HL7 V26 IG EHDI, R1-201x, HL7 Version 2.6 Implementation Guide: Early Hearing Detection and Intervention (EHDI), Release 1 (new standard)

Stakeholders: EHRs, PHRs, state and local Departments of Health.

Project Need: Although this project focuses on the transmission of these data to the public health program, that is not the only potential recipient. In fact, extensive work has been done to leverage the HL7 ORU^R01 message standard to target how patient care devices can functionally interoperate. This work has been done predominately under IHE as the family of functional profiles known as PCD (for Patient Care Devices). That effort establishes how actors in a process can use the HL7 message to enable different system actors to participate in such an exchange with fidelity. Specifically, the profile PCD-01 describes the functional profile that could apply to hearing screening data. In order to allow hearing screening to benefit from that extensive body of existing work, we will endeavor to follow the implementation constraints they required.

This guide will focus on standardizing how newborn hearing screening information is transmitted from a point-of-care device to an interested consumer such as public health.

BSR/HL7 V26 IG VRDR, R1-US Realm-201x, HL7 Version 2.6 Implementation Guide: Vital Records Death Reporting, Release 1 - US Realm (new standard)

Stakeholders: EHRs, PHRs, state and local Departments of Health

Project Need: The current HL7 CDA Vital Records Death Reporting Draft Standard for Trial Use (DSTU) was designed to provide a document standard to support interoperable electronic data exchanges among electronic health record systems, United States (U.S.) vital records (VR) systems and potentially other public information systems for death events. The DSTU was limited to a subset of the content required for death reporting that may be transmitted from the health care organizations' electronic health record systems to their state/jurisdictional Vital Statistics Agency based on the U. S. Standard Certificate of Death. The Scope Statement for the initial DSTU noted 'In a later stage, the CDC/NCHS will also explore the potential to use the same standard to transmit vital records death reporting information from the state Vital Statistics Offices to the CDC/NCHS. Normative Release 1 addresses this reporting need. State and jurisdictional Vital Records representatives have expressed the need for both a messaging and document standard approach for VR death reporting to support individual state/jurisdictional implementation requirements.

This standard includes a comprehensive representation of the information state/jurisdictional Vital Reporting (VR) agencies must provide to the CDC/NCHS for death reporting events. Additionally, it will support reporting from CDC/NCHS back to the state/jurisdictional Vital Statistics agencies. This CDA IG will provide a document standard that represents the same content supported by the HL7 V2.6 VRDR IG Rel 2.

#### **NEBB (National Environmental Balancing Bureau)**

Contact: *Bohdan Fedyk, (301) 977-3968, don@nebb.org*  
*8575 Grovemont Circle, Gaithersburg, MD 20877*

BSR/NEBB S110-201x, Whole Building Technical Commissioning of New Construction (revision of ANSI/NEBB S110-2018)

Stakeholders: Private and government building owners and building operators, commissioners, and testing firms.

Project Need: Revise Normative Appendix A only, to include the new instrument list in the current American National Standard.

This standard describes the technical commissioning procedures utilized for newly installed or retrofitted buildings technical systems. It defines the technical work procedures and technical testing processes that are required to facilitate fully functional systems. The standard covers all technical building systems such as Building Enclosure, HVAC, Controls, Plumbing, Fire Protection, Electrical, Lighting, Specialty Electrical, Communications, and Renewable Energy Systems. It defines the commissioning inspection and testing technical processes and provides sample guidelines for attaining optimal system performance and functionality, for those systems commissioned that conforms to design, specification, and industry-accepted codes and standards. This standard may be utilized in tandem with existing commissioning process standards as a technical performance standard.

BSR/NEBB S120-201x, Technical Retro-Commissioning of Existing Buildings Standard (revision and redesignation of ANSI/NEBB S120-2016, Rev. 1-2017)

Stakeholders: Private and government building owners and building operators, commissioners, and testing firms.

Project Need: Revise Normative Appendix A only, to include the new instrument list in the current American National Standard.

This standard describes the technical retro-commissioning procedures utilized for existing building technical systems such as HVAC, Controls, Plumbing, Electrical, Lighting, Specialty Electrical and Renewable Energy Systems for the improvement and optimization of Indoor Environmental Quality, Comfort and Energy & Water utility usage reduction. It defines the technical work procedures, testing and system adjustments that are required to improve system performance by optimizing existing systems. This standard may be utilized in tandem with existing energy audit standards as a technical performance standard.

#### **NECA (National Electrical Contractors Association)**

Contact: *Melissa West, (301) 215-4544, melissa.west@necanet.org*  
*3 Bethesda Metro Center, Suite 1100, Bethesda, MD 20814*

BSR/NECA 331-201x, Standard for Installing Building and Service Entrance Grounding and Bonding (new standard)

Stakeholders: Electrical contractors, electrical workers, designers and engineers, and building or facility owners.

Project Need: National Electrical Installation Standards (developed by NECA in partnership with other industry organizations) are the first performance standards for electrical construction. They go beyond the basic safety requirements of the National Electrical Code to clearly define what is meant by installing products and systems in a "neat and workmanlike" manner.

This standard describes installation procedures for building and service-entrance grounding as well as building interior bonding and grounding. The information provided in this standard is intended to define what is meant by installing equipment in a "neat and workmanlike manner" as required by the National Electrical Code® (ANSI/NFPA 70) (NEC), Section 110.12, and in accordance with "accepted good practice" as required by National Electrical Safety Code (R) (ANSI/IEEE C2) (NESC), Rule 012.C.

**NEMA (ASC C136) (National Electrical Manufacturers Association)**

Contact: Dejan Lenasi, (778) 386-9190, [dejan.lenasi@signify.com](mailto:dejan.lenasi@signify.com)  
1300 North 17th Street, Suite 900, Rosslyn, VA 22209

BSR NEMA ASC C136-201x, Luminaire - Four-Pin Extension Module and Receptacle - Physical and Electrical Interchangeability and Testing (new standard)

Stakeholders: Producers, specifiers, users, installers.

Project Need: Technologies and standards are evolving rapidly in the dynamic smart city environment. Luminaires are uniquely identified and seamlessly integrated into the IT network in a building or city and share information about their status and operations. Outfitted with integrated sensors, each luminaire becomes a point of intelligence that can share information from street lights to power meters to traffic signals, on activity patterns, changes in temperature or humidity and beyond. The lighting industry is currently undergoing a paradigm shift from conventional lighting to LED Connected Lighting Systems. By describing a connectivity fit system for smart outdoor luminaires, Book 18 marks ZHAGA's first contribution to the rapidly emerging world of smart lighting. Side-by-side with ZHAGA, NEMA (ASC C136) is paving the way for large-scale penetration of connectivity into outdoor lighting installations by developing a new C136 series standard on connectivity fit systems. While ZHAGA Book 18 defines a standardized interface between an outdoor LED luminaire and a sensing/communication module that sits on the outside of the luminaire, NEMA (ASC C136) is dedicated to integrating the interface set in Book 18 with streamlined design and manufacture of versatile connector for outdoor luminaires which includes a socketed receptacle (LEX-R) that allows a compatible sensing/communication module (LEX-M) to be easily removed and replaced.

This Standard defines the following roadway and area lighting equipment, which may be physically and electrically interchanged to operate within established values: (a) A locking-type 4-pin Luminaire Extension Module (LEX-M), (b) A locking-type mating 4-pin Luminaire Extension Receptacle (LEX-R), and (c) A Luminaire Extension Cap (LEX-C). This equipment is primarily intended for outdoor application and it may also be used indoors. This equipment provides mechanical and electrical specification for the interfaces between a LEX-M (sensor/communication module) and LEX-R (electrical part of LED luminaire) using a voltage up to 60 V dc max. The LEX-C is used to cover the receptacle in case no LEX-M is used with LEX-R. In this case, the mechanical specification for the interfaces between a LEX-R and LEX-C is provided. This equipment is a plug-and-play interface used with outdoor luminaires to add connectivity and/or sensing functions. The plug-and-play interface supports future system and services upgrades. Outside of Scope: (a) Modules directly connected to the mains; (b) The functionality of the actual sensor/communication module; (c) The mounting method of the receptacle to the luminaire, including anti-rotation means; (d) The electrical interconnection between receptacle and the driver as per ANSI C137.4. This standard builds on the interface specified in the ZHAGA Book-18 standards, by adding specific requirements of the mechanical and electrical properties of a device. As a result, the ZHAGA and ANSI requirements for LEX-M, LEX-R, and LEX-C would be harmonized, allowing plug-and-play interchangeability.

**NFSI (National Floor Safety Institute)**

Contact: Russell Kendzior, (817) 749-1700, [russk@nfsi.org](mailto:russk@nfsi.org)  
P.O. Box 92607, Southlake, TX 76092

BSR/NFSI B101.11-201x, Standard for the prevention of climate related slips, trips and falls (new standard)

Stakeholders: General public, consumers, leisure/recreational, commercial, mercantile, household, and manufacturers.

Project Need: To create a standard for the prevention of climate-related slips, trips, and falls (i.e., snow, ice, rain, etc.).

The standard will address the prevention of climate-related slips, trips, and falls (i.e., snow, ice, rain, etc.).

**SPRI (Single Ply Roofing Industry)**

Contact: Linda King, (781) 647-7026, [info@spri.org](mailto:info@spri.org)  
465 Waverley Oaks Road, Suite 421, Waltham, MA 02452

BSR/SPRI RP-4-201x, Wind Design Standard for Ballasted Single-Ply Roofing Systems (revision of ANSI/SPRI RP-4-2013)

Stakeholders: Building owners, code officials, architects, designers, specifiers, engineers, roofing consultants, roofing contractors, roofing material manufacturers.

Project Need: Review as per the 5-year requirement and update with current industry information.

This standard provides a method of designing wind uplift resistance of ballasted single-ply roofing systems. It is intended as a design and installation reference for those individuals who design, specify, and install ballasted single-ply roofing systems. It shall be used in conjunction with the installation specifications and requirements of the manufacturer of the specific products used in the ballasted single-ply roofing system.

**UL (Underwriters Laboratories, Inc.)**

Contact: Heather Sakellariou, (847) 664-2346, [Heather.Sakellariou@ul.com](mailto:Heather.Sakellariou@ul.com)  
333 Pfingsten Road, Northbrook, IL 60062-2096

BSR/UL 4600-201x, Standard for Safety for the Evaluation of Autonomous Products (new standard)

Stakeholders: Autonomous Products industry.

Project Need: To obtain national recognition of a standard covering safety principles and processes for evaluation of autonomous products and their ability to perform the intended function without human intervention.

This standard covers the safety principles and processes for evaluation of autonomous products, specifically their ability to perform the intended function without human intervention based on their current state and sensing of the operating environment. The standard also covers the reliability of hardware and software necessary for machine learning, sensing of the operating environment, and other safety aspects of autonomy. These requirements do not address the specific intended function (e.g., surface cleaning), which is covered by the individual product safety standard. These requirements do not cover industrial vehicles.

# American National Standards Maintained Under Continuous Maintenance

The ANSI Essential Requirements: Due Process Requirements for American National Standards provides two options for the maintenance of American National Standards (ANS): periodic maintenance (see clause 4.7.1) and continuous maintenance (see clause 4.7.2). Continuous maintenance is defined as follows:

The standard shall be maintained by an accredited standards developer. A documented program for periodic publication of revisions shall be established by the standards developer. Processing of these revisions shall be in accordance with these procedures. The published standard shall include a clear statement of the intent to consider requests for change and information on the submittal of such requests. Procedures shall be established for timely, documented consensus action on each request for change and no portion of the standard shall be excluded from the revision process. In the event that no revisions are issued for a period of four years, action to reaffirm or withdraw the standard shall be taken in accordance with the procedures contained in the ANSI Essential Requirements.

The Executive Standards Council (ExSC) has determined that for standards maintained under the Continuous Maintenance option, separate PINS announcements are not required. The following ANSI Accredited Standards Developers have formally registered standards under the Continuous Maintenance option

- AAMI (Association for the Advancement of Medical Instrumentation)
- AARST (American Association of Radon Scientists and Technologists)
- AGA (American Gas Association)
- AGSC-AGRSS (Auto Glass Safety Council)
- ASC X9 (Accredited Standards Committee X9, Incorporated)
- ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)
- ASME (American Society of Mechanical Engineers)
- ASTM (ASTM International)
- GBI (Green Building Initiative)
- HL7 (Health Level Seven)
- IES (Illuminating Engineering Society)
- MHI (Material Handling Industry)
- NAHBRC (NAHB Research Center, Inc.)
- NBBPVI (National Board of Boiler and Pressure Vessel Inspectors)
- NCPDP (National Council for Prescription Drug Programs)
- NEMA (National Electrical Manufacturers Association)
- NISO (National Information Standards Organization)
- NSF (NSF International)
- PRCA (Professional Ropes Course Association)
- RESNET (Residential Energy Services Network, Inc.)
- SAE (SAE International)
- TCNA (Tile Council of North America)
- TIA (Telecommunications Industry Association)
- UL (Underwriters Laboratories, Inc.)

To obtain additional information with regard to these standards, including contact information at the ANSI Accredited Standards Developer, please visit ANSI Online at [www.ansi.org/asd](http://www.ansi.org/asd), select "Standards Activities," click on "Public Review and Comment" and "American National Standards Maintained Under Continuous Maintenance." This information is also available directly at [www.ansi.org/publicreview](http://www.ansi.org/publicreview)

Alternatively, you may contact the Procedures & Standards Administration department (PSA) at [psa@ansi.org](mailto:psa@ansi.org) or via fax at 212-840-2298. If you request that information be provided via E-mail, please include your E-mail address; if you request that information be provided via fax, please include your fax number. Thank you.

# ANSI-Accredited Standards Developers Contact Information

The addresses listed in this section are to be used in conjunction with standards listed in PINS, Call for Comment and Final Actions. This section is a list of developers who have submitted standards for this issue of *Standards Action* – it is not intended to be a list of all ANSI-Accredited Standards Developers. Please send all address corrections to Standards Action Editor at [standact@ansi.org](mailto:standact@ansi.org).

<b>AABC</b> Associated Air Balance Council 1518 K Street NW Suite 503 Washington, DC 20005 Phone: (202) 737-0202 Web: <a href="http://www.aabc.com">www.aabc.com</a>	<b>ASSP (Safety)</b> American Society of Safety Professionals 520 N. Northwest Highway Park Ridge, IL 60068 Phone: (847) 232-2012 Web: <a href="http://www.asse.org">www.asse.org</a>	<b>ECIA</b> Electronic Components Industry Association 2214 Rock Hill Road Suite 265 Herndon, VA 20170-4212 Phone: (571) 323-0294 Web: <a href="http://www.ecianow.org">www.ecianow.org</a>	<b>NECA</b> National Electrical Contractors Association 3 Bethesda Metro Center Suite 1100 Bethesda, MD 20814 Phone: (301) 215-4544 Web: <a href="http://www.neca-neis.org">www.neca-neis.org</a>
<b>AAFS</b> American Academy of Forensic Sciences 410 North 21st Street Colorado Springs, CO 80904 Phone: (719) 453-1036 Web: <a href="http://www.aafs.org">www.aafs.org</a>	<b>ASTM</b> ASTM International 100 Barr Harbor Drive West Conshohocken, PA 19428-2959 Phone: (610) 832-9696 Web: <a href="http://www.astm.org">www.astm.org</a>	<b>EOS/ESD</b> ESD Association, Inc. 7900 Turin Rd., Bldg. 3 Rome, NY 13440 Phone: (315) 339-6937 Web: <a href="http://www.esda.org">www.esda.org</a>	<b>NEMA (ASC C136)</b> National Electrical Manufacturers Association 1300 North 17th Street Suite 900 Rosslyn, VA 22209 Phone: (773) 386-9190 Web: <a href="http://www.nema.org">www.nema.org</a>
<b>ADA (Organization)</b> American Dental Association 211 East Chicago Avenue Chicago, IL 60611-2678 Phone: (312) 587-4129 Web: <a href="http://www.ada.org">www.ada.org</a>	<b>AWI</b> Architectural Woodwork Institute 46179 Westlake Drive, Ste 120 Potomac Falls, VA 20165 Phone: (571) 323-3636 Web: <a href="http://www.awinet.org">www.awinet.org</a>	<b>HL7</b> Health Level Seven 3300 Washtenaw Avenue Suite 227 Ann Arbor, MI 48104 Phone: (734) 677-7777 Web: <a href="http://www.hl7.org">www.hl7.org</a>	<b>NFSI</b> National Floor Safety Institute P.O. Box 92607 Southlake, TX 76092 Phone: (817) 749-1700 Web: <a href="http://www.nfsi.org">www.nfsi.org</a>
<b>API</b> American Petroleum Institute 1220 L Street, NW Washington, DC 20005 Phone: (202) 682-8286 Web: <a href="http://www.api.org">www.api.org</a>	<b>AWS</b> American Welding Society 8669 NW 36 ST., #130 Miami, FL 33166 Phone: (800) 443-9353 Web: <a href="http://www.aws.org">www.aws.org</a>	<b>IEEE (ASC C63)</b> Institute of Electrical and Electronics Engineers 445 Hoes Lane Piscataway, NJ 08854 Phone: (732) 562-3874 Web: <a href="http://standards.ieee.org">standards.ieee.org</a>	<b>NSF</b> NSF International 789 N. Dixboro Road Ann Arbor, MI 48105-9723 Phone: (734) 827-6866 Web: <a href="http://www.nsf.org">www.nsf.org</a>
<b>ASC X9</b> Accredited Standards Committee X9, Incorporated 275 West Street Suite 107 Annapolis, MD 21401 Phone: (410) 267-7707 Web: <a href="http://www.x9.org">www.x9.org</a>	<b>AWWA</b> American Water Works Association 6666 W. Quincy Ave. Denver, CO 80235 Phone: (303) 347-6178 Web: <a href="http://www.awwa.org">www.awwa.org</a>	<b>IIAR</b> International Institute of Ammonia Refrigeration 1001 North Fairfax Street Alexandria, VA 22314 Phone: (703) 312-4200 Web: <a href="http://www.iiar.org">www.iiar.org</a>	<b>SPRI</b> Single Ply Roofing Industry 465 Waverley Oaks Road Suite 421 Waltham, MA 02452 Phone: (781) 647-7026 Web: <a href="http://www.spri.org">www.spri.org</a>
<b>ASHRAE</b> American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. 1791 Tullie Circle NE Atlanta, GA 30329 Phone: (678) 539-1209 Web: <a href="http://www.ashrae.org">www.ashrae.org</a>	<b>BICSI</b> Building Industry Consulting Service International 8610 Hidden River Parkway Tampa, FL 33637 Phone: (813) 903-4712 Web: <a href="http://www.bicsi.org">www.bicsi.org</a>	<b>InfoComm</b> InfoComm International Phone: (703) 273-7200 Web: <a href="http://www.infocomm.org">www.infocomm.org</a>	<b>UL</b> Underwriters Laboratories, Inc. 333 Pfingsten Road Northbrook, IL 60062-2096 Phone: (847) 664-2346 Web: <a href="http://www.ul.com">www.ul.com</a>
<b>ASME</b> American Society of Mechanical Engineers Two Park Avenue New York, NY 10016-5990 Phone: (212) 591-8521 Web: <a href="http://www.asme.org">www.asme.org</a>	<b>CSA</b> CSA Group 8501 E. Pleasant Valley Road Cleveland, OH 44131 Phone: (216) 524-4990 Web: <a href="http://www.csagroup.org">www.csagroup.org</a>	<b>ITI (INCITS)</b> InterNational Committee for Information Technology Standards 1101 K Street, NW Suite 610 Washington, DC 20005-3922 Phone: (202) 737-8888 Web: <a href="http://www.incits.org">www.incits.org</a>	<b>VITA</b> VMEbus International Trade Association (VITA) 929 W. Portobello Avenue Mesa, AZ 85210 Phone: (602) 281-4497 Web: <a href="http://www.vita.com">www.vita.com</a>
<b>ASQ (ASC Z1)</b> American Society for Quality 600 N Plankinton Ave Milwaukee, WI 53203 Phone: (800) 248-1946 Web: <a href="http://www.asq.org">www.asq.org</a>	<b>CTA</b> Consumer Technology Association 1919 South Eads Street Arlington, VA 22202 Phone: (703) 907-7697 Web: <a href="http://www.cta.tech">www.cta.tech</a>	<b>NEBB</b> National Environmental Balancing Bureau 8575 Grovemont Circle Gaithersburg, MD 20877 Phone: (301) 977-3968 Web: <a href="http://www.nebb.org">www.nebb.org</a>	



# ISO & IEC Draft International Standards

This section lists proposed standards that the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC) are considering for approval. The proposals have received substantial support within the technical committees or subcommittees that developed them and are now being circulated to ISO and IEC members for comment and vote. Standards Action readers interested in reviewing and commenting on these documents should order copies from ANSI.

## Comments

Comments regarding ISO documents should be sent to ANSI's ISO Team (isot@ansi.org); comments on IEC documents must be submitted electronically in the approved ISO template and as a Word document as other formats will not be accepted.

Those regarding IEC documents should be sent to Tony Zertuche, General Secretary, USNC/IEC, at ANSI's New York offices (tzertuche@ansi.org). The final date for offering comments is listed after each draft.

## Ordering Instructions

**ISO and IEC Drafts can be made available by contacting ANSI's Customer Service department. Please e-mail your request for an ISO or IEC Draft to Customer Service at sales@ansi.org. When making your request, please provide the date of the Standards Action issue in which the draft document you are requesting appears.**

## ISO Standards

### AGRICULTURAL FOOD PRODUCTS (TC 34)

ISO/DIS 17059, Oilseeds - Extraction of oil and preparation of methyl esters of triglyceride fatty acids for analysis by gas chromatography (Rapid method) - 9/3/2018, \$40.00

### CLINICAL LABORATORY TESTING AND IN VITRO DIAGNOSTIC TEST SYSTEMS (TC 212)

ISO/DIS 20776-1, Susceptibility testing of infectious agents and evaluation of performance of antimicrobial susceptibility test devices - Part 1: Broth micro-dilution reference method for testing the in vitro activity of antimicrobial agents against rapidly growing aerobic bacteria involved in infectious diseases - 7/20/2018, \$77.00

### DIMENSIONAL AND GEOMETRICAL PRODUCT SPECIFICATIONS AND VERIFICATION (TC 213)

ISO/DIS 10360-5, Geometrical product specifications (GPS) - Acceptance and reverification tests for coordinate measuring systems (CMS) - Part 5: CMMs using single and multiple stylus contacting probing systems using discrete point and/or scanning measuring mode - 7/22/2018, \$107.00

### DOCUMENT IMAGING APPLICATIONS (TC 171)

ISO/DIS 22550, Document management - AFP interchange for PDF - 9/15/2018, \$112.00

### EARTH-MOVING MACHINERY (TC 127)

ISO/DIS 6750-1, Earth-moving machinery - Operators manual - Part 1: Contents and format - 9/20/2018, \$93.00

### FREIGHT CONTAINERS (TC 104)

ISO/DIS 20854, Freight Container - Thermal containers - Safety standard for refrigerating systems using flammable refrigerants - Requirements for design and operation - 9/21/2018, \$134.00

### GEOGRAPHIC INFORMATION/GEOMATICS (TC 211)

ISO 19150-2/DAMd1, Geographic information - Ontology - Part 2: Rules for developing ontologies in the Web Ontology Language (OWL) - Amendment 1 - 7/22/2018, \$33.00

### GLASS IN BUILDING (TC 160)

ISO/DIS 22509, Glass in building - Heat strengthened soda lime silicate glass - 9/20/2018, \$98.00

### INTERNAL COMBUSTION ENGINES (TC 70)

ISO/DIS 8178-9, Reciprocating internal combustion engines - Exhaust emission measurement - Part 9: Test cycles and test procedures for measurement of exhaust gas smoke emissions from compression ignition engines using an Opacimeter - 7/19/2018, \$134.00

### MACHINE TOOLS (TC 39)

ISO/DIS 16092-2, Machine tools safety - Presses - Part 2: Safety requirement for mechanical presses - 9/21/2018, \$134.00  
ISO/DIS 16092-4, Machine tools safety - Presses - Part 4: Safety requirements for pneumatic presses - 9/21/2018, \$112.00

### MEDICAL DEVICES FOR INJECTIONS (TC 84)

ISO/DIS 20069, Guidance for assessment and evaluation of changes to drug delivery systems - 7/21/2018, \$102.00

### OPTICS AND OPTICAL INSTRUMENTS (TC 172)

ISO/DIS 19056-2, Microscopes - Definition and measurement of illumination properties - Part 2: Illumination properties related to the colour in bright field microscopy - 7/22/2018, \$40.00  
ISO/DIS 10110-12, Optics and photonics - Preparation of drawings for optical elements and systems - Part 12: Aspheric surfaces - 7/19/2018, \$88.00

### PAINTS AND VARNISHES (TC 35)

ISO/DIS 17872, Paints and varnishes - Guidelines for the introduction of scribe marks through coatings on metallic panels for corrosion testing - 9/16/2018, \$82.00



ISO/DIS 23321, Solvents for paints and varnishes - Demineralized water for industrial applications - Specification and test methods - 9/16/2018, \$33.00

ISO/DIS 23322, Paints and varnishes - Determination of solvents in coating materials containing organic solvents only - Gas-chromatographic method - 9/16/2018, \$46.00

#### **SHIPS AND MARINE TECHNOLOGY (TC 8)**

ISO/DIS 6218, Inland navigation vessels - Manually- and power-operated coupling devices for rope connections of pushing units and coupled vessels - Safety requirements and main dimensions - 7/23/2018, \$71.00

ISO/DIS 29400, Ships and marine technology - Offshore wind energy - Port and marine operations - 7/21/2018, \$203.00

#### **STEEL (TC 17)**

ISO/DIS 11484, Steel products - Employers qualification system of non-destructive testing (NDT) personnel - 11/9/2029, \$71.00

#### **SURFACE CHEMICAL ANALYSIS (TC 201)**

ISO/DIS 20903, Surface chemical analysis - Auger electron spectroscopy and X-ray photoelectron spectroscopy - Methods used to determine peak intensities and information required when reporting results - 7/21/2018, \$71.00

#### **TEXTILES (TC 38)**

ISO/DIS 1833-10, Textiles - Quantitative chemical analysis - Part 10: Mixtures of triacetate or polylactide with certain other fibres (method using dichloromethane) - 7/20/2018, \$29.00

ISO/DIS 1833-21, Textiles - Quantitative chemical analysis - Part 21: Mixtures of chlorofibres, certain modacrylics, certain elastanes, acetates, triacetates with certain other fibres (method using cyclohexanone) - 7/21/2018, \$33.00

ISO/DIS 1833-28, Textiles - Quantitative chemical analysis - Part 28: Mixtures of chitosan with certain other fibers (method using diluted acetic acid) - 9/21/2018, \$33.00

#### **TOBACCO AND TOBACCO PRODUCTS (TC 126)**

ISO/DIS 22486, Water pipe tobacco smoking machine - Definitions and standard conditions - 9/16/2018, \$58.00

#### **WATER QUALITY (TC 147)**

ISO/DIS 22908, Water quality - Radium 226 and radium 228 - Test method using liquid scintillation counting - 9/17/2018, \$98.00

#### **WELDING AND ALLIED PROCESSES (TC 44)**

ISO 15614-1/DAmD1, Specification and qualification of welding procedures for metallic materials - Welding procedure test - Part 1: Arc and gas welding of steels and arc welding of nickel and nickel alloys- Amendment 1 - 9/16/2018, \$29.00

### **ISO/IEC JTC 1, Information Technology**

ISO/IEC DIS 10373-7, Identification cards - Test methods - Part 7: Vicinity cards - 7/21/2018, \$119.00

ISO/IEC DIS 20547-3, Information technology - Big data reference architecture - Part 3: Reference architecture - 7/20/2018, \$119.00

ISO/IEC DIS 29192-6, Information technology - Security techniques - Lightweight cryptography - Part 6: Message authentication codes (MACs) - 9/21/2018, \$88.00

ISO/IEC DIS 29192-7, Information technology - Security techniques - Lightweight cryptography - Part 7: Broadcast authentication protocols - 9/20/2018, \$46.00

ISO/IEC DIS 14496-32, Information technology - Coding of audio-visual objects - Part 32: File format reference software and conformance - 9/21/2018, \$77.00

## **IEC Standards**

2/1913/CDV, IEC 60034-3 ED7: Rotating electrical machines - Part 3: Specific requirements for synchronous generators driven by steam turbines or combustion gas turbines and for synchronous compensators, 2018/9/21

10/1064/CD, IEC 62975 ED1: Natural esters - Guidelines for maintenance and use in electrical equipment, 2018/9/21

21A/665/CD, IEC 63115-1 ED1: Secondary cells and batteries containing alkaline or other non-acid electrolytes - Sealed nickel-metal hydride rechargeable cells and modules for use in industrial applications - Part 1: Performance, 2018/9/21

22F/495/CD, IEC TR 62544/AMD2 ED1: High-voltage direct current (HVDC) systems - Application of active filters, 2018/8/24

23E/1067/DC, Document for comments: Residual current operated circuit-breakers for household and similar use - Part 62873-80-1-4: Requirements - Mechanical design - Screws, current-carrying parts and connections, 018/9/7/

23E/1066/DC, Document for comments: Residual current operated circuit-breakers for household and similar use - Part 62873-80-1-3: Requirements - Mechanical design - Clearances and creepage distances, 018/9/7/

23E/1068/DC, Document for comments: Residual current operated circuit-breakers for household and similar use - Part 62873-80-1-5: Requirements - Mechanical design - Terminals for external conductors, 018/9/7/

23E/1069/DC, Document for comments: Residual current operated circuit-breakers for household and similar use - Part 62873-80-1-6: Requirements - Mechanical design - Non-interchangeability, 018/9/7/

23G/408/FDIS, IEC 60320-3/AMD1 ED1: Appliance couplers for household and similar general purposes - Part 3: Standard sheets and gauges, 2018/8/10

26/659/CD, IEC 62135-2 ED3: Resistance welding equipment - Part 2: Electromagnetic compatibility (EMC) requirements, 2018/8/24

34A/2100/DC, Document for Comment: IEC 61549 Amd 4 - Fragment retention lamps - Sheet 61549-IEC-810, 2018/9/21

34B/1992A/CD, IEC 60061-3/AMD57 ED3: Amendment 57 - Lamp caps and holders together with gauges for the control of interchangeability and safety - Part 3: Gauges, 2018/8/24

46F/420/CDV, IEC 61169-64 ED1: Radio Frequency Connectors - Part 64: Sectional specification for RF coaxial connectors with 0.8 mm inner diameter of outer conductor - Characteristic impedance 50  $\Omega$  (type-0.8), 2018/9/21

47A/1050/CDV, IEC 62228-3 ED1: Integrated circuits - EMC evaluation of transceivers - Part 3: CAN transceivers, 2018/9/21

47E/614/NP, PNW 47E-614: Future 60747-19-2: Semiconductor devices - Part 19-2: Smart sensors - Indication of specifications of low-power smart sensors allowing autonomous power supply operation, 2018/9/21

47E/615/CD, IEC 60747-19-1 ED1: Semiconductor devices - Part 19-1: Smart sensors - Control scheme of smart sensors, 2018/9/21

- 47E/619/NP, PNW 47E-619: Future IEC 60747-5-11: Semiconductor devices - Part 5-11: Optoelectronic devices - Light emitting diodes - Test method of radiative and nonradiative currents of light emitting diodes, 2018/9/21
- 59A/218/CD, IEC 60436/AMD1 ED4: Amendment 1 - Electric dishwashers for household use - Methods for measuring the performance, 2018/9/21
- 59F/352/CD, IEC 60704-2-1 ED4: Household and similar electrical appliances - Test code for the determination of airborne acoustical noise - Part 2-1: Particular requirements for vacuum cleaners, 2018/8/24
- 61/5707/CD, IEC 60335-1/FRAG10 ED6: Household and similar electrical appliances - Safety - Part 1: General requirements, 2018/8/24
- 61B/611/CDV, IEC 60335-2-25/FRAG5 ED7: Household and similar electrical appliances - Safety - Part 2-25 (f5): Particular requirements for microwave ovens, including combination microwave ovens, 2018/9/21
- 61B/612/CDV, IEC 60335-2-90/AMD1/FRAG6 ED4: Amendment 1 (f6) - Household and similar electrical appliances - Safety - Part 2-90: Particular requirements for commercial microwave ovens, 2018/9/21
- 61C/757/NP, PNW 61C-757: Household and similar electrical appliances - Safety - Part 2-11x: Particular requirements for professional ice-cream makers, 2018/9/21
- 62D/1610/CD, ISO 81060-3 ED1: Non-invasive sphygmomanometers - Part 3: Clinical investigation of continuous non-invasive automated measurement type, 2018/8/24
- 64/2298/FDIS, IEC 60364-8-2 ED1: Low-voltage electrical installations - Part 8-2: Prosumer's low-voltage electrical installations, 2018/8/10
- 65/701/FDIS, IEC 62881 ED1: Cause and Effect Matrix, 2018/8/10
- 65B/1117/CDV, IEC 63144 ED1: Industrial Process Control Devices - Thermographic Imagers - Metrological Characterization and Calibration of Thermographic Imagers, 2018/9/21
- 65E/606/CD, IEC TR 62541-2 ED3: OPC unified architecture - Part 2: Security Model, 2018/9/21
- 65E/605/CD, IEC TR 62541-1 ED3: OPC unified architecture - Part 1: Overview and concepts, 2018/9/21
- 66/672/CDV, IEC 61010-2-033 ED2: Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 2 -033: Particular requirements for hand-held multimeters and other meters, for domestic and professional use, capable of measuring mains voltage, 2018/9/21
- 66/674/CDV, IEC 61010-2-120 ED2: Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 2 -120: Particular safety requirements for machinery aspects of equipment, 2018/9/21
- 66/673/CDV, IEC 61010-2-032 ED4: Safety requirements for electrical equipment for measurement, control and laboratory use - Part 2 -032: Particular requirements for hand-held and hand-manipulated current sensors for electrical test and measurement, 2018/9/21
- 82/1447/DTS, IEC TS 63019 ED1: Information model for availability of photovoltaic (PV) power systems, 2018/9/21
- 82/1448/CD, IEC TS 63140 ED1: Photovoltaic (PV) modules - Partial shade endurance testing for monolithically integrated products, 2018/9/21
- 85/644/FDIS, IEC 61557-12 ED2: Electrical safety in low voltage distribution systems up to 1 000 V a.c. and 1 500 V d.c. - Equipment for testing, measuring or monitoring of protective measures - Part 12: Power metering and monitoring devices (PMD), 2018/8/10
- 86/534/CDV, IEC 62129-3 ED1: Calibration of wavelength/optical frequency measurement instruments - Part 3: Optical frequency meters internally referenced to a frequency comb, 2018/9/21
- 86C/1535/CD, IEC 61280-4-5 ED1: Fibre-optic communication subsystem test procedures - Part 4-5: Installed cable plant - Attenuation measurement of MPO terminated fibre optic cable plant using test equipment with MPO interfaces, 2018/9/21
- 86C/1528/CDV, IEC 61280-4-1 ED3: Fibre-optic communication subsystem test procedures - Part 4-1: Installed cable plant - Multimode attenuation measurement, 2018/9/21
- 91/1513/CDV, IEC 60068-2-69/AMD1 ED3: Environmental testing - Part 2-69: Tests - Test Te/Tc: Solderability testing of electronic components and printed boards by the wetting balance (force measurement) method, 2018/9/21
- 95/386/CDV, IEC 60255-26 ED4: Measuring relays and protection equipment - Part 26: Electromagnetic compatibility requirements, 2018/9/21
- 97/195/CD, IEC 63067 ED1: Electrical installations for lighting and beaconing of aerodromes - Connecting devices - General requirements and tests, 2018/9/21
- 105/688/CDV, IEC 62282-8-101 ED1: Fuel cell technologies - Part 8 -101: Energy storage systems using fuel cell modules in reverse mode - Test procedures for solid oxide single cell and stack performance including reversible operation, 2018/9/21
- 107/335/CDV, IEC 62668-1 ED1: Process management for avionics - Counterfeit prevention - Part 1: Avoiding the use of counterfeit, fraudulent and recycled electronic components, 2018/9/21
- 110/996/CD, IEC 63145-20-10 ED1: Eyewear display - Part 20-10: Fundamental measurement methods - Optical properties, 2018/8/24
- 110/997/CD, IEC 63145-22-10 ED1: Eyewear display - Part 22-10: Specific measurement methods for AR type - Optical properties, 2018/8/24
- 113/432/CD, IEC TS 62607-5-3: Nanomanufacturing - Key control characteristics - Part 5-3: Thin-film organic/nano electronic devices - Measurements of charge carrier concentration, 2018/8/24
- 113/434/NP, PNW 113-434 ED1: IEC TS 62607-6-10: Nanomanufacturing - Key control characteristics - Part 6-10: Graphene - Measurement of sheet resistance by terahertz time-domain spectroscopy, 2018/9/21
- CIS/F/739/CDV, CISPR 14-1/AMD1/FRAG3 ED6: Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 1: Emission, 2018/9/21
- CIS/F/740/CDV, CISPR 14-2/AMD1/FRAG1 ED2: Fragment 1 of Amendment 1: Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 2: Immunity - Product family standard, 2018/9/21
- JTC1-SC41/51/NP, PNW JTC1-SC41-51: Internet of Things (IoT) - Application framework for industrial facility demand response energy management, 2018/9/21
- JTC1-SC41/52/NP, PNW JTC1-SC41-52: Internet of Things (IoT) - Requirements of IoT data exchange platform for various IoT services, 2018/9/21



# Newly Published ISO & IEC Standards

Listed here are new and revised standards recently approved and promulgated by ISO - the International Organization for Standardization – and IEC – the International Electrotechnical Commission. Most are available at the ANSI Electronic Standards Store (ESS) at [www.ansi.org](http://www.ansi.org). All paper copies are available from Standards resellers (<http://webstore.ansi.org/faq.aspx#resellers>).

## ISO Standards

### AIRCRAFT AND SPACE VEHICLES (TC 20)

[ISO 16157:2018](#), Space systems - Human-life activity support systems and equipment integration in space flight - Techno-medical requirements for space vehicle human habitation environments, \$68.00

### EARTH-MOVING MACHINERY (TC 127)

[ISO 19014-1:2018](#), Earth-moving machinery - Functional safety - Part 1: Methodology to determine safety-related parts of the control system and performance requirements, \$138.00

### ENVIRONMENTAL MANAGEMENT (TC 207)

[ISO 14080:2018](#), Greenhouse gas management and related activities - Framework and principles for methodologies on climate actions, \$185.00

### OPTICS AND OPTICAL INSTRUMENTS (TC 172)

[ISO 21575:2018](#), Optics and photonics - Optical materials and components - The powder test method for the water resistance of optical glass, \$45.00

### PLAIN BEARINGS (TC 123)

[ISO 6280:2018](#), Plain bearings - Requirements and guidance on backings for thick-walled multilayer bearings, \$45.00

[ISO 6282:2018](#), Plain bearings - Metallic thin-walled half bearings - Determination of the sigma 0,01\*-limit, \$45.00

### PLASTICS PIPES, FITTINGS AND VALVES FOR THE TRANSPORT OF FLUIDS (TC 138)

[ISO 15874-2/Amd1:2018](#), Plastics piping systems for hot and cold water installations - Polypropylene (PP) - Part 2: Pipes - Amendment 1, \$19.00

[ISO 15874-3/Amd1:2018](#), Plastics piping systems for hot and cold water installations - Polypropylene (PP) - Part 3: Fittings - Amendment 1, \$19.00

[ISO 15874-5/Amd1:2018](#), Plastics piping systems for hot and cold water installations - Polypropylene (PP) - Part 5: Fitness for purpose of the system - Amendment 1, \$19.00

### QUALITY MANAGEMENT AND CORRESPONDING GENERAL ASPECTS FOR MEDICAL DEVICES (TC 210)

[ISO 18250-3:2018](#), Medical devices - Connectors for reservoir delivery systems for healthcare applications - Part 3: Enteral applications, \$185.00

### ROAD VEHICLES (TC 22)

[ISO 6546:2018](#), Road vehicles - Collection of accident data for evaluation of occupant restraint performance, \$68.00

### RUBBER AND RUBBER PRODUCTS (TC 45)

[ISO 1856:2018](#), Flexible cellular polymeric materials - Determination of compression set, \$45.00

[ISO 2781:2018](#), Rubber, vulcanized or thermoplastic - Determination of density, \$68.00

### TYRES, RIMS AND VALVES (TC 31)

[ISO 11795:2018](#), Agricultural tractor drive wheel tyres - Explanation of rolling circumference index (RCI) and speed radius index (SRI) and method of measuring tyre rolling circumference, \$45.00

### WELDING AND ALLIED PROCESSES (TC 44)

[ISO 10042:2018](#), Welding - Arc-welded joints in aluminium and its alloys - Quality levels for imperfections, \$103.00

## ISO/IEC JTC 1, Information Technology

[ISO/IEC 29100/Amd1:2018](#), Information technology - Security techniques - Privacy framework - Amendment 1: Clarifications, \$19.00

## IEC Standards

### ELECTRICAL ACCESSORIES (TC 23)

[IEC 60320-2-3 Ed. 2.0 b:2018](#), Appliance couplers for household and similar general purposes - Part 2-3: Appliance couplers with a degree of protection higher than IPX0, \$117.00

[IEC 60320-2-4 Ed. 2.0 b:2018](#), Appliance couplers for household and similar general purposes - Part 2-4: Couplers dependent on appliance weight for engagement, \$235.00

[S+ IEC 60320-2-3 Ed. 2.0 en:2018 \(Redline version\)](#), Appliance couplers for household and similar general purposes - Part 2-3: Appliance couplers with a degree of protection higher than IPX0, \$152.00

[S+ IEC 60320-2-4 Ed. 2.0 en:2018 \(Redline version\)](#), Appliance couplers for household and similar general purposes - Part 2-4: Couplers dependent on appliance weight for engagement, \$305.00

### ELECTRICAL APPARATUS FOR EXPLOSIVE ATMOSPHERES (TC 31)

[IEC 60079-1 Ed. 7.0 b cor.1:2018](#), Corrigendum 1 - Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d", \$0.00

### ELECTRICAL EQUIPMENT IN MEDICAL PRACTICE (TC 62)

[IEC 60601-2-54 Amd.2 Ed. 1.0 b:2018](#), Amendment 2 - Medical electrical equipment - Part 2-54: Particular requirements for the basic safety and essential performance of X-ray equipment for radiography and radioscopy, \$117.00

[IEC 60601-2-54 Ed. 1.2 b:2018](#), Medical electrical equipment - Part 2-54: Particular requirements for the basic safety and essential performance of X-ray equipment for radiography and radioscopy, \$645.00

#### **FUSES (TC 32)**

[IEC 60127-8 Ed. 1.0 en:2018](#), Miniature fuses - Part 8: Fuse resistors with particular overcurrent protection, \$164.00

#### **MAGNETIC COMPONENTS AND FERRITE MATERIALS (TC 51)**

[IEC 63093-5 Ed. 1.0 en:2018](#), Ferrite cores - Guidelines on dimensions and the limits of surface irregularities - Part 5: EP-cores and associated parts for use in inductors and transformers, \$117.00

[IEC 63093-6 Ed. 1.0 en:2018](#), Ferrite cores - Guidelines on dimensions and the limits of surface irregularities - Part 6: ETD-cores for use in power supplies, \$164.00

[IEC 63093-8 Ed. 1.0 en:2018](#), Ferrite cores - Guidelines on dimensions and the limits of surface irregularities - Part 8: E-cores, \$199.00

#### **SAFETY OF HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES (TC 61)**

[IEC 60335-2-76 Ed. 3.0 en:2018](#), Household and similar electrical appliances - Safety - Part 2-76: Particular requirements for electric fence energizers, \$317.00

[S+ IEC 60335-2-76 Ed. 3.0 en:2018 \(Redline version\)](#), Household and similar electrical appliances - Safety - Part 2-76: Particular requirements for electric fence energizers, \$412.00

# Registration of Organization Names in the United States

The Procedures for Registration of Organization Names in the United States of America (document ISSB 989) require that alphanumeric organization names be subject to a 90-day Public Review period prior to registration. For further information, please contact the Registration Coordinator at (212) 642-4975.

The following is a list of alphanumeric organization names that have been submitted to ANSI for registration. Alphanumeric names appearing for the first time are printed in bold type. Names with confidential contact information, as requested by the organization, list only public review dates.

## PUBLIC REVIEW

South Carolina Law Enforcement Division (SLED)

Public Review: April 27 to July 23, 2018

NOTE: Challenged alphanumeric names are underlined. The Procedures for Registration provide for a challenge process, which follows in brief. For complete details, see Section 6.4 of the Procedures.

A challenge is initiated when a letter from an interested entity is received by the Registration Coordinator. The letter shall identify the alphanumeric organization name being challenged and state the rationale supporting the challenge.

A challenge fee shall accompany the letter. After receipt of the challenge, the alphanumeric organization name shall be marked as challenged in the Public Review list. The Registration Coordinator shall take no further action to register the challenged name until the challenge is resolved among the disputing parties.

# Proposed Foreign Government Regulations

## Call for Comment

U.S. manufacturers, exporters, regulatory agencies and standards developing organizations may be interested in proposed foreign technical regulations notified by Member countries of the World Trade Organization (WTO). In accordance with the WTO Agreement on Technical Barriers to Trade (TBT Agreement), Members are required to notify proposed technical regulations that may significantly affect trade to the WTO Secretariat in Geneva, Switzerland. In turn, the Secretariat issues and makes available these notifications. The purpose of the notification requirement is to provide global trading partners with an opportunity to review and comment on the regulations before they become final.

The USA Inquiry Point for the WTO TBT Agreement is located at the National Institute of Standards and Technology (NIST) in the Standards Coordination Office (SCO). The Inquiry Point distributes the notified proposed foreign technical regulations (notifications) and makes the associated full-texts available to U.S. stakeholders via its online service, Notify U.S. Interested U.S. parties can register with Notify U.S. to receive e-mail alerts when notifications are added from countries and industry sectors of interest to them.

To register for Notify U.S., please visit <http://www.nist.gov/notifyus/>.

The USA WTO TBT Inquiry Point is the official channel for distributing U.S. comments to the network of WTO TBT Enquiry Points around the world. U.S. business contacts interested in commenting on the notifications are asked to review the comment guidance available on Notify U.S. at <https://tsapps.nist.gov/notifyus/data/guidance/guidance.cfm> prior to submitting comments.

For further information about the USA TBT Inquiry Point, please visit: <https://www.nist.gov/standardsgov/what-we-do/trade-regulatory-programs/usa-wto-tbt-inquiry-point>

Contact the USA TBT Inquiry Point at: (301) 975-2918; Fax: (301) 926-1559; E-mail: [usatbtep@nist.gov](mailto:usatbtep@nist.gov) or [notifyus@nist.gov](mailto:notifyus@nist.gov).

# Information Concerning

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## American National Standards

### Call for Members

#### INCITS Executive Board – ANSI Accredited SDO and US TAG to ISO/IEC JTC 1, Information Technology

The InterNational Committee for Information Technology Standards (INCITS), an ANSI accredited SDO, is the forum of choice for information technology developers, producers and users for the creation and maintenance of formal de jure IT standards. INCITS' mission is to promote the effective use of Information and Communication Technology through standardization in a way that balances the interests of all stakeholders and increases the global competitiveness of the member organizations.

The INCITS Executive Board serves as the consensus body with oversight of its 40+ Technical Committees. Additionally, the INCITS Executive Board has the international leadership role as the US Technical Advisory Group (TAG) to ISO/IEC JTC 1, Information Technology.

Membership in the INCITS Executive Board is open to all directly and materially affected parties in accordance with INCITS membership rules. To find out more about participating on the INCITS Executive Board, contact Jennifer Garner at [jgarner@itic.org](mailto:jgarner@itic.org) or visit <http://www.incits.org/participation/membership-info> for more information.

Membership in all interest categories is always welcome; however, the INCITS Executive Board seeks to broaden its membership base in the following categories:

- Service Providers
- Users
- Standards Development Organizations and Consortia
- Academic Institutions

### Society of Cable Telecommunications

#### ANSI Accredited Standards Developer

SCTE, an ANSI-accredited SDO, is the primary organization for the creation and maintenance of standards for the cable telecommunications industry. SCTE's standards mission is to develop standards that meet the needs of cable system operators, content providers, network and customer premises equipment manufacturers, and all others who have an interest in the industry through a fair, balanced and transparent process.

SCTE is currently seeking to broaden the membership base of its consensus bodies and is interested in new members in all membership categories to participate in new work in fiber-optic networks, advanced advertising, 3D television, and other important topics. Of particular interest is membership from the content (program and advertising) provider and user communities.

Membership in the SCTE Standards Program is open to all directly a materially affected parties as defined in SCTE's membership rules and operating procedures. More information is available at [www.scte.org](http://www.scte.org) or by e-mail from [standards@scte.org](mailto:standards@scte.org).

## International Organization for Standardization (ISO)

### ISO Proposal for a New Field of ISO Technical Activity

#### Sustainable Finance

#### Comment Deadline: July 13, 2018

BSI, the ISO member body for the United Kingdom, has submitted to ISO a new work item proposal for the development of an ISO standard on Sustainable Finance, with the following scope statement:

Standardization in the field of Sustainable Finance

The program of work will promote the integration of sustainability considerations and environmental, social and governance (ESG) practices into institutional investment decision-making and wider finance management. It will ultimately look to support the alignment of the global financial system with sustainable development goals.

Anyone wishing to review the proposal can request a copy by contacting ANSI's ISO Team ([isot@ansi.org](mailto:isot@ansi.org)), with a submission of comments to Steve Cornish ([scornish@ansi.org](mailto:scornish@ansi.org)) by close of business on Friday, July 13.

## Meeting Notices

### North American Crossbow Federation

#### NACF001-2018 – Criteria of Crossbow Designs Under Conditions of Reasonable Foreseeable Use and Abuse by Users

The North American Crossbow Federation continues with their efforts to establish basic definitions, standards and testing procedures for the crossbow industry according to the procedure set forth by ANSI. The NACF now has in place the required ANSI-mandated balance of consensus committee members. Five NACF manufacture members and ten consensus committee members make up the consensus committee. These proposed standards are listed with ANSI as NACF 001-2018.

This consensus committee will hold a meeting on July 31st at 2:00EST in regards to these proposed definitions, standards and testing procedures. A copy of these proposed crossbow definitions, standards and testing methods may be obtained on the NACF web site under the section titled "Industry Standards".

Questions or comments in regards to these proposed matters should be sent before the meeting and can be sent to the NACF by using the "Contact Us" feature on the NACF web site. The NACF web site is: [www.northamericancrossbowfederation.com/](http://www.northamericancrossbowfederation.com/).

### ISO TC270 – US TAG (Plastics Industry Association (PLASTICS))

The Plastics Industry Association (PLASTICS) is announcing a meeting of the U.S. TAG to ISO/TC270 for July 31-August 1, 2018 at Milacron in Cincinnati, OH. The main purpose of the meeting will be to review strategy for approaching WG2 (Extrusion) and to review the Committee Draft in WG3 (Clamping) for the purpose of developing and taking consensus on national comments. For additional information, including a draft agenda and registration, please contact Megan Hayes ([mhayes@plasticsindustry.org](mailto:mhayes@plasticsindustry.org)).



**BSR/ASHRAE Addendum d  
ANSI/ASHRAE Standard 15-2016**

**Public Review Draft**

# **Safety Standard for Refrigeration Systems**

**Fourth Public Review – ISC (June 2018)  
(Draft shows Independent Substantive Changes to Previous Public Review Draft)**

This draft has been recommended for public review by the responsible project committee. To submit a comment on this proposed standard, go to the ASHRAE website at <https://www.ashrae.org/technical-resources/standards-and-guidelines/public-review-drafts> and access the online comment database. The draft is subject to modification until it is approved for publication by the Board of Directors and ANSI.

The appearance of any technical data or editorial material in this public review document does not constitute endorsement, warranty, or guaranty by ASHRAE of any product, service, process, procedure, or design, and ASHRAE expressly disclaims such.

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**ASHRAE, 1791 Tullie Circle, NE, Atlanta GA 30329-2305**



ASHRAE Addendum d to ANSI/ASHRAE Standard 15-2016, *Safety Standard for Refrigeration Systems*  
Third Public Review Draft – Independent Substantive Changes

**(This foreword is not part of this standard. It is merely informative and does not contain requirements necessary for conformance to the standard. It has not been processed according to the ANSI requirements for a standard and may contain material that has not been subject to public review or a consensus process. Unresolved objectors on informative material are not offered the right to appeal at ASHRAE or ANSI.)**

## FOREWORD

This addendum modifies portions of Standard 15 to incorporate refrigerants with a 2L flammability classification as defined in ASHRAE Standard 34-2016. The 2010 edition of ASHRAE Standard 34 added optional Subclass 2L to the Class 2 flammability classification. A number of refrigerants have been classified as Subclass 2L (refer to ANSI/ASHRAE Standard 34-2016 and addenda). Use of Subclass 2L refrigerants currently requires compliance with Class 2 requirements per ASHRAE Standard 15-2016 (or earlier editions). A broader use of Class 2L refrigerants requires a new set of alternative application requirements. Addendum d proposes new requirements for high probability systems used for human comfort applications. This proposal does not change how ASHRAE Standard 15 deals with Class 2L refrigerants in industrial or commercial applications or machinery rooms. Those applications are expected to be handled in separate addenda.

In August 2016, Addendum d was published for purposes of a First Publication Public Review draft. In April 2017 a second public review was conducted. A Third Public Review was completed in April, 2018. The committee appreciates the many comments that were received during these reviews, and the technical issues identified. The Committee reviewed each comment and provided responses to the Commenters. At the same time research has been conducted that gives a technical basis for some provisions in this proposed addenda. This Fourth Public Review draft incorporates changes that are responsive to the public review comments and research results where appropriate.

This addendum is contingent on publication of Addendum G to ASHRAE Standard 34-2016 to make 2L a flammability class rather than a sub-class, and to define A2L and B2L as safety groups. Also, this addendum makes use of LFL values that will be published in an addendum to ASHRAE 34 in both I-P and S-I units.

Rapid refrigerant leak detection of Class 2L flammable refrigerants, and air movement to enable rapid mixing of leaked refrigerant, are at the core of the requirements presented in this addendum. Recall that the RCL has a factor of safety of 4 for flammable refrigerants. That is, when leaked refrigerant is fully mixed in a space, the maximum refrigerant concentration is 25% of the LFL and cannot ignite. Basic requirements for refrigerant leak detectors have been included in this draft. However, research and development of refrigerant leak detectors is continuing, and additional requirements to specify robust and reliable refrigerant leak detection may occur in the future.

There was a considerable amount of research into the use of flammable refrigerants that occurred in 2016 and 2017. The research is continuing. Standard 15 must rely on published research at the time any addendum is published and accordingly future changes may be expected.

And finally, Addendum d is relying on product standards for listed products that use Class 2L flammable refrigerants. It is not intended that this standard repeat the detailed requirements contained in product standards. Product standards are under development and subject to change. This addendum makes a reasonable attempt to correlate its requirements with the details provided in the product standards, as they are presently written.

***Note to Reviewers: The draft of Addendum d that was used for the Third Public Review is replaced in its entirety by this Fourth Public Review draft. Substantive changes to the Third Public Review draft and related changes to Standard 15 are indicated by blue colored text with underlining (for additions) and ~~strikethrough~~ (for deletions). Only these changes in blue are open to comment. Editorial changes are not open for comment. Other sections of ASHRAE 15-2016 that are unchanged are also not open for comment.***

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## 7. RESTRICTIONS ON REFRIGERANT USE

### 7.5 Additional Restrictions

**7.5.2 Applications for Human Comfort.** Group A2, A3, B1, B2, B2L and B3 refrigerants shall not be used in high-probability systems for human comfort. Use of Group A2L refrigerants shall be in accordance with Section 7.6

#### Exceptions:

1. ~~This~~ These restrictions ~~do~~ does not apply to sealed absorption and unit systems having refrigerant quantities less than or equal to those indicated in Table 7.4.
2. ~~This~~ These restrictions ~~do~~ does not apply to industrial occupancies.

**7.6 Group A2L Refrigerants for Human Comfort.** High-probability systems using Group A2L refrigerants for human comfort applications shall comply with this section.

#### 7.6.1 Refrigerant Concentration Limits.

7.6.1.1 Occupied spaces shall comply with Section 7.2.

7.6.1.2 Unoccupied spaces with refrigerant containing equipment, including but not limited to piping or tubing, shall comply with Section 7.2 except as permitted by Section 7.6.4.

**7.6.2 Listing and Installation Requirements.** Refrigeration systems shall be *listed* and shall be installed in accordance with listing, the manufacturer's instructions, and any markings on the equipment restricting the installation.

7.6.2.1 The nameplate required by Section 9.15 shall include a symbol indicating that a flammable refrigerant is used, as specified by the product listing.

7.6.2.2 A label indicating a flammable refrigerant is used shall be placed adjacent to service ports and other locations where service involving components containing refrigerant is performed, as specified by the product listing.

7.6.2.3 A refrigerant detector shall be provided in accordance with Section 7.6.5 where any of the following apply:

- a. For commercial, public assembly and large mercantile occupancies, when the refrigerant charge of any independent circuit exceeds 0.212 x LFL (lb) where LFL is in pounds per 1000 ft<sup>3</sup> [6 x LFL (kg) where LFL is in kg/m<sup>3</sup>] ~~22 lb (10 kg)~~ unless the concentration of refrigerant in a complete discharge from any independent circuit will not exceed 50% of the RCL.
- b. For institutional and residential occupancies, when the refrigerant charge of any independent circuit exceeds 0.212 x LFL (lb) where LFL is in pounds per 1000 ft<sup>3</sup> [6 x LFL (kg) where LFL is in kg/m<sup>3</sup>] ~~6.6 lb (3 kg)~~ unless the concentration of refrigerant in a complete discharge from any independent circuit will not exceed 50% of the RCL.
- c. When the occupancy classification is institutional.
- d. When required by the product listing.
- e. When using the provisions of Section 7.6.4.

ASHRAE Addendum d to ANSI/ASHRAE Standard 15-2016, *Safety Standard for Refrigeration Systems*  
Third Public Review Draft – Independent Substantive Changes

**7.6.2.4** When the refrigerant detector senses a rise in refrigerant concentration above the value specified in Section 7.6.5 b), the following actions shall be taken:

a) The minimum air flow rate of the supply air fan shall be in accordance with the following equation.

$$Q_{\min} = 1,000 \cdot M / \text{LFL} \quad (\text{I-P})$$

$$Q_{\min} = 60,000 \cdot M / \text{LFL} \quad (\text{SI})$$

Where  $Q_{\min}$  is the minimum airflow rate in ft<sup>3</sup>/min (m<sup>3</sup>/h)

$M$  is the refrigerant charge of the largest independent refrigerating circuit of the system in lb (kg)

LFL is the lower flammability limit in lb per 1000 ft<sup>3</sup> (g/m<sup>3</sup>)

b) Turn off the compressor and all other electrical devices, excluding the control power transformers, control systems, and the supply air fan. The supply air fan shall continue to operate for at least 5 minutes after the refrigerant detector has sensed a drop in the refrigerant concentration below the value specified in Section 7.6.5 b)

c) Any device that controls air flow located within the product or in duct work that supplies air to the occupied space shall be fully open. Any device that controls air flow shall be listed.

d) Turn off any heaters and electrical devices located in the ductwork. The heaters and electrical devices shall remain off for at least 5 minutes after the refrigerant detector has sensed a drop in the refrigerant concentration below the value specified in Section 7.6.5 b)

### **7.6.3 Ignition Sources located in Ductwork**

**7.6.3.1** Open flame-producing devices shall not be permanently installed in the ductwork that serves the space.

**7.6.3.2** Unclassified electrical devices shall not be located within the ductwork that serves the space.

**7.6.3.3** Devices containing hot surfaces exceeding 1290 °F (700 °C) shall not be located in the ductwork that serves the space unless there is a minimum air flow of 200 ft/min (1.0 m/s) across the heating device(s) and there is proof of air flow before the heating device(s) is energized.

**7.6.4 Compressors and Pressure Vessel Located Indoors—Allowance to Exceed RCL.** For refrigeration compressors and pressure vessels located in an indoor space that is accessible only during service and maintenance it shall be permissible to exceed the RCL if all of the following provisions are met.

a) The refrigerant charge of largest-independent refrigerating circuit shall not exceed

1. 6.6 lb (3 kg) for Residential and Institutional occupancies.

2. 22 lb (10 kg) for Commercial and Public / Large Mercantile occupancies.

b) The space where the equipment is located shall be provided with a mechanical ventilation system in accordance with Section 7.6.4 c) and a refrigerant detector in accordance with Section 7.6.5. The mechanical ventilation system shall be started when the refrigerant detector senses refrigerant in accordance with Section 7.6.5. The mechanical ventilation system shall continue to operate for at

ASHRAE Addendum d to ANSI/ASHRAE Standard 15-2016, *Safety Standard for Refrigeration Systems*  
Third Public Review Draft – Independent Substantive Changes

least 5 30 minutes after the refrigerant detector has sensed a drop in the refrigerant concentration below the value specified in Section 7.6.5 b).

c) A mechanical ventilation system shall be provided that will mix air with leaked refrigerant, and remove it from the space where the equipment is located. The space shall be provided with an exhaust fan. The exhaust fan shall remove air from the space where the equipment is located in accordance with the following equation.

$$Q_{\min} = 1,000 \cdot M / \text{LFL} \quad (\text{I-P})$$

$$Q_{\min} = 60,000 \cdot M / \text{LFL} \quad (\text{SI})$$

Where  $Q_{\min}$  is the minimum airflow rate in ft<sup>3</sup>/min (m<sup>3</sup>/h)

M is the refrigerant charge of the largest independent refrigerating circuit of the system in lb (kg)

LFL is the lower flammability limit in lb per 1000 ft<sup>3</sup> (g/m<sup>3</sup>)

d) The exhaust air inlet shall be located where refrigerant from a leak is expected to accumulate. The bottom of the air inlet elevation shall be within 12 inches (30 cm) of the lowest elevation in the space where the compressor or pressure vessel is located. Provision shall be made for make-up air to replace that being exhausted. Opening(s) for the make-up air shall be positioned such that air will mix with leaked refrigerant.

e) Air that is exhausted from the ventilation system shall be either:

- i. discharged outside of the building envelope, or
- ii. discharged to an indoor space, provided that the refrigerant concentration will not exceed the limit specified in Section 7.6.1.

f) In addition to the requirements of Section 7.6.3 there shall be no open flame producing devices that do not contain a flame arrestor or hot surfaces exceeding 1290 °F (700 °C) that are installed within space where the equipment is located.

**7.6.5 Refrigerant Detectors.** Refrigerant detectors required by Section 7.6.2 shall meet the following requirements:

a) Refrigerant detectors that are part of the listing shall be evaluated by the testing laboratory as part of the equipment listing.

b) Refrigerant detectors as installed shall activate the functions required by Section 7.6.2.4 within a time not to exceed 15 seconds, when the refrigerant concentration reaches 25% of the lower flammability limit (LFL).

c) Refrigerant detectors shall be located such that refrigerant will be detected if the refrigerating system is operating, or not operating. Use of more than one refrigerant detector shall be permitted.

i) For refrigerating systems that are connected to the occupied space through ductwork, refrigerant detectors shall be located within the listed equipment.

ii) For refrigerating systems that are directly connected to the occupied space without ductwork, the refrigerant detector shall be located in the equipment, or shall be located in the occupied space at a height of not more than 12 inches (30 cm) above the floor and within a horizontal distance of not more 3.3 ft (1.0 m) with a direct line of sight of the unit.

ASHRAE Addendum d to ANSI/ASHRAE Standard 15-2016, *Safety Standard for Refrigeration Systems*  
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d) *Refrigerant detectors* shall provide a means for an automatic operational self-test as provided in the product listing. Use of a refrigerant test gas is not required. If a failure is detected, a trouble alarm shall be activated and the actions required by Section 7.6.2.4 shall be initiated.

e) *Refrigerant detectors* shall be tested during installation to verify the set point and response time as required by Section 7.6.5 b). After installation, the refrigerant detector shall be tested to verify the set point and response time annually or at an interval not exceeding the manufacturer's installation instructions, whichever is less.

## 9. DESIGN AND CONSTRUCTION OF EQUIPMENT AND SYSTEMS

**9.13.1** The following are requirements for unprotected refrigerant containing copper pipe or tubing:

c. For Group A2L, A2, A3, B1, B2L, B2, and B3 refrigerants, protective ~~metal~~-enclosures or covers shall be provided for annealed copper tube erected on the premises.



**BSR/ASHRAE Addendum p to  
ANSI/ASHRAE Standard 34-2016**

**Public Review Draft**

# **Proposed Addendum p to Standard 34-2016, Designation and Safety Classification of Refrigerants**

**First Public Review (July 2018)  
(Draft shows Proposed Changes to Current Standard)**

This draft has been recommended for public review by the responsible project committee. To submit a comment on this proposed standard, go to the ASHRAE website at <https://www.ashrae.org/technical-resources/standards-and-guidelines/public-review-drafts> and access the online comment database. The draft is subject to modification until it is approved for publication by the Board of Directors and ANSI. Until this time, the current edition of the standard (as modified by any published addenda on the ASHRAE website) remains in effect. The current edition of any standard may be purchased from the ASHRAE Online Store at [www.ashrae.org/bookstore](http://www.ashrae.org/bookstore) or by calling 404-636-8400 or 1-800-727-4723 (for orders in the U.S. or Canada).

This standard is under continuous maintenance. To propose a change to the current standard, use the change submittal form available on the ASHRAE website, [www.ashrae.org](http://www.ashrae.org).

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**ASHRAE, 1791 Tullie Circle, NE, Atlanta GA 30329-2305**

BSR/ASHRAE Addendum p to ANSI/ASHRAE Standard 34-2016, *Designation and Safety Classification of Refrigerants*

First Public Review Draft

**(This foreword is not part of this standard. It is merely informative and does not contain requirements necessary for conformance to the standard. It has not been processed according to the ANSI requirements for a standard and may contain material that has not been subject to public review or a consensus process. Unresolved objectors on informative material are not offered the right to appeal at ASHRAE or ANSI.)**

## FOREWORD

*This addendum adds the azeotropic refrigerant blend R-515B in Table 4-2 and Table D-2.*

*[Note to Reviewers: This addendum makes proposed changes to the current standard. These changes are indicated in the text by underlining (for additions) and ~~striketrough~~ (for deletions) except where the reviewer instructions specifically describe some other means of showing the changes. Only these changes to the current standard are open for review and comment at this time. Additional material is provided for context only and is not open for comment except as it relates to the proposed changes.]*

## Addendum p to 34-2016

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Add the following underlined data to Table 4-2 and Table D-2 in the columns indicated.

### **TABLE 4-2 Data and Safety Classifications for Refrigerant Blends**

Refrigerant Number = 515B

Composition (Mass %) = R-1234ze(E) / 227ea (91.1 / 8.9)

Composition tolerances = +0.1, -2.0 / +2.0, -0.1

OEL = 810

Safety Group = A1

RCL = 61,000 ppm v/v; 18 lb/Mcf; 290 g/m<sup>3</sup>

Highly Toxic or Toxic Under Code Classification = Neither

### **TABLE D-2 Data for Refrigerant Blends**

Refrigerant Number = 515B

Composition (Mass %) = R-1234ze(E) / 227ea (91.1 / 8.9)

Azeotropic Molecular Mass = 117.9 g/mol

Azeotropic Temperature (°F) = 86

Azeotropic Temperature (°C) = 30

Normal BPt. (°F) = -2.3

Normal BPt. (°C) = -19.0



# Public Review Draft

Proposed Addendum g to Standard 189.1-2017

# Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings

First Public Review (July 2018)  
(Draft Shows Proposed Changes to Current Standard)

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## FOREWORD

*This addendum replaces the current defined term of “design professional” from Standard 90.1 with “registered design professional,” which is consistent with the terms used in the 2015 International Green Construction Code. Standard 189.1 addresses subject matter for which the traditional titles of architect and engineer, used in the Standard 90.1 definition) do not necessarily align with typical requirements of authorities having jurisdiction. For example, it is common for jurisdictions to have tiered requirements for designer qualifications, often permitting licensed master tradespeople to design certain projects within their respective discipline. The proposed definition also better accommodates specialty design categories such as onsite wastewater system designer, irrigation system designer, landscape designer and soil scientist.*

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### Addendum g to Standard 189.1-2017

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***Modify Section 3 as follows:***

***~~design professional:~~*** see ANSI/ASHRAE/IES Standard 90.1.

***registered design professional:*** An individual who is registered or licensed to practice their respective design profession as defined by the statutory requirements of the professional registration laws of the state or jurisdiction in which the project is to be constructed.

***Modify Sections 5 and 9 as follows:***

#### **5.3.7.2 Bicycle Parking**

**5.3.7.2.1 Minimum Number of Spaces.** Bicycle parking spaces shall be provided for at least 5% of the *occupant load* of each building but not less than two parking spaces. Occupants who are nonambulatory, under restraint, or under custodial care need not be included in the total occupant

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load for the building. *Building projects* with dwelling units shall be provided with at least 0.5 bicycle parking spaces per bedroom for each building but not less than two parking spaces.

Exceptions to 5.3.7.2.1:

1. *Building projects* with *dwelling units* that provide each unit with a private garage or private, locked storage *space* of sufficient size to store a bicycle.
2. The number of bicycle parking *spaces* shall be allowed to be reduced subject to *AHJ* approval of a transportation plan, prepared by a registered design professional, that demonstrates the likelihood that building occupants will use public transportation and/or walk to the *building project site*.

## **9.5 Performance Option**

**9.5.1 Life-Cycle Assessment (LCA).** An *LCA* shall be performed in accordance with ASTM E2921 and ISO Standard 14044, as modified by this section, for a minimum of two building alternatives, both of which shall conform to the *owner's project requirements (OPR)*.

...

**9.5.1.2 Procedure.** The *LCA* shall be performed in accordance with the service lives, life-cycle stages, study boundaries, and comparison methodologies of ASTM E2921 with the following modifications:

- a. Each building alternative shall comply with Sections 6, 7, and 8 of this standard.
- b. The service life of the buildings shall not be less than that determined using Table 10.3.2.3, except that the service life of long-life buildings shall be no less than 75 years.
- c. Operating energy consumption shall be included or excluded at the discretion of the project team.
- d. The *LCA* tool (or tools) or software shall include a published third-party impact indicator method.
- e. The estimate of structural system material quantities shall be verified by a registered design professional or other approved source.

**Section 9.5.1.3 Reporting.** A report that includes a description of the building alternatives and their physical differences shall be prepared and shall comply with the reporting requirements stated in ASTM E2921. The name and address of the registered design professional or other approved source verifying structural system material quantities shall be included. A critical review shall be performed by an external expert independent of those performing the *LCA*.

# Public Review Draft

Proposed Addendum h to Standard 189.1-2017

# Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings

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## **FOREWORD**

*This addendum clarifies that it is the alternate on-site sources of water or municipally reclaimed water are not required to be “acceptable” because it is given that anything not disallowed by an AHJ is acceptable.*

***Note: In this addendum, changes to the current standard are indicated in the text by underlining (for additions) and ~~striketrough~~ (for deletions) unless the instructions specifically mention some other means of indicating the changes. Only these changes are open for review and comment at this time. Additional material is provided for context only and is not open for comment except as it relates to the proposed substantive changes.***

## **Addendum h to 189.1-2017**

***Modify as follows:***

**6.3.3 Special Water Features.** Water use shall comply with the following:

a. Ornamental fountains and other ornamental water features shall be supplied either by *alternate on-site sources of water* or by municipally reclaimed water delivered by the local water utility, ~~acceptable to the AHJ~~. Fountains and other features equipped with *automatic* water refilling valves shall be equipped with (1) makeup water meters (2) leak detection devices that shut off water flow if a leak of more than 1.0 gal/h (3.8 L/h) is detected, and (3) equipment to recirculate, filter, and treat all water for reuse within the system.

Exception to 6.3.3(a): Where *alternate on-site sources of water* or municipally reclaimed water are not available within 500 ft (150 m) of the *building project site*, *potable water* is allowed to be used for water features with less than 10,000 gal (38,000 L) capacity.

# Public Review Draft

Proposed Addendum f to Standard 189.1-2017

# Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings

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## **FOREWORD**

*This addendum replaces the current definition of “construction documents,” which references Standard 90.1, with a definition that is consistent with the 2015 International Green Construction Code. The Standard 90.1 definition does not address building sites or land development which are included in the scope of Standard 189.1. The proposed definition is applicable across all of the 2015 International Codes. Incorporating it into the next edition of Standard 189.1, which will become the 2021 International Green Construction Code, will allow construction document requirements that are particular to sites and land development while keeping the IgCC’s definition of construction documents consistent with the remainder of the International Codes. This substitution of definition will not change the intent or requirements of the standard.*

***Note: In this addendum, changes to the current standard are indicated in the text by underlining (for additions) and ~~striketrough~~ (for deletions) unless the instructions specifically mention some other means of indicating the changes. Only these changes are open for review and comment at this time. Additional material is provided for context only and is not open for comment except as it relates to the proposed substantive changes.***

## **Addendum f to Standard 189.1-2017**

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***Modify Section 3 as follows:***

***construction documents: see ANSI/ASHRAE/IES Standard 90.1 written, graphic and pictorial documents prepared or assembled for describing the design, location and physical characteristics of the elements of a project necessary for obtaining a building permit.***

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**\*Note to reviewers not subject to public review comment\*:**

**The term ‘*construction documents*’ appears in the standard as follows:**

**5.3.2 Predesign Site Inventory and Assessment.** A predesign inventory and assessment of the natural resources of the *building project site* shall be submitted with the *site* design and *construction documents*. The inventory and assessment shall include all of the following:

**5.3.5.5 Vegetated Terrace and Roofing Systems.** Vegetated terrace and roofing systems, where provided in accordance with Section 5.3.5.3, shall comply with the following:

a. All plantings shall be capable of withstanding the microclimate conditions of the vegetated area, including but not limited to wind, precipitation, and temperature. *Plants* shall be selected and placed to provide foliage coverage of not less than 50% of designed area of vegetation based on the anticipated *plant* growth within two years of the issuance of the final certificate of occupancy. *Construction documents* shall be submitted that show the planting location and anticipated two-year foliage coverage of the plantings. Duplicate coverage shall not be credited where multiple *plants* cover the same area. *Invasive plants* shall not be planted.

### **5.3.7.2 Bicycle Parking**

...

**5.3.7.2.6 Documentation.** *Construction documents* shall include plans and details showing compliance with Sections 5.3.7.2.1 through 5.3.7.2.5.

**7.4.3.2 Ventilation Controls for Densely Occupied Spaces.** The requirements in this section supersede those in ANSI/ASHRAE/IES Standard 90.1, Section 6.4.3.8. *Demand control ventilation (DCV)* shall be provided for densely occupied spaces served by systems with one or more of the following:

...

The *DCV* system shall be designed to be in compliance with ASHRAE Standard 62.1, Section 6.2.7.1. Occupancy assumptions shall be shown in the design documents for spaces provided with *DCV*. All CO<sub>2</sub> sensors used as part of a *DCV* system or any other system that dynamically controls *outdoor air* shall meet the following requirements:

...

c. *Outdoor air* CO<sub>2</sub> concentrations shall be determined by one of the following:



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1. *Outdoor air* CO<sub>2</sub> concentrations shall be dynamically measured using one or multiple CO<sub>2</sub> sensors. The CO<sub>2</sub> sensor locations shall be identified on the *construction documents*.

**7.4.6.1.1 Interior Lighting Power Densities (LPDs).** The interior *lighting power allowance* shall be determined using ANSI/ASHRAE/IES Standard 90.1, either Section 9.5 or 9.6, with the following modifications:

...

f. An additional *lighting power allowance* shall be credited for *institutional tuning* of dimmable lighting systems that meet all of the following requirements:

1. *Institutional tuning* controls shall be accessible only to authorized personnel.
2. *Construction documents* shall state that maximum light output or power of controlled lighting shall be reduced by at least 15% from full output.

**8.3.3 Acoustical Control.** The provisions of this section shall govern acoustical control for the *building envelope*, the interior *spaces* within the building or structure, and the design of the related mechanical equipment and systems. School *spaces* identified in ANSI/ASA S12.60 shall comply with ANSI/ASA S12.60. Healthcare *spaces*, as defined in the FGI Guidelines, shall comply with the FGI Guidelines. All other *spaces* shall be designed in accordance with Sections 8.3.3.1 through 8.3.3.5.

**8.3.3.1 Documentation.** *Construction documents* and supplemental information necessary to verify compliance with this standard, such as calculations, worksheets, laboratory test reports, field test reports, compliance forms, vendor literature, or other data, shall be reviewed by a person experienced in the field of acoustics and who shall report compliance or noncompliance with the required acoustical performance. The *construction documents* and any reports shall show all the pertinent data and features of the building, equipment, and systems in sufficient detail to permit a determination of compliance by the *authority having jurisdiction (AHJ)* and to indicate compliance with the requirements of this standard.

...

**8.3.3.2 Interior Background Noise Requirements.** The *building envelope*; interior *spaces* within the building; and building systems, including mechanical, electrical, and plumbing systems, shall be designed and constructed such that the interior sound pressure levels created by the combination of building systems noise and exterior sound sources, under normal operation with windows closed and no active sound masking systems, do not exceed the values specified in Table 8.3.3.2. The *hourly average sound pressure level*  $L_{eq}$  and *maximum sound pressure level*  $L_{max}$  shall not exceed the values listed in Table 8.3.3.2. Outdoor noise levels used in the design shall be provided in the *construction documents*.

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### 8.3.4.1 Soil-Gas Control Systems

...

**8.3.4.2 Alternative Methods of Soil-Gas Control.** A soil-gas control system shall be provided, and such system shall be clearly identified or otherwise noted on *construction documents* and shall be approved by a qualified soil-gas professional and the *building project FPT provider*.

## 10.3.1 Construction

**10.3.1.1 Building Systems FPT.** *Functional and performance testing* shall be performed on all building systems specifically referenced in this section using *generally accepted engineering standards* acceptable to the *authority having jurisdiction (AHJ)*.

An *FPT* process and system performance requirements shall be incorporated into *construction documents* and construction schedule of the *building project* to verify system performance.

...

**10.3.1.1.1 Activities Prior to Building Permit for Facilities Using the FPT Process.** The following activities shall be completed before a permit is issued for any system requiring *FPT*:

...

b. *FPT providers* shall review the *construction documents* to verify that the relevant sensor locations, devices, and control sequences are properly specified; performance and testing criteria are included; and equipment to be tested is accessible for testing and maintenance.

...

**10.3.1.2 Building Project Commissioning (Cx) Process.** The Cx process shall be performed in accordance with this section using ANSI/ASHRAE/IES Standard 202 or other *generally accepted engineering standards* acceptable to the *AHJ*. The *Cx provider* shall verify that a *Cx process* has been incorporated into the design phases of the project and that commissioning shall be incorporated into the *construction documents*. The *Cx process* documents that the building and its commissioned components, assemblies, and systems comply with the *owner's project requirements (OPR)*. The project requirements, including *OPR*, *BoD*, design and construction record documentation, training plans and records, O&M plans and procedures, and Cx reports shall be assembled in a systems manual that provides information for building operating and maintenance staff.

...

**10.3.1.2.2 Cx Activities Prior to Building Permit.**

The following activities shall be completed prior to issuance of a building permit:

a. A copy of the *Cx plan* in accordance with ANSI/ASHRAE/IES Standard 202 shall be submitted for review with the building permit application.

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- b. An *approved Cx provider* shall be designated by the *owner* to manage Cx process activities prior to completion of *construction documents*. The *Cx provider* shall have the necessary training, experience, and equipment and be independent from the design team and the contractor responsible for the work being commissioned. The *Cx provider* shall disclose possible conflicts of interest so that objectivity can be confirmed. The Cx team shall include an *FPT provider* who may also be the *Cx provider*.
- c. Construction phase Cx requirements shall be incorporated into project specifications and other *construction documents* developed by the design team.

...

**10.3.1.8 Construction Activity Pollution Prevention: Protection of Occupied Areas.** The *construction documents* shall identify operable windows, doors, and air intake openings that serve occupied spaces, including those not associated with the *building project*, that are in the area of construction activity or within 35 ft (11 m) of the limits of construction activity. Such windows, doors, and air intake openings that are under control of the *owner* shall be closed, or other measures shall be taken to limit *contaminant* entry.

## INFORMATIVE APPENDIX H

### OPTION FOR ENERGY EFFICIENCY USING THE IECC PRESCRIPTIVE COMPLIANCE PATH

...

**H4.3.2 Ventilation Controls for Densely Occupied Spaces.** The requirements in this section supersede those in the IECC, Section C403.7.1. *Demand control ventilation (DCV)* shall be provided for densely occupied spaces served by systems with one or more of the following:

...

The *DCV* system shall be designed to be in compliance with ASHRAE Standard 62.1, Section 6.2.7. Occupancy assumptions shall be shown in the design documents for spaces provided with *DCV*. All CO<sub>2</sub> sensors used as part of a *DCV* system or any other system that dynamically controls *outdoor air* shall meet the following requirements:

...

- c. *Outdoor air* CO<sub>2</sub> concentrations shall be determined by one of the following:
  1. *Outdoor air* CO<sub>2</sub> concentrations shall be dynamically measured using one or multiple CO<sub>2</sub> sensors. The CO<sub>2</sub> sensor locations shall be identified on the *construction documents*.

## INFORMATIVE APPENDIX I

### ADDITIONAL GUIDANCE FOR FUNCTIONAL PERFORMANCE TESTING (FPT) AND THE COMMISSIONING (CX) PROCESS

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**I2.3 Cx Plan.** A *Cx plan* is a document developed by a *Cx provider* that should include the following:

...

d. A detailed description and schedule of *Cx process* activities and the list of operations, systems, and assemblies that will be commissioned, and a description of performance criteria where not shown on the *construction documents*

...

**I2.6 Record Documents.** Record documents should be provided to the *owner* upon project completion. The record documents should be accessible to the building operations and maintenance personnel, be included in the systems manual, and include all of the following:

a. Approved *construction documents*, including record plans and specifications.  
 b. Approved submittals and coordination drawings. This documentation should show the actual locations of equipment, systems, and assemblies, such as piping, ductwork, valves, controls, access panels, electrical equipment, plumbing equipment, lighting and other operating components and systems. The record documents should particularly note equipment locations that are concealed or are installed in locations other than those indicated on the approved *construction documents*.

...

**I2.7 Systems Manual.** A systems manual should be provided by an *owner* for use in building operations training. The systems manual should be made accessible to building operations and maintenance (O&M) personnel and should be updated and maintained by an *owner* for the life of the building.

A systems manual should include the following:

a. Facility design and *construction documents*, including the following:

1. *OPR* and *BoD*

2. Construction record documents, including drawings, specifications, and approved submittals

## List of Sections

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SF-441/ <del>SF441M</del>	Specification for Chlorinated Poly(Vinyl Chloride)(CVC) Plastic Pipe, Schedules 40 and 80.....
SF-442/ <del>SF-442M</del>	Specification for Polyethylene (PE) Plastic Pipe (DR-PR) Based on Outside Diameter.....
SF-2389	Specification for Pressure-Rated Polypropylene (PP) Piping Systems.....
SF-2619/ <del>SF-2619M</del>	Specification for High-Density Polyethylene (PE) Line Pipe.....
SF-2880	Specification for Lap-joint Type Flange Adapters for Polyethylene Pressure Pipe in Nominal Pipe Sizes 3 $\frac{3}{4}$ in. to 65in. ....
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## II-1

## Acceptable ASTM Editions

## SPECIFICATIONS LISTED BY MATERIALS

SF-441/ <del>SF441M</del>	Specification for Chlorinated Poly(Vinyl Chloride)(CVC) Plastic Pipe, Schedules 40 and 80.....
SF-442/ <del>SF-442M</del>	Specification for Polyethylene (PE) Plastic Pipe (DR-PR) Based on Outside Diameter.....
SF-2619/ <del>SF-2619M</del>	Specification for High-Density Polyethylene (PE) Line Pipe.....
SF-2880	Specification for Lap-joint Type Flange Adapters for Polyethylene Pressure Pipe in Nominal Pipe Sizes 3 $\frac{3}{4}$ in. to 65in. ....

## SPECIFICATION REMOVAL

From time to time, it becomes necessary to remove specifications from this Part of ~~Section II~~ NM.3. This occurs because the sponsoring society (e.g., ASTM, ~~AWS, CEN~~) has notified ASME that the specification has either been replaced with another specification, or that there is no known use and production of a material. Removal of a specification from ~~this Section NM.3~~ also results in concurrent removal of the same specification from ~~NM.1 and NM.2 and from all of the ASME Construction Standards Section IX and from all of the ASME Boiler and Pressure Vessel Construction Codes~~ that reference the material. ~~This action effectively prohibits further use of the material in ASME Boiler and Pressure Vessel construction.~~

The following specifications will be dropped from NM.3 ~~this Section~~ in the next Edition, unless information concerning current production and use of the material is received before December 1 of this year:

None in this Edition.

## SPECIFICATION FOR POLYAMIDE 11 GAS PRESSURE PIPE, TUBING, AND FITTINGS

## SF-2945

(Identical with ASTM Specification F2945-12a except for additional requirements in section 9 and Annex A.3, update to para. 14, corrected title of 49 CFR 192 in para 2.3, revised marking requirements in para 7.1, Note 10 and para. A2.6.1.1, changes from “ANSI” to “ASME” in paras. 2.2, 3.2, 5.15, X2.3.3, X2.5.1, and X2.6.1, and quality assurance requirements in para 8.1 and para A2.7.1 have been made mandatory.)

## Polyamide 11 Gas Pressure Pipe, Tubing, and Fittings

(Identical with ASTM Specification F2945-12a except for additional requirements in section 9 and Annex A.3, update to para. 14, corrected title of 49 CFR 192 in para 2.3, revised marking requirements in para 7.1, Note 10 and para. A2.6.1.1, changes from “ANSI” to “ASME” in paras. 2.2, 3.2, 5.15, X2.3.3, X2.5.1, and X2.6.1, and quality assurance requirements in para 8.1 and para A2.7.1 have been made mandatory.)

## 2.3 Federal Specifications

OPS Part 192 Title 49 Code of Federal Regulations 49 CFR 192, Transportation of Natural Gas and Other Gas by Pipeline: Minimum Federal Safety Standards

3.2 The gas industry terminology used in this specification is in accordance with ASME B31.8 or CFR OPS Part 192 Title 49 49 CFR 192, unless otherwise indicated.

## X2.6 Repair Considerations

X2.6.1 Repairs may be made to plastic pipe under appropriate circumstances. Selection and installation considerations for the use of full encirclement band clamps are available in Guide F1025. Additional information on repair of plastic pipe may be found in manufacturers’ literature, the AGA Plastic Pipe Manual for Gas Service, ASME B31.8 Gas Transmission and Distribution Piping Systems, and in the ASME Guide for Gas Transmission and Distribution Piping Systems.

## MANDATORY APPENDIX II

## GUIDELINE ON ACCEPTABLE ASTM EDITIONS

All materials, originating from an ASTM specification, allowed by the various ~~Sections of this standard~~ construction standards and used for construction within the scope of their requirements shall be furnished in accordance with the Material Specifications contained within NM.3.1 and NM.3.2 and this guideline except where otherwise provided in Cases or in the applicable Section of NM standard.

Table II-1

## Acceptable ASTM Editions

Specifications	Section		Case	Latest Adopted ASTM	Other Acceptable ASTM Editions
	NM-1	<del>NM-2</del>			
<del>SF-602</del>	...	x	...	9	...
<del>(Identical except for technical changes in para 2.1, para 5.2.2, para 5.2.3, para 8.1, para 9.2.2, para 10, Annex A1, Annex A2, Annex A3, and some editorial changes.</del>					
<del>SF-1763</del>	x	...	...	00(R13)	...
<del>(Identical except for Note 1, Paras 2.2, Section 9, Annex A1, and some editorial changes.</del>					
<del>SF-6519</del>	...	x	...	06(R11)	...
<del>(Identical except for para 2.1, para 2.2, para 2.3, para 3.2.2, Note 3, Note 4, para 4.2.2, Section 9, Section 10, Annex A1, para X1.1.1, para X1.2.1, para X1.3.4, and some editorial changes.</del>					
<del>SF-2996</del>	...	x	...	07	...
<del>(Identical except for changes in para 2.1, para 8.2, para 9.1, para 9.2, Annex A1, para X1.2.2, and some editorial corrections.</del>					
<del>SF-2997</del>	...	...	...	07	...
<del>(Identical except for changes in paras 2.1, 7.8, 8.1, &amp; 9.1.3, addition of Annex A1, and some editorial changes.</del>					
<del>SF-3612</del>	...	x	...	14	...
<del>(Identical except for para 4.1, 2.3, 2.4, 6.5.1, 8.4, 8.5.1, section 10, Note 3, Annex A1, Note A1.3, Annex A2, and some editorial changes.</del>					
<del>SF-3754</del>	...	x	...	11	...
<del>(Identical except for paras 2.1, 2.4, 5.5, 6.6, 6.8, 8.5, 8.7.2, 11.1, Note 13, Section 10, Annex A3, and some editorial corrections.</del>					
<del>SF-4024</del>	...	x	...	12	...
<del>(Identical except for Note 1, paras 2.1, 2.2, Section 13, Annex A1, and some editorial changes.</del>					
<del>SF-4161</del>	...	x	...	14	...
<del>(Identical except for paras 2.2, 2.3, 5.1, Section 9, Annex A1, and some editorial changes.</del>					

Table II-1 (Cont'd)

## Acceptable ASTM Editions

Specifications	Section		Case	Latest Adopted ASTM	Other Acceptable ASTM Editions
	NM-1	<del>NM-2</del>			
<del>SF-5421</del>	...	x	...	05(R10)	...
<del>(Identical except for changes in para 2.1, 4.2.1, 8.1, 11.2.1, Section 13, structural requirements in Annex A1, and some editorial changes.</del>					
<del>SF-5677</del>	...	x	...	05(R10)	...
<del>(Identical except for title, paras 1.1, 2.3, 11.2, Annex A1, and some editorial changes.</del>					
<del>SF-5685</del>	...	x	...	11	...
<del>(Identical except for Paras 1.1, 2.2, 4.5.5, 4.5.6, 4.5.7, 7.4.1, Para 8.1.1, Annex A2, deletion of one note, and some editorial changes.</del>					
<del>SF-6041</del>	...	x	...	11	...
<del>(Identical except for changes in para 2.2, Note 3, para 4.1.2, para 5.1.1, para 5.1.2, Section 12, addition of Annex A1, and some editorial changes.</del>					
<del>SF-477</del>	...	x	...	14	...
<del>(Identical except for para 2.3, para 7.10, para 9.2, Annex A1, and some editorial changes.</del>					
<del>SF-913</del>	...	x	...	01(R14)	...
<del>(Identical except for para 1.1, para 3.3, para 11.2, Annex A1, and some editorial changes.</del>					
<del>SF-1173</del>	...	x	...	01(R12)	...
<del>(Identical except for para 2.2, para 2.4, para 2.5, para 3.3, para 10.2, Annex A1, and some editorial changes.</del>					

## MANDATORY APPENDIX IV

## GUIDELINE ON THE APPROVAL OF NEW MATERIALS UNDER THE ASME NONMETALLIC PRESSURE PIPING STANDARD

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## IV-3 GENERAL MECHANICAL PROPERTIES

Together with the specification for the material, the inquirer shall furnish the Committee with adequate data on which to base design values for inclusion in the applicable tables and data sheets.

For materials that will be used in heat fused or other joining applications, sufficient data shall be provided for joined materials to allow ASME to assess the properties of the completed joint in comparison with the base material.

If adoption at temperatures below room temperature is requested, and if it is desired to take design advantage of increased strength at lower temperatures, data on the properties shall be provided from room temperature to the lowest intended use temperature at intervals not exceeding 20°F (or 10°C).

...

## IV THERMOPLASTIC SPECIFIC MECHANICAL PROPERTIES

For thermoplastic materials, the data shall include values of ultimate tensile strength (if applicable based on the material type), yield strength (if applicable based on the material type) and elongation at yield and break, from room temperature to maximum intended use temperature at intervals not exceeding 20°F (or 10°C). Additionally, the data shall include values of hydrostatic design basis (HDB) or minimum required strength (MRS) at room temperature and the maximum intended use temperature. If HDB is not applicable, then alternate long-term strength methodology shall be proposed. Where the mechanical properties are dependent upon the product form, the applicable product form used to produce the mechanical properties should be identified.

Toughness (e.g. slow crack growth resistance, and rapid crack propagation, etc.) data shall be provided for materials for which toughness requirements in this standard would be expected to apply. The data shall include test results for the intended lowest service temperature and for the range of material thicknesses desired. For construction involving joining, the toughness data shall include the results of toughness tests in accordance with this standard for the affected zone for joints made by the intended joining process(es).

...

## IV-10 NEW MATERIALS CHECKLIST

To assist inquirers desiring coverage for new materials in this standard, or extending coverage of existing materials, the Committee has developed the following checklist of items that ought to be addressed by each inquiry. The Committee reserves the right to request additional data and application information when considering new materials.

- (a) Has a qualified inquirer request been provided?
- (b) Has a request either for revision to existing Code requirements or for a Code Case been defined?
- (c) Has a letter to ASTM been submitted requesting coverage of the new material in a specification, and has a copy been submitted to the committee? Alternatively, is this material already covered by a specification issued by a recognized national or international organization and has an English language version been provided?
- (d) Has the construction standard and Division coverage been identified?

NM.3.2-20XX

## Nonmetallic Materials

## Part 2: Reinforced Thermoset Plastic Material Specifications

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## SPECIFICATION REMOVAL

From time to time, it becomes necessary to remove specifications from this Part of Section II, NM.3. This occurs because the sponsoring society (e.g., ASTM, AWS, CEN) has notified ASME that the specification has either been replaced with another specification, or that there is no known use and production of a material. Removal of a specification from this Section NM.3 also results in concurrent removal of the same specification from NM.1 and NM.2 and from all of the ASME Construction Standards Section IX and from all of the ASME Boiler and Pressure Vessel Construction Codes that reference the material. This action effectively prohibits further use of the material in ASME Boiler and Pressure Vessel construction.

The following specifications will be dropped from NM.3 this Section in the next Edition, unless information concerning current production and use of the material is received before December 1 of this year:

None in this Edition.

## MANDATORY APPENDIX II

## GUIDELINE ON ACCEPTABLE ASTM EDITIONS

All materials, originating from an ASTM specification, allowed by the various Sections of this standard construction standards and used for construction within the scope of their requirements shall be furnished in accordance with the Material Specifications contained within NM.3.1 and NM.3.2 and this guideline except where otherwise provided in Cases or in the applicable Section of NM standard.

## Acceptable ASTM Editions

Specifications	Section <del>NM-1</del>	NM-2	Case	Latest Adopted ASTM	Other Acceptable ASTM Editions
<del>SD-1784</del> (Identical except for additional requirements in section 13 and Annex A1, and renumbering of sections 14 and 15.)	<del>x</del>	<del>...</del>	<del>...</del>	<del>11</del>	<del>...</del>
<del>SD-1785</del> (Identical except for additional requirements in section 12 and Annex A1, revised marking requirements in para. 10.2.1.4, renumbering of section 13 and quality assurance requirement in section 11.1 has been made mandatory.)	<del>x</del>	<del>...</del>	<del>...</del>	<del>12</del>	<del>...</del>
<del>SD-2116</del> (Identical except for changes in sections 7.1 and 13, additional requirements in section 14 and Annex A1, and renumbering of section 15.)	<del>x</del>	<del>...</del>	<del>...</del>	<del>07(R12)</del>	<del>...</del>
<del>SD-2239</del> (Identical except for additional requirements in section 11 and Annex A1, revised marking requirements in para. 9.1.5, renumbering of section 12 and quality assurance requirement in section 10.1 has been made mandatory.)	<del>x</del>	<del>...</del>	<del>...</del>	<del>12a</del>	<del>...</del>
<del>SD-2241</del> (Identical except for additional requirements in section 12 and Annex A2, revised marking requirements in para. 10.1.5, renumbering of section 13 and quality assurance requirement in section 11.1 has been made mandatory.)	<del>x</del>	<del>...</del>	<del>...</del>	<del>9</del>	<del>...</del>
<del>SD-2464</del> (Identical except for additional requirements in section 12 and Annex A1, revised marking requirements in para. 10.2.1.5 and 10.3, and quality assurance requirement in section 11.1 has been made mandatory.)	<del>x</del>	<del>...</del>	<del>...</del>	<del>13</del>	<del>...</del>
<del>SD-2466</del> (Identical except for additional requirements in section 12 and Annex A1, revised marking requirements in para. 10.1.5, renumbering of section 13 and quality assurance requirement in section 11.1 has been made mandatory.)	<del>x</del>	<del>...</del>	<del>...</del>	<del>13</del>	<del>...</del>
<del>SD-2467</del> (Identical except for additional requirements in section 12 and Annex A1, revised marking requirements in para. 10.2.4 and 10.3, renumbering of section 13 and quality assurance requirement in section 11.1 has been made mandatory.)	<del>x</del>	<del>...</del>	<del>...</del>	<del>13a</del>	<del>...</del>
<del>SD-2513</del> (Identical except for additional requirements in section 9 and Annex A3, update to section 1.4, revised marking requirements in sections 2.1, 7.2 and 7.5, changes from "ANSI" to "ASME" in sections 2.2, 3.2 and 5.15 and para. X1.3.4, X1.5.1 and X1.6.1, and quality assurance requirement in section 8.1 has been made mandatory.)	<del>x</del>	<del>...</del>	<del>...</del>	<del>14e01</del>	<del>...</del>
<del>SD-2683</del> (Identical except for additional requirements in section 11 and Annex A1, revised marking requirements in para. 9.1.5, and quality assurance requirement in section 10.1 has been made mandatory.)	<del>x</del>	<del>...</del>	<del>...</del>	<del>14</del>	<del>...</del>
<del>SD-2737</del> (Identical except for additional requirements in section 11 and Annex A1, revised marking requirements in para. 9.1.5, renumbering of section 12 and quality assurance requirement in section 10.1 has been made mandatory.)	<del>x</del>	<del>...</del>	<del>...</del>	<del>12a</del>	<del>...</del>
<del>SD-2846/SD-2846M</del> (Identical except for additional requirements in section 15 and Annex A1, revised marking requirements in para. 12.2.3, renumbering of section 16 and quality assurance requirement in section 14.1 has been made mandatory.)	<del>x</del>	<del>...</del>	<del>...</del>	<del>14</del>	<del>...</del>
<del>SD-3035</del> (Identical except for additional requirements in section 11 and Annex A1, revised marking requirements in para. 9.1.5, renumbering of section 12 and quality assurance requirement in section 10.1 has been made mandatory.)	<del>x</del>	<del>...</del>	<del>...</del>	<del>14a</del>	<del>...</del>
<del>SD-3222</del> (Identical except for changes in sections 7.1 and 12, and additional requirements in section 13 and Annex A1, and renumbering of sections 14 and 15.)	<del>x</del>	<del>...</del>	<del>...</del>	<del>05(R10)</del>	<del>...</del>
<del>SD-3261</del> (Identical except for additional requirements in section 13 and Annex A1, revised marking requirements in para. 11.1.1, renumbering of section 14 and quality assurance requirement in section 12.1 has been made mandatory.)	<del>x</del>	<del>...</del>	<del>...</del>	<del>12e01</del>	<del>...</del>
<del>SD-3307</del> (Identical except for changes in sections 5.2, 7.1 and 10, and additional requirements in section 11 and Annex A1, and renumbering of sections 12 and 13.)	<del>x</del>	<del>...</del>	<del>...</del>	<del>10</del>	<del>...</del>
<del>SD-3350</del> (Identical except for additional requirements in section 14 and Annex A1, and renumbering of section 15.)	<del>x</del>	<del>...</del>	<del>...</del>	<del>14</del>	<del>...</del>
<del>SD-4101</del> (Identical except for changes in section 14, additional requirements in section 15 and Annex A1, and renumbering of sections 16, 17 and 18.)	<del>x</del>	<del>...</del>	<del>...</del>	<del>11</del>	<del>...</del>
<del>SD-4894</del> (Identical except for changes in sections 7.1 and 11, and additional requirements in section 12 and Annex A1, and renumbering of sections 13 and 14.)	<del>x</del>	<del>...</del>	<del>...</del>	<del>07(R12)</del>	<del>...</del>
<del>SD-4895</del> (Identical except for changes in section 11, additional requirements in section 12 and Annex A1, and renumbering of sections 13 and 14.)	<del>x</del>	<del>...</del>	<del>...</del>	<del>10</del>	<del>...</del>
<del>SD-4976</del> (Identical except for changes in sections 3.2, 9.2 and 13, additional requirements in section 14 and Annex A1, and renumbering of sections 15 and 16.)	<del>x</del>	<del>...</del>	<del>...</del>	<del>12a</del>	<del>...</del>

## Acceptable ASTM Editions

Specifications	Section <del>NM-1</del>	NM-2	Case	Latest Adopted ASTM	Other Acceptable ASTM Editions
<del>SD-6779</del> (Identical except for changes in section 8.1, para. 11.1.1 and section 12, additional requirements in section 13 and Annex A1, and renumbering of sections 14 and 15.)	<del>x</del>	<del>...</del>	<del>...</del>	<del>12a</del>	<del>...</del>
<del>SF-437</del> (Identical except for additional requirements in section 12 and Annex A1, revised marking requirements in para. 10.2.1.5 and 10.3, and quality assurance requirement in section 11.1 has been made mandatory.)	<del>x</del>	<del>...</del>	<del>...</del>	<del>9</del>	<del>...</del>
<del>SF-438</del> (Identical except for additional requirements in section 12 and Annex A1, revised marking requirements in para. 10.2.1.5 and 10.3, renumbering of section 13 and quality assurance requirement in section 11.1 has been made mandatory.)	<del>x</del>	<del>...</del>	<del>...</del>	<del>9</del>	<del>...</del>
<del>SF-439</del> (Identical except for additional requirements in section 12 and Annex A1, revised marking requirements in para. 10.2.1.5 and 10.3, renumbering of section 13 and quality assurance requirement in section 11.1 has been made mandatory.)	<del>x</del>	<del>...</del>	<del>...</del>	<del>13</del>	<del>...</del>
<del>SF-441/SF-441M</del> (Identical except for additional requirements in section 12 and Annex A1, revised marking requirements in para. 10.2.1.5, and quality assurance requirement in section 11.1 has been made mandatory.)	<del>x</del>	<del>...</del>	<del>...</del>	<del>13e01</del>	<del>...</del>
<del>SF-442/SF-442M</del> (Identical except for additional requirements in section 12 and Annex A1, revised marking requirements in para. 10.2.1.5, and quality assurance requirement in section 11.1 has been made mandatory.)	<del>x</del>	<del>...</del>	<del>...</del>	<del>13e01</del>	<del>...</del>
<del>SF-714</del> (Identical except for additional requirements in section 8 and Annex A1, revised marking requirements in para. 9.1.2, changes from "ANSI" to "ASME" in sections 1.7 and 2.2 and tables 5 and 7, and quality assurance requirement in section 10.1 has been made mandatory.)	<del>x</del>	<del>...</del>	<del>...</del>	<del>13</del>	<del>...</del>
<del>SF-1055</del> (Identical except for additional requirements in section 13 and Annex A2, revised marking requirements in para. 10.1.5, renumbering of section 13 and quality assurance requirement in section 11.1 has been made mandatory.)	<del>x</del>	<del>...</del>	<del>...</del>	<del>13</del>	<del>...</del>
<del>SF-1483</del> (Identical except for additional requirements in section 11 and Annex A1, revised marking requirements in para. 9.1.6, quality assurance requirement in section 10.1 has been made mandatory, and renumbering of section 12.)	<del>x</del>	<del>...</del>	<del>...</del>	<del>12</del>	<del>...</del>
<del>SF-1673</del> (Identical except for additional requirements in section 12 and Annex A2, revised marking requirements in para. 10.2.2.5, quality assurance requirement in section 11.1 has been made mandatory, and renumbering of section 13.)	<del>x</del>	<del>...</del>	<del>...</del>	<del>10</del>	<del>...</del>
<del>SF-1733</del> (Identical except for additional requirements in section 13 and Annex A1, revised marking requirements in para. 11.1.1 and quality assurance requirement in section 12.1 has been made mandatory.)	<del>x</del>	<del>...</del>	<del>...</del>	<del>13</del>	<del>...</del>
<del>SF-1924</del> (Identical except for additional requirements in section 11 and Annex A1, revised marking requirements in para. 9.1.1, renumbering of section 12 and quality assurance requirement in section 10.1 has been made mandatory.)	<del>x</del>	<del>...</del>	<del>...</del>	<del>12</del>	<del>...</del>
<del>SF-1970</del> (Identical except for additional requirements in section 13 and Annex A1, revised marking requirements in para. 11.1.7, renumbering of section 14 and quality assurance requirement in section 12.1 has been made mandatory.)	<del>x</del>	<del>...</del>	<del>...</del>	<del>12e01</del>	<del>...</del>
<del>SF-2206</del> (Identical except for additional requirements in section 13 and Annex A1, revised marking requirements in para. 10.1.1, renumbering of section 13 and quality assurance requirement in section 11.1 has been made mandatory.)	<del>x</del>	<del>...</del>	<del>...</del>	<del>14</del>	<del>...</del>
<del>SF-2389</del> (Identical except for changes to section 11, and additional requirements in Annex A1, revised marking requirements in para. 12.1.7 and quality assurance requirement in section 13.1 has been made mandatory.)	<del>x</del>	<del>...</del>	<del>...</del>	<del>10</del>	<del>...</del>
<del>SF-2600</del> (Identical except for additional requirements in section 12 and Annex A2, revised marking requirements in para. 10.1.5, renumbering of section 13 and quality assurance requirement in section 11.1 has been made mandatory.)	<del>x</del>	<del>...</del>	<del>...</del>	<del>9</del>	<del>...</del>
<del>SF-2619/SF-2619M</del> (Identical except for additional requirements in section 12 and Annex A2, revised marking requirements in para. 10.1.5, renumbering of section 13 and quality assurance requirement in section 11.1 has been made mandatory.)	<del>x</del>	<del>...</del>	<del>...</del>	<del>13</del>	<del>...</del>
<del>SF-2623</del> (Identical except for additional requirements in section 11 and Annex A1, revised marking requirements in para. 9.1.6, changes from "ANSI" to "ASME" in sections 2.2 and 3.1, quality assurance requirement in section 10.1 has been made mandatory, and renumbering of section 12.)	<del>x</del>	<del>...</del>	<del>...</del>	<del>8</del>	<del>...</del>
<del>SF-2769</del> (Identical except for additional requirements in section 11 and Annex A1, changes to section 5.6 title, revised marking requirements in para. 9.1.4.7, changes from "ANSI" to "ASME" in sections 2.2, 2.8 and 3.1, quality assurance requirement in section 10.1 has been made mandatory, and renumbering of section 12.)	<del>x</del>	<del>...</del>	<del>...</del>	<del>10</del>	<del>...</del>
<del>SF-2880</del> (Identical except for revised requirements in section 9 and additional requirements in Annex A1, and revised marking requirements in para. 7.1.3.8.)	<del>x</del>	<del>...</del>	<del>...</del>	<del>14</del>	<del>...</del>
<del>SF-2945</del> (Identical except for additional requirements in section 9 and Annex A3, update to section 1.4, revised marking requirements in section 7.1 Note 10 and para. A2.6.1.1, changes from "ANSI" to "ASME" in sections 2.2, 3.2 and 5.15 and para. X2.3.3, X2.5.1 and X2.6.1, and quality assurance requirements in section 8.1 and para. A2.7.1 have been made mandatory.)	<del>x</del>	<del>...</del>	<del>...</del>	<del>12a</del>	<del>...</del>

## MANDATORY APPENDIX IV

## GUIDELINE ON THE APPROVAL OF NEW MATERIALS UNDER THE ASME NONMETALLIC PRESSURE PIPING STANDARD

## IV-3 GENERAL MECHANICAL PROPERTIES

Together with the specification for the material, the inquirer shall furnish the Committee with adequate data on which to base design values for inclusion in the applicable tables and data sheets.

For materials that will be used in heat fused or other joining applications, sufficient data shall be provided for joined materials to allow ASME to assess the properties of the completed joint in comparison with the base material.

If adoption at temperatures below room temperature is requested, and if it is desired to take design advantage of increased strength at lower temperatures, data on the properties shall be provided from room temperature to the lowest intended use temperature at intervals not exceeding 20°F (or 10°C).

## IV THERMOPLASTIC SPECIFIC MECHANICAL PROPERTIES



For thermoplastic materials, the data shall include values of ultimate tensile strength (if applicable based on the material type), yield strength (if applicable based on the material type) and elongation at yield and break, from room temperature to maximum intended use temperature at intervals not exceeding 20°F (or 10°C). Additionally, the data shall include values of hydrostatic design basis (HDB) or minimum required strength (MRS) at room temperature and the maximum intended use temperature. If HDB is not applicable, then alternate long-term strength methodology shall be proposed. Where the mechanical properties are dependent upon the product form, the applicable product form used to produce the mechanical properties should be identified.

Toughness (e.g. slow crack growth resistance, and rapid crack propagation, etc.) data shall be provided for materials for which toughness requirements in this standard would be expected to apply. The data shall include test results for the intended lowest service temperature and for the range of material thicknesses desired. For construction involving joining, the toughness data shall include the results of toughness tests in accordance with this standard for the affected zone for joints made by the intended joining process(es).

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#### IV-10 NEW MATERIALS CHECKLIST

To assist inquirers desiring coverage for new materials in this standard, or extending coverage of existing materials, the Committee has developed the following checklist of items that ought to be addressed by each inquiry. The Committee reserves the right to request additional data and application information when considering new materials.

- Has a qualified inquirer request been provided?
- Has a request either for revision to existing ~~Code~~ requirements or for a ~~Code~~ Case been defined?
- Has a letter to ASTM been submitted requesting coverage of the new material in a specification, and has a copy been submitted to the committee? Alternatively, is this material already covered by a specification issued by a recognized national or international organization and has an English language version been provided?
- Has the construction standard ~~and Division~~ coverage been identified?

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#### GUIDELINE ON LOCATING MATERIALS INSTRESS TABLES, AND IN TABLES OF MECHANICAL AND PHYSICAL PROPERTIES

##### 2.1 Tables 1-1-1 and 1-1-1M

Tables 1-1-1 and 1-1-1M provide allowable stresses for thermoplastic<sup>1</sup> materials used in ASME NM.1 construction. Within these tables, the first step in ordering materials is to use their nominal compositions. These nominal compositions are nothing more than widely recognized designators for each thermoplastic material. These nominal compositions are arranged as follows:

- ~~acrylonitrile butadiene styrenes (ABSs)~~
- ~~chlorinated polyvinyl chlorides (CPVCs)~~
- ~~cross-linked polyethylenes (PEXs)~~
- ~~polyamides (PAs)~~
- ~~polyethylenes (PEs)~~
- ~~polyethylenes of raised temperatures (PE-RTs)~~

#### Data Sheet 1-2.1-2M Fiberglass Unsaturated Polyester Resin Type II (SC-582)

General Notes:

- (c) The maximum allowable design stress value shall be ~~12440~~ 20690 kPa for flanges constructed of Type II laminates.

#### Data Sheet 1-2.2-1M Vinylester Resin Type I (SC-582)

Description and Service Limits

Reinforcement material:	Fiberglass (type E or ECR glass)
Resin material:	Vinylester resin
Reinforcement pattern:	Random glass
Structural wall thickness range, <del>in</del> mm:	2.5 to 17.5
Liner thickness, <del>in</del> mm:	2.5

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General Notes:

- (c) The maximum allowable design stress value shall be ~~12440~~ 20690 kPa for flanges constructed of Type II laminates.

#### Table 2-1 Thermal Expansion ~~Coefficients~~ for Thermoplastic Materials

#### Table 2-1M Thermal Expansion ~~Coefficients~~ for Thermoplastic Materials

#### Table 2-3 Moduli of Elasticity, E, of Thermoplastic Materials for Given Temperatures

Materials	Load Duration	Modulus of Elasticity, E, MPa, for Temperature, °C, of															
		23 and Under	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95
PVDF 2025 [Notes (1) and (3)]	Short term	1750	1721	1650	1569	1480	1383	1281	1176	1070	967	869	777	693	618	552	495
	0.5 h	1554	1528	1465	1394	1314	1228	1137	1044	950	859	772	690	615	549	490	439
	1 h	1477	1453	1393	1325	1249	1167	1081	992	903	816	733	656	585	522	466	418
	10 h	1248	1227	1176	1119	1055	986	913	838	763	690	619	554	494	441	394	353
	24 h	1169	1150	1102	1048	989	924	856	785	715	646	580	519	463	413	369	330
	100 h	1054	1036	993	945	891	833	771	708	644	582	523	468	417	372	332	298
	1000 h	933	917	879	837	789	737	683	627	570	516	463	414	369	329	294	264
	1 yr	833	819	785	747	704	658	610	560	509	460	414	370	330	294	263	235
	10 yr	767	754	723	687	648	606	561	515	469	424	381	340	304	271	242	217
	50 yr	725	713	683	650	613	573	530	487	443	400	360	322	287	256	229	205

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**MANDATORY APPENDIX II**  
**GUIDELINES ON MULTIPLE MARKING OF MATERIALS**

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**II-200 GUIDELINES**

The construction standards individually define what materials may be used in components constructed in compliance to their rules requirements. If a material meets all of the requirements for a specification for which it is marked, including documentation, if any, and if it meets all requirements for use imposed by the construction standard, it may be used. The construction standard, in general, do not address the case of materials marked with more than one specification, grade, class, or type, so these guidelines are offered for clarification.

**II-300 ACCEPTABILITY OF MULTIPLE MARKING**

Dual or multiple marking is acceptable, as long as the material so marked meets all of the requirements of all the specifications, grades, classes, and types with which it is marked.

All of the measured and controlled attributes of the ~~multiply-marked~~ ~~multiple-marked~~ grades or specifications must overlap (e.g., chemistry, mechanical properties, dimensions, and tolerances) and the material so marked must exhibit values that fall within the overlaps. Further, the controlled but unmeasured attributes of the specifications or grades must overlap.

Many specifications or grades have significant overlap of chemistry ranges or properties. It is common for material manufacturers to produce materials that satisfy more than one specification, grade, class, or type. Examples include SD-3035 and SF-714, PE3408 and PE4710, ~~etc.~~

...

**II-600 MARKING SELECTION**

If a material is marked with specifications, grades, classes, or types, it may be used with the allowable stresses, ~~design stress intensities~~, or ratings appropriate for any of the markings on the material, as long as the material specification, grade, class, and type is permitted by the standard of construction governing the component in which the material is to be used. However, once the designer has selected which marking applies (specification, grade, class, type, etc.), the designer must use all the design values appropriate for that selection and shall may not mix and match values from any other specifications, grades, classes, types, etc., with which the material may be marked.

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**MANDATORY APPENDIX III**

**GUIDELINE ON THE APPROVAL OF NEW MATERIALS ~~UNDER THE ASME NONMETALLIC PRESSURE PIPING STANDARD~~**

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**III-300 GENERAL MECHANICAL PROPERTIES**

Together with the specification for the material, the inquirer shall furnish the Committee with adequate data on which to base design values for inclusion in the applicable tables and data sheets.

For materials that will be used in heat fused or other joining applications, sufficient data shall be provided for joined materials to allow ASME to assess the properties of the completed joint in comparison with the base material.

If adoption at temperatures below room temperature is requested, and if it is desired to take design advantage of increased strength at lower temperatures, data on the properties shall be provided from room temperature to the lowest intended use temperature at intervals not exceeding 20° F (or 10° C).

If the material is to be used in components that operate under external pressure, compressive stress-strain curves (for each load direction for anisotropic materials and as a function of load and duration for viscoelastic materials) shall be furnished, for the same temperature range and intervals for which tensile properties have been provided. The stress-strain curves (not load versus extension) shall be determined using a Class B-2 or better accuracy extensometer as defined in Practice ASTM E 83. Numerical data, when available, should be submitted. The data should include the original cross-sectional area of the test specimen and stress-strain curves with units marked on them.

...

**III-1000 NEW MATERIALS CHECKLIST**

To assist inquirers desiring coverage for new materials in this standard, or extending coverage of existing materials, the Committee has developed the following checklist of items that ought to be addressed by each inquiry. The Committee reserves the right to request additional data and application information when considering new materials.

- (a) Has a qualified inquirer request been provided?
- (b) Has a request either for revision to existing ~~Code~~ requirements or for a ~~Code~~ Case been defined?
- (c) Has a letter to ASTM ~~or AWS~~ been submitted requesting coverage of the new material in a specification, and has a copy been submitted to the Committee? Alternatively, is this material already covered by a specification issued by a recognized national or international organization and has an English language version been provided?
- (d) Has the construction standard and Division coverage been identified?

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**III-12000 REQUIREMENTS FOR RECOGNIZED NATIONAL OR INTERNATIONAL SPECIFICATIONS**

Acceptable material specifications will be identified by date or edition. Approved edition(s) will be stated in the subtitle of the ASME specification. Eventually, acceptable previous editions will be listed in NM.3.1 and NM.2-Subparts 1 and 2. Minimum requirements shall be contained in a material specification for which acceptance is being requested include such items as name of national or international organization, scope, reference documents, process, manufacture, conditions for delivery, chemical requirements (if applicable), tensile requirements, forming properties, testing specifications and requirements, workmanship, finish, marking, inspection, and rejection.

**III-1300 PUBLICATION OF RECOGNIZED NATIONAL OR INTERNATIONAL SPECIFICATIONS**

Specifications for which ASME has not been given permission to publish by the originating organization will be referenced on a cover sheet in NM.3.1 and NM.3.2-Subparts 1 and 2. Documents that are referenced in accepted national or international material specifications will not be published by ASME. Additions and exceptions to the material specification will be noted in the subtitle of the specification.

**III-1400 CASE**

The Standards Committee will consider the issuance of an ASME Case, permitting the use of a new material, provided that the following conditions are met:

- (a) the inquirer provides evidence that a request for coverage of the material in a specification has been made to ASTM or a recognized national or international organization
  - (b) the material is commercially available and can be purchased within the proposed specification requirements
  - (c) the inquirer shows that there will be a reasonable demand for the material by industry and that there exists an urgency for approval by means of a Case
  - (d) the requests for approval of the material shall clearly describe it in specification form, including such items as scope, process, manufacture, conditions for delivery, chemical requirements (if applicable), tensile requirements, forming properties, testing specifications and requirements, workmanship, finish, marking, inspection, and rejection
  - (e) all other requirements identified previously under standard Policy and Application apply
  - (f) the inquirer shall furnish the Standards Committee with all the data specified in this Guideline Appendix.
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## NSF/ANSI Standard For Wastewater Technology –

### Onsite residential and commercial water reuse treatment systems

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#### 8 Performance testing and evaluation

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##### 8.1.2.1.1 Graywater challenge water: Systems treating bathing source water

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The 30-d average concentration of the bathing water delivered to the system shall be as follows:

Parameter	Required range
TSS	50 – 100 mg/L
BOD <sub>5</sub>	100 – 180 mg/L
temperature	25 – 35 °C
pH	6.0 – 7.5
turbidity	30 – 70 NTU
total phosphorous – P	1.0 – 4.0 mg/L
total Kjeldahl nitrogen – N	3.0 – 5.0 mg/L
COD	200 – 400 mg/L
TOC	30 – 60 mg/L
total coliforms	10 <sup>3</sup> – 10 <sup>4</sup> cfu/100 mL
E. coli ( <del>Escherichia coli</del> – ATCC <sup>†</sup> 11775) <sup>†</sup>	10 <sup>2</sup> – 10 <sup>3</sup> cfu/100 mL

<sup>†</sup>ATCC, American Type Culture Collection, PO Box 1549, Manassas, VA 20108 <[www.atcc.org](http://www.atcc.org)>.

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## NSF/ANSI Standard For Wastewater Technology –

# Onsite residential and commercial water reuse treatment systems

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## 8 Performance testing and evaluation

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### 8.6 Criteria (applicable to all reuse systems evaluated in accordance with 8.1, 8.2, and 8.3)

#### 8.6.1 General

**8.6.1.1** If conditions during the testing and evaluation period result in system upset, improper sampling, improper dosing, or influent characteristics outside of the specified ranges, an assessment shall be conducted to determine the extent to which these conditions adversely affected the performance of the system. Based on this assessment, specific data points may be excluded from the averages of effluent measurements. Rationale for all data exclusions shall be documented in the final report.

**8.6.1.2** In the event that a catastrophic site problem not described in this Standard including, but not limited to, influent characteristics (including influent total coliform or *E.coli* results exceeding the single sample maximum values during testing under 8.1), malfunctions of test apparatus, and acts of nature, jeopardizes the validity of the performance testing and evaluation, manufacturers shall be given the choice to:

- perform maintenance on the system, reinitiate system start-up procedures, and restart the performance testing and evaluation; or
- with no routine maintenance performed, have the system brought back to pre-existing conditions and resume testing within 3 wk (21 d) after the site problem has been identified and corrected. Data collected during the system recovery period shall be excluded from averages of effluent measurements.

NOTE — Pre-existing conditions shall be defined as the point when the results of 3 consecutive data days are within 15% of the previous 30-d average(s).

**8.6.1.3** During the design loading sequence, a minimum of 2/3 of the total scheduled data days shall be necessary for the test to be considered valid.

**8.6.1.4** During the stress loading sequence (8.1.2.2.2 and 8.2.2.2.2), a minimum of 2/3 of the total scheduled data days and from at least one of the scheduled data days during any single stress recovery shall be necessary for the test to be considered valid.

**8.6.1.5** In the event that the system cannot discharge due to system design or malfunction, an assessment shall be conducted to determine the reason of discharge failure. Based on this assessment, it is permissible to exclude specific data points from the averages of effluent measurements. Manufacturers shall be given

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the choice to follow one of options in 8.6.1.2. Rationale for all data exclusions shall be documented in the final report.

**BSR/UL 563, Standard for Safety for Ice Makers**

19A.2.1 All single-phase motors other than a hermetic refrigerant motor compressor shall be protected by one or more of the following:

- a) A separate device responsive to motor current and rated or set to trip at not more than the percentage of the motor nameplate full-load current rating specified in Table 19A.1. If the percentage protection specified in Column A of Table 19A.1 does not correspond to the percentage value of an overload relay of a standard size, the device of the next higher size may be used. However, the overload device of the next higher size shall protect against currents exceeding the percentage values specified in Column B of Table 19A.1.
- b) A separate overload device which combines the functions of overload and overcurrent protection and is responsive to motor current rated or set at values not greater than the percentages of the motor nameplate full-load current rating as specified Table 19A.1. Such a device shall be capable of fully protecting the circuit and motor both under overload and short circuit conditions.
- c) *Deleted.*
- d) A protective device integral with the motor that complies with the Standard for Thermally Protected Motors, UL 1004-3. A motor intended to move air only, by means of an air-moving fan that is integrally attached, keyed, or otherwise fixed to the motor, is required to have locked-rotor protection only.
- e) Impedance protection complying with the ~~Standard for Automatic Electrical Controls; Part 2: Particular Requirements for Thermal Motor Protectors, UL 60730-2-22~~ or the Standard for Impedance protected Motors, UL 1004-2.
- f) Protective electronic circuits integral to the motor that comply with the Standard for Electronically Protected Motors, UL 1004-7.
- g) Protective electronic circuits that comply with clause 19A.2.2.
- h) Other protection that is shown by test to be equivalent to the protection specified in (c) and (d).

20.20 Unless specified elsewhere in this standard, protective (safety) controls, such as temperature and pressure limiting controls, shall comply with one of the following standards:

- a) *Deleted.*
- b) Standard for Limit Controls, UL 353;
- c) Standard for Automatic Electrical Controls - Part 1: General Requirements, UL 60730-1, and the specific applicable Part 2 Standard.

Calibration requirements are to be applied. A control evaluated to UL 60730-1 shall have Type 2 Action.

20.22 Protective (Safety) controls and switches relying on software to provide the protective function shall be investigated to the requirements of:

- a) Software Class B in Annex H of the Standard for Automatic Electrical Controls - Part 1: General Requirements, UL 60730-1; or
- b) Supplement SA in the Standard for Limit Controls, UL 353.

c) *Deleted.*

64.6 Additional instructions are specified in paragraphs 5.2.1, ~~5.2.3~~ 5.3.1, 6.8, 6.9, 9.1.7, 43.3, 61.2(d), 61.21, and 61.22.

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## BSR/UL 1277, Standard for Safety for Tray Cables

## PROPOSALS

## 1. Addition of 1000 V Rating to UL 1277 for Tray Cable

Table 14.1

Dielectric voltage-withstand RMS test potential in volts

Size of circuit or insulated grounding conductor being tested	Type TW	PVC-insulated conductor other than Type TW	Conductor not Insulated with PVC	
			600-V or 1000-V	1000-V or 2000-V
18 and 16 AWG	-	2000	3000	-
14 - 10	1500	2000	3000	6000
8	2000	2000	3500	6000
7 - 2	2000	2000	3500	7500
1 - 4/0	2500	2500	4000	9000
250 - 500 kcmil	3000	3000	5000	10,000
550 - 1000	3500	3500	6000	11,000

## 3. Alternate Aging Time and Temperature for 60°C Oil Rating, Revised Table 12.2

Table 12.2

Oil resistance of jackets

Condition of specimens at time of measurement	Minimum ultimate elongation (1-inch or 25-mm bench marks)	Minimum tensile strength
Unaged	In accordance with requirements in UL 1581 from Table 12.1	
<u>Specimens of 75°C (167°F) oil-resistant jacket from cable marked "oil resistant II" [see 29.1(i)]:</u>		
<del>Specimens of 75°C (167°F) oil-resistant jacket from cable marked "oil resistant II" [see 29.1(i)]:</del> In addition to complying with 60°C oil requirements, specimens shall be aged in IRM 902 oil for 60 d at 75.0 ±1.0°C (167.0 ±1.8°F)	65 percent of the result with unaged specimens	65 percent of the result with unaged specimens
<u>Specimens of 60°C (140°F) oil-resistant jacket from cable marked "oil-resistant I" [see 29.1(j)]:</u>		
<del>Specimens of 60°C (140°F) oil-resistant jacket from cable marked "oil-resistant I" [see 29.1(j)]:</del> Aged in IRM 902 oil for 96 h at 100.0 ±1.0°C (212.0 ±1.8°F) <del>or for 60 d at 60.0 ±1.0°C (167.0 ±1.8°F)</del>	50 percent of the result with unaged specimens	50 percent of the result with unaged specimens
<u>or</u>		
<u>Aged in IRM 902 oil for 60 d at 60.0 ±1.0°C (140.0 ±1.8°F)</u>	<u>65 percent of the result with unaged specimens</u>	<u>65 percent of the result with unaged specimens</u>