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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: September 22, 2019

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

Addenda

BSR/ASHRAE Addendum b to ANSI/ASHRAE Standard 145.2-2016, Laboratory Test Method for Assessing the Performance of Gas-Phase Air Cleaning Systems: Air Cleaning Devices (addenda to ANSI/ASHRAE Standard 145.2-2011)

This addendum makes changes to the Title, Purpose, and Scope of Standard 145.2-2016.

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

Send comments (with optional copy to psa@ansi.org) to: <http://www.ashrae.org/standards-research--technology/public-review-drafts>

BSR/ASHRAE Addendum d to ANSI/ASHRAE Standard 34-2019, Designation and Safety Classification of Refrigerants (addenda to ANSI/ASHRAE Standard 34-2016)

This addendum adds the zeotropic refrigerant blend R-469A in Table 4-2.

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

Send comments (with optional copy to psa@ansi.org) to: osr.ashrae.org

BSR/ASHRAE Addendum e to ANSI/ASHRAE Standard 34-2019, Designation and Safety Classification of Refrigerants (addenda to ANSI/ASHRAE Standard 34-2016)

This addendum adds the zeotropic refrigerant blend R-470A in Table 4-2.

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

Send comments (with optional copy to psa@ansi.org) to: osr.ashrae.org

BSR/ASHRAE Addendum f to ANSI/ASHRAE Standard 34-2019, Designation and Safety Classification of Refrigerants (addenda to ANSI/ASHRAE Standard 34-2016)

This addendum adds LFL data to Tables 4-1 and 4-2

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

Send comments (with optional copy to psa@ansi.org) to: osr.ashrae.org

BSR/ASHRAE/IES Addendum by to ANSI/ASHRAE/IES Standard 90.1-2016, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IES Standard 90.1-2016)

This third public review draft ISC makes changes to the proposed renewable requirements based on comments received during the second public review.

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

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

BSR/ASHRAE/IES Addendum da to ANSI/ASHRAE/IESNA Standard 90.1-2016, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2016)

The proposed addendum aligns documentation (G1.3.2), simulation program (G2.2), climatic data (G2.3), and exceptional calculations (G2.5) requirements of Appendix G with the corresponding requirements of Section 11.

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

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

BSR/ASHRAE/IES Addendum db to ANSI/ASHRAE/IES Standard 90.1-2016, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2016)

The addendum clarifies how to establish the Appendix G baseline space conditioning categories that must be used in conjunction with Tables G3.4-1 to G3.4-8.

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

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

UL (Underwriters Laboratories, Inc.)

Revision

BSR/UL 147-201x, Standard for Safety for Hand-Held Torches for Fuel Gases (revision of ANSI/UL 147-2016)

The following topic is being proposed: (1) Revisions to the Fire Test.

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

Send comments (with optional copy to psa@ansi.org) to: Marcia Kawate, (510) 319-4259, Marcia.M.Kawate@ul.org

BSR/UL 147B-201x, Standard for Safety for Nonrefillable (Disposable) Type Metal Container Assemblies for Butane (revision of ANSI/UL 147B-2016)

The following topic is being proposed: (1) Revisions to the Fire Test.

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

Send comments (with optional copy to psa@ansi.org) to: Marcia Kawate, (510) 319-4259, Marcia.M.Kawate@ul.org

BSR/UL 498-201x, Standard for Safety for Attachment Plugs and Receptacles (revision of ANSI/UL 498-2018)

This proposal for UL 498 covers: addition of requirements for Attachment Fitting & Receptacle for Luminaire and/or Ceiling Fan Load Ratings.

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

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

BSR/UL 1564-201x, Standard for Safety for Industrial Battery Chargers (revision of ANSI/UL 1564-2013 (R2017))

The following is proposed: (1) Reference update from UL 508 to UL 1332 and (2) Requirements for industrial battery chargers intended to charge lithium ion batteries

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

Send comments (with optional copy to psa@ansi.org) to: Jonette Herman, (919) 549-1479, Jonette.A.Herman@ul.org

BSR/UL 2515A-201X, Standard for Supplemental Requirements for Extra Heavy Wall Reinforced Thermosetting Resin Conduit (RTRC) and Fittings (revision of ANSI/UL 2515A-2016)

(1) Clarification on where to measure the minimum inside diameter of socket specified in Table 3.2.

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

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

BSR/UL 2580-201x, Standard for Safety for Batteries for Use in Electrical Vehicles (revision of ANSI/UL 2580-2016)

This proposal for UL 2580 covers: (1) Inclusion of cell criteria in Annex D and revision to Overcharge Test; (2) Revision of production quality control criteria in 17.4; (4) Vibration Endurance Test options for EESAs intended for off-road vehicle applications; (7) Revisions to functional safety criteria; (8) Revision to Internal Fire Test for clarity and addition of Annex E for examples of cell failure methods; and (9) Revision to External Fire Test to allow for other recognized test methods.

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

Send comments (with optional copy to psa@ansi.org) to: Megan Van Heirselee, (847) 664-2881, Megan.M.VanHeirselee@ul.org

Comment Deadline: October 7, 2019

AAFS (American Academy of Forensic Sciences)

New Standard

BSR/ASB Std 030-201x, Standards for a Quality Assurance Program in Bloodstain Pattern Analysis (new standard)

This document provides requirements for establishing and maintaining a documented quality assurance program in bloodstain pattern analysis to forensic service providers. A quality assurance program is necessary to ensure the quality of the work product that comes from any forensic service provider.

Single copy price: Free

Obtain an electronic copy from: Document will be provided electronically on AAFS Standards Board website free of charge.

Document will be provided electronically on AAFS Standards Board free of charge

Send comments (with optional copy to psa@ansi.org) to: asb@aaafs.org. Document and comments template can be viewed on the AAFS Standards Board website at: <http://www.asbstandardsboard.org/notice-of-standard-development-and-coordination//>

AAMI (Association for the Advancement of Medical Instrumentation)

Reaffirmation

BSR/AAMI/ISO 13485-2003 Ed. 3 (R201x), Medical devices - Quality management systems - Requirements for regulatory purposes (reaffirmation of ANSI/AAMI/ISO 13485-2003 (R2009))

Specifies requirements for a quality management system for medical devices where an organization needs to demonstrate its ability to provide a product that consistently meets customer and applicable regulatory requirements.

Single copy price: \$133.00 (AAMI Members); \$236.00 (Non-Members)

Obtain an electronic copy from: <https://my.aami.org/store/detail.aspx?id=13485>

Send comments (with optional copy to psa@ansi.org) to: WVARGAS@AAMI.ORG

AMCA (Air Movement and Control Association)

Revision

BSR/AMCA Standard 260-201x, Laboratory Methods of Testing Induced Flow Fans for Rating (revision of ANSI/AMCA Standard 260 -13)

The purpose of this standard is to establish a uniform laboratory method for determining an induced flow fan's aerodynamic performance in terms of airflow rate, pressure developed, power consumption, air density, speed of rotation, and efficiency. This standard is an adjunct to ANSI/AMCA Standard 210 in order to accommodate the induced flow fan's unique characteristics.

Single copy price: \$45.00 (AMCA Members); \$90.00 (Non-Members)

Obtain an electronic copy from: jbrooks@amca.org

Order from: Joseph Brooks, jbrooks@amca.org

Send comments (with optional copy to psa@ansi.org) to: jbrooks@amca.org

APA (APA - The Engineered Wood Association)

Revision

BSR/ASD PRG 320-201x, Standard for Performance-Rated Cross-Laminated Timber (revision of ANSI/APA PRG 320-2018)

Update the existing standard to include Structural Composite Lumber and revise the existing standard on glue bond durability requirements

Single copy price: Free

Obtain an electronic copy from: borjen.yeh@apawood.org

Order from: Borjen Yeh, (253) 620-7467, borjen.yeh@apawood.org

Send comments (with optional copy to psa@ansi.org) to: Same

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

BSR/ESD S6.1-201x, ESD Association Standard for the Protection of Electrostatic Discharge Susceptible Items - Grounding (revision of ANSI/ESD S6.1-2014)

This standard applies to bonding and grounding for the prevention of ESD in an EPA. The procedures, materials, and techniques specified in this standard may not be applicable for grounding of electrical sources operating at frequencies above 400 Hz. Electrically initiated explosive devices and hazardous areas with flammable atmospheres may require additional considerations that may not be adequately covered by these requirements.

Single copy price: \$105.00 (List)/\$75.00 (ESD Members) [Hard Cover]; \$130.00 (List)/\$100.00 (ESD Members) [Soft Cover]

Obtain an electronic copy from: cearl@esda.org

Order from: Christina Earl, (315) 339-6937, cearl@esda.org

Send comments (with optional copy to psa@ansi.org) to: Same

BSR/ESD STM12.1-201x, ESD Association Standard Test Method for the Protection of Electrostatic Discharge Susceptible Items - Seating - Resistance Measurement (revision of ANSI/ESD STM12.1-2014)

The test methods established here are designed to measure the resistance of seating. The resistances considered here are measured from various components of the seating to a groundable point such as a conductive caster or a drag chain. Resistivity measurements are not within the scope or purpose of this standard test method.

Single copy price: \$105.00 (List)/\$75.00 (ESD Members) [Hard Cover]; \$130.00 (List)/\$100.00 (ESD Members) [Soft Cover]

Obtain an electronic copy from: cearl@esda.org

Order from: Christina Earl, (315) 339-6937, cearl@esda.org

Send comments (with optional copy to psa@ansi.org) to: Same

BSR/ESD STM15.1-201x, ESD Association Standard Test Method for the Protection of Electrostatic Discharge Susceptible Items - Methods for Resistance Measurement of Gloves and Finger Cots (revision and redesignation of ANSI/ESD STM15.1-201x)

This document applies to all gloves and finger cots with a resistance as measured with personnel as a system of less than 1.0×10^{11} ohms. This document provides test procedures for measuring the electrical resistance of gloves or finger cots. The document also provides methods for performing intrinsic resistance measurements that include surface, volume, and two-point resistance using ANSI/ESD STM11.11, STM11.12, and STM11.13, respectively. "In-use" resistance measurement of the glove/finger cot and personnel together as a system is defined using a constant area and force electrode (CAFE).

Single copy price: \$105.00 (List)/\$75.00 (ESD Members) [Hard Cover]; \$130.00 (List)/\$100.00 (ESD Members) [Soft Cover]

Obtain an electronic copy from: cearl@esda.org

Order from: Christina Earl, (315) 339-6937, cearl@esda.org

Send comments (with optional copy to psa@ansi.org) to: Same

ESTA (Entertainment Services and Technology Association)**Revision**

BSR/E1.4-3-201x, Entertainment Technology - Manually Operated Hoist Rigging Systems (revision and partition of ANSI E1.4-2014)

This standard applies to permanently installed, human-powered manually operated hoists used as part of rigging systems for raising, lowering, and suspension of scenery, properties, lighting, and similar loads. This standard establishes requirements for the design, manufacture, installation, inspection, and maintenance of manual hoist systems for lifting and suspension of loads for performance, presentation, and theatrical production.

Single copy price: Free

Obtain an electronic copy from: https://tsp.esta.org/tsp/documents/public_review_docs.php

Order from: Karl Ruling, (212) 244-1505, standards@esta.org

Send comments (with optional copy to psa@ansi.org) to: Same

NEMA (ASC C136) (National Electrical Manufacturers Association)

Revision

BSR C136.35-201X, Locking Type Power Taps (LTPT) (revision of ANSI C136.35-2009 (R2014))

This standard covers the electrical and mechanical interchangeability of electrical devices mounted on or in luminaires, brackets, or remotely mounted on the support structure of the luminaire and that may draw power from the luminaire. These devices are used in conjunction with roadway and area lighting luminaires and may be mounted or plugged into the photocontrol receptacle. This standard does not cover such things as flag banners, flower containers, or decorative holiday/seasonal lights.

Single copy price: \$50.00

Obtain an electronic copy from: David.Richmond@nema.org

Order from: David Richmond, (703) 841-3234, David.Richmond@nema.org

Send comments (with optional copy to psa@ansi.org) to: Same

NFPA (National Fire Protection Association)

NFPA FIRE PROTECTION STANDARDS DOCUMENTATION

The National Fire Protection Association announces the availability of NFPA 1500 Second Draft Report for concurrent review by NFPA and ANSI. The disposition of all comments that were received after publication of the NFPA 1500 First Draft Report are published in the NFPA 1500 Second Draft Report, located on the document's information page under the next edition tab. The document's specific URL, www.nfpa.org/doc#next (for example www.nfpa.org/1500next), can easily access the document's information page. All Notices of Intent to Make A Motion at the 2020 Association Tech Session, in Orlando, Florida on the NFPA 1500 Second Draft Report, must be received by NFPA on or before 8/29/2019.

For more information on the rules and for up-to-date information on schedules and deadlines for processing NFPA Documents, check the NFPA website (<http://www.nfpa.org>) or contact NFPA's Codes and Standards Administration. Those who sent a Notice of Intent to Make a Motion to NFPA (Contact Standards Administration, NFPA, One Batterymarch Park, Quincy, MA 02269-7471) on the related standards are invited to copy ANSI's Board of Standards Review.

Revision

BSR/NFPA 1500-201x, Standard on Fire Department Occupational Safety, Health, and Wellness Program (revision of ANSI/NFPA 1500-2018)

This standard shall contain minimum requirements for a fire service-related occupational safety, health, and wellness program.

Obtain an electronic copy from: www.nfpa.org/1500next

Send comments (with optional copy to psa@ansi.org) to: Same

PHTA (Pool and Hot Tub Alliance)

Revision

BSR/APSP/ICC-14-201x, Standard for Portable Electric Spa Energy Efficiency (revision of ANSI/APSP/ICC-14 2014)

The requirements in this standard apply to factory-built residential portable electric spas and residential exercise spas (also known as swim spas) and portions of combination spas that are used for bathing and are operated by a private owner. The standard is meant to establish minimum energy efficiency requirements for portable electric spas and exercise spas. This revision includes updates as a result of working with members of the International Hot Tub Association (IHTA) and representatives of the California Energy Commission (CEC).

Single copy price: Free

Obtain an electronic copy from: shilaski@phta.org

Send comments (with optional copy to psa@ansi.org) to: Susan J. Hilaski; shilaski@phta.org

UL (Underwriters Laboratories, Inc.)

Revision

BSR/UL 87A-201x, Standard for Safety for Power-Operated Dispensing Devices for Gasoline and Gasoline/Ethanol Blends with Nominal Ethanol Concentrations up to 85 Percent (E0 - E85) (revision of ANSI/UL 87A-2019)

The following topics are being proposed: (1) Add 16 percent isobutanol/gasoline blend and (2) Adding zones to the different divisions.

Single copy price: Free

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

Order from: <http://www.shopulstandards.com>

Send comments (with optional copy to psa@ansi.org) to: Follow the instructions in the following website to enter comments into the CSDS Work Area: <https://csds.ul.com/Home/ProposalsDefault.aspx>

BSR/UL 651-201X, Standard for Schedule 40, 80, Type EB and A Rigid PVC Conduit and Fittings (revision of ANSI/UL 651-2018)

(1) Removal of Low-Temperature Handling Test from standard and (2) Clarification of Socket Depth Construction and Testing Requirements.

Single copy price: Free

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

Order from: <http://www.shopulstandards.com>

Send comments (with optional copy to psa@ansi.org) to: Follow the instructions in the following website to enter comments into the CSDS Work Area: <https://csds.ul.com/Home/ProposalsDefault.aspx>

BSR/UL 827-201X, Standard for Safety for Central-Station Alarm Services (revision of ANSI/UL 827-2019)

(1) Modifications to communication infrastructure.

Single copy price: Free

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

Order from: <http://www.shopulstandards.com>

Send comments (with optional copy to psa@ansi.org) to: Follow the instructions in the following website to enter comments into the CSDS Work Area: <https://csds.ul.com/Home/ProposalsDefault.aspx>

BSR/UL 2061-201x, Standard for Safety for Adapters and Cylinder Connection Devices for Portable LP-Gas Cylinder Assemblies (revision of ANSI/UL 2061-2014b)

The following is being proposed: (1) Clarifying the Flow Limiting Test for consistency with Table 5.1; (2) Adding exceptions to the Accelerated Aging Test with respect to RTI ratings.

Single copy price: Free

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

Order from: <http://www.shopulstandards.com>

Send comments (with optional copy to psa@ansi.org) to: Follow the instructions in the following website to enter comments into the CSDS Work Area: <https://csds.ul.com/Home/ProposalsDefault.aspx>

Comment Deadline: October 22, 2019

Reaffirmations and withdrawals available electronically may be accessed at: webstore.ansi.org

ASME (American Society of Mechanical Engineers)

Reaffirmation

BSR/ASME EA-1-2009 (R201x), Energy Assessment for Process Heating Systems (reaffirmation of ANSI/ASME EA-1-2009 (R2014))

This Standard covers process heating systems that are defined as a group (or a set or combination) of heating equipment used for heating materials in the production of goods in an industrial plant.

Single copy price: \$43.00

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 optional copy to psa@ansi.org) to: Luis Pulgarin, (212) 591-8184, pulgarinl@asme.org

BSR/ASME EA-3-2009 (R201x), Energy Assessment of Industrial Steam Systems (reaffirmation of ANSI/ASME EA-3-2009 (R2014))

This Standard covers steam systems that are defined as a system containing steam generator(s) or other steam source(s), a steam distribution network and end-use equipment.

Single copy price: \$43.00

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 optional copy to psa@ansi.org) to: Luis Pulgarin, (212) 591-8184, pulgarinl@asme.org

Technical Reports Registered with ANSI

Technical Reports Registered with ANSI are not consensus documents. Rather, all material contained in Technical Reports Registered with ANSI is informational in nature. Technical reports may include, for example, reports of technical research, tutorials, factual data obtained from a survey carried out among standards developers and/or national bodies, or information on the "state of the art" in relation to standards of national or international bodies on a particular subject.

Immediately following the end of a 30-day announcement period in Standards Action, the Technical Report will be registered by ANSI. Please submit any comments regarding this registration to the organization indicated, with a copy to the PSA Center, American National Standards Institute, 25 West 43rd Street, New York, NY 10036 or E-Mail to psa@ansi.org.

Comment Deadline: September 22, 2019

ASC X9 (Accredited Standards Committee X9, Incorporated)

Revision

X9 TR-34-2019, Interoperable Method for Distribution of Symmetric Keys Using Asymmetric Techniques: Part 1 - Using Factoring-Based Public Key Cryptography Unilateral Key Transport (revision of technical report)

This document describes a method consistent with the requirements of ANS X9.24-2, Retail Financial Services Symmetric Key Management - Part 2: Using Asymmetric Techniques for the Distribution of Symmetric Keys for the secure exchange of keys using asymmetric techniques between two devices that share asymmetric keys. This method is designed to operate within the existing capabilities of devices used in the retail financial services industry.

Single copy price: sambria.frazier@x9.org

Order from: ambria.frazier@x9.org

RIA (Robotic Industries Association)

RIA TR R15.706-2019, Technical Report for Industrial Robots and Robot Systems - Safety Requirements - User Responsibilities (technical report)

ANSI/RIA R15.06-2012 provides information for the safe design, manufacturing, installation, operation, maintenance and decommissioning of industrial robots and robot systems. It is directed to a variety of stakeholders including the manufacturer, integrator and supplier of robots and robot systems. These suppliers are required to produce machines (robots and robot systems) with the intent of providing the capabilities, functionality, and information needed for the end-user to safely use the robot systems. The standard addresses the entire supply chain of the robot systems, but does not include requirements or guidance to the end-user who is responsible for the safety of the robot system in use. This technical report is directed to the user stakeholder. It provides guidance and expands on the responsibilities that are implied, but not stated specifically, in the standard.

Single copy price: 2019 List Price: \$50.00 per copy. RIA members will receive a 20% discount, for an RIA Member price of \$40.00 per copy.

Order from: Robotic Industries Association (RIA)

Withdrawal of Technical Reports Registered with ANSI

Withdrawal of a Technical Report that is registered with ANSI is determined by the responsible ANSI-Accredited Standards Developer. The following Technical Reports are hereby withdrawn in accordance with the Developers own procedures.

B11 (B11 Standards, Inc.)

B11.TR3-2014, Risk Assessment and Risk Reduction - A Guideline to Estimate, Evaluate and Reduce Risks Associated with Machine Tools

Project Withdrawn

In accordance with clause 4.2.1.3.3 Discontinuance of a standards project of the ANSI Essential Requirements, 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:

AAMI (Association for the Advancement of Medical Instrumentation)

BSR/AAMI/ISO 10993-16-201x, Biological evaluation of medical devices - Part 16: Toxicokinetic study design for degradation products and leachables (identical national adoption of ISO 10993-16 (current version) and revision of ANSI/AAMI/ISO 10993-16-2010 (R2014))

Inquiries may be directed to Colleen Elliott, (703) 253-8261, celliott@aami.org

ASTM (ASTM International)

BSR/ASTM D3840-201x, Specification for Fiberglass (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe Fittings for Nonpressure Applications (revision of ANSI/ASTM D3840-2014)

Inquiries may be directed to Corice Leonard, (610) 832-9744, accreditation@astm.org

BSR/ASTM D4024-201x, Specification for Machine Made "Fiberglass" (Glass-Fiber-Reinforced Thermosetting Resin) Flanges (revision of ANSI/ASTM D4024-2000)

Inquiries may be directed to Corice Leonard, (610) 832-9744, accreditation@astm.org

BSR/ASTM D4097-201x, Specification for Contact-Molded Glass-Fiber-Reinforced Thermoset Resin Corrosion-Resistant Tanks (revision of ANSI/ASTM D4097-2018)

Inquiries may be directed to Corice Leonard, (610) 832-9744, accreditation@astm.org

NEMA (ASC C136) (National Electrical Manufacturers Association)

BSR C136.46-2013 (R201x), Standard for Roadway and Area Lighting Equipment - Concrete Lighting Poles (reaffirmation of ANSI C136.46-2013)

Inquiries may be directed to David Richmond, (703) 841-3234, David.Richmond@nema.org

Notice of Withdrawal: ANS at least 10 years past approval date

The following American National Standards have not been revised or reaffirmed within ten years from the date of their approval as American National Standards and accordingly are withdrawn:

ANS (American Nuclear Society)

ANSI/ANS 10.2-2000 (R2009), Portability of Scientific and Engineering Software

Inquiries may be directed to Patricia Schroeder, (708) 579-8269, pschroeder@ans.org

ECIA (Electronic Components Industry Association)

ANSI/EIA 198-3-4-F-2009, Ceramic Dielectric Capacitors Classes I, II, III and IV - Part III, Section 4, Radial Through-Hole Capacitors, Conformally Coated and Molded Types

ANSI/EIA 364-1000.01B-2009, Environmental Test Methodology for Assessing the Performance of Electrical Connectors and Sockets Used in Controlled Environment Applications

Inquiries may be directed to Cecelia Yates, (703) 907-8026, cyates@ecaus.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.

ASTM (ASTM International)

ANSI/ASTM C581-2015, Practice for Determining Chemical Resistance of Thermosetting Resins Used in Glass-Fiber-Reinforced Structures Intended for Liquid Service

Inquiries may be directed to Corice Leonard, (610) 832-9744, accreditation@astm.org

ANSI/ASTM C582-2009 (R2016), Specification for Contact-Molded Reinforced Thermosetting Plastic (RTP) Laminates for Corrosion-Resistant Equipment

ANSI/ASTM D2105-2001 (R2014), Test Method for Longitudinal Tensile Properties of Fiberglass (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe and Tube

ANSI/ASTM D2143-2015, Test Method for Cyclic Pressure Strength of Reinforced, Thermosetting Plastic Pipe

ANSI/ASTM D2517-2018, Specification for Reinforced Epoxy Resin Gas Pressure Pipe and Fittings

ANSI/ASTM D2924-2017, Test Method for External Pressure Resistance of Fiberglass (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe

ANSI/ASTM D2925-2014, Test Method for Beam Deflection of Fiberglass (Glass-Fiber-Reinforced Thermosetting Resin) Pipe Under Full Bore Flow

ANSI/ASTM D2992-2018, Practice for Obtaining Hydrostatic or Pressure Design Basis for Fiberglass (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe and Fittings

ANSI/ASTM D2996-2015, Specification for Filament-Wound Fiberglass (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe

ANSI/ASTM D2996-2017, Specification for Filament-Wound Fiberglass (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe

ANSI/ASTM D2997-2015, Specification for Centrifugally Cast Fiberglass (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe

ANSI/ASTM D3262-2016, Specification for Fiberglass (Glass-Fiber-Reinforced Thermosetting-Resin) Sewer Pipe

ANSI/ASTM D3299-2010, Specification for Filament-Wound Glass-Fiber-Reinforced Thermoset Resin Corrosion-Resistant Tanks
Questions may be directed to: Corice Leonard, (610) 832-9744, accreditation@astm.org

ANSI/ASTM D3299-2018, Specification for Filament-Wound Glass-Fiber-Reinforced Thermoset Resin Corrosion-Resistant Tanks

ANSI/ASTM D3517-2014, Specification for Fiberglass (Glass-Fiber-Reinforced Thermosetting-Resin) Pressure Pipe

ANSI/ASTM D3567-2017, Practice for Determining Dimensions of Fiberglass (Glass-Fiber-Reinforced Thermosetting Resin) Pipe and Fittings

ANSI/ASTM D3681-2018, Test Method for Chemical Resistance of Fiberglass (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe in a Deflected Condition

ANSI/ASTM D3753-2012, Specification for Glass-Fiber-Reinforced Polyester Manholes and Wetwells

Questions may be directed to: Corice Leonard, (610) 832-9744, accreditation@astm.org

ANSI/ASTM D3754-2014, Specification for Fiberglass (Glass-Fiber-Reinforced Thermosetting-Resin) Sewer and Industrial Pressure Pipe

ANSI/ASTM D3839-2014, Guide for Underground Installation of Fiberglass (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe

Questions may be directed to: Corice Leonard, (610) 832-9744, accreditation@astm.org

ANSI/ASTM D3840-2014, Specification for Fiberglass (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe Fittings for Nonpressure Applications

ANSI/ASTM D3982-2008 (R2014), Specification for Contact Molded Fiberglass (Glass Fiber Reinforced Thermosetting Resin) Ducts

ANSI/ASTM D4024-2015, Specification for Machine Made Fiberglass (Glass-Fiber-Reinforced Thermosetting Resin) Flanges

ANSI/ASTM D4097-2018, Specification for Contact-Molded Glass-Fiber-Reinforced Thermoset Resin Corrosion-Resistant Tanks

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

Questions may be directed to: Corice Leonard, (610) 832-9744, accreditation@astm.org

ANSI/ASTM D4161-2014 (R2019), Specification for Fiberglass (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe Joints Using Flexible Elastomeric Seals

ANSI/ASTM D4167-2015, Specification for Fiber-Reinforced Plastic Fans and Blowers

Inquiries may be directed to Corice Leonard, (610) 832-9744, accreditation@astm.org

ANSI/ASTM D5364-2014 (R2019), Guide for Design, Fabrication, and Erection of Fiberglass Reinforced (FRP) Plastic Chimney Liners with Coal-Fired Units

ANSI/ASTM D5365-2018, Test Method for Long-Term Ring-Bending Strain of Fiberglass (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe

ANSI/ASTM D5421-2015, Specification for Contact Molded Fiberglass (Glass-Fiber-Reinforced Thermosetting Resin) Flanges

ANSI/ASTM D5677-2016, Specification for Fiberglass (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe and Pipe Fittings, Adhesive Bonded Joint Type, for Aviation Jet Turbine Fuel Lines

ANSI/ASTM D5677-2017, Specification for Fiberglass (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe and Pipe Fittings, Adhesive Bonded Joint Type, for Aviation Jet Turbine Fuel Lines

ANSI/ASTM D5685-2019, Specification for Fiberglass (Glass-Fiber-Reinforced Thermosetting-Resin) Pressure Pipe Fittings

ANSI/ASTM D6041-2018, Specification for Contact-Molded Fiberglass (Glass-Fiber-Reinforced Thermosetting Resin) Corrosion Resistant Pipe and Fittings

ANSI/ASTM D6783-2005 (R2017), Specification for Polymer Concrete Pipe

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.

AAMI (Association for the Advancement of Medical Instrumentation)

Office: 901 N. Glebe Road, Suite 300
Arlington, VA 22203

Contact: Will Vargas

Phone: (703) 647-2779

E-mail: wvargas@aami.org

BSR/AAMI 2700-02-1-201x, Medical Devices and Medical Systems - Essential safety and performance requirements for equipment comprising the patient-centric integrated clinical environment (ICE): Part 2-1: Particular requirements for forensic data logging (new standard)

BSR/AAMI/ISO 13485-2003 Ed. 3 (R201x), Medical devices - Quality management systems - Requirements for regulatory purposes (reaffirmation of ANSI/AAMI/ISO 13485-2003 (R2009))

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 S6.1-201x, ESD Association Standard for the Protection of Electrostatic Discharge Susceptible Items - Grounding (revision of ANSI/ESD S6.1-2014)

BSR/ESD STM12.1-201x, ESD Association Standard Test Method for the Protection of Electrostatic Discharge Susceptible Items - Seating - Resistance Measurement (revision of ANSI/ESD STM12.1-2014)

BSR/ESD STM15.1-201x, ESD Association Standard Test Method for the Protection of Electrostatic Discharge Susceptible Items - Methods for Resistance Measurement of Gloves and Finger Cots (revision and redesignation of ANSI/ESD STM15.1-201x)

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

Office: 445 Hoes Lane
Piscataway, NJ 08854

Contact: Jennifer Santulli

Phone: (732) 562-3874

E-mail: J.Santulli@ieee.org

BSR N42.53-201x, Standard Performance Criteria for Backpack-Based Radiation-Detection Systems Used for Homeland Security (revision of ANSI N42.53-2013)

NEMA (ASC C136) (National Electrical Manufacturers Association)

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

Contact: David Richmond

Phone: (703) 841-3234

E-mail: David.Richmond@nema.org

BSR C136.35-201X, Locking Type Power Taps (LTPT) (revision of ANSI C136.35-2009 (R2014))

BSR C136.46-201X, Standard for Roadway and Area Lighting Equipment - Concrete Lighting Poles (revision of ANSI C136.46-2013)

NEMA (National Electrical Manufacturers Association)

Office: 1300 N 17th St.
Arlington, VA 22209

Contact: Kirk Anderson

Phone: (224) 475-7886

E-mail: Kirk.Anderson@nema.org

BSR/NEMA WC4-1-201x, Cables for electric vehicles (new standard)

TPI (Truss Plate Institute)

Office: 218 North Lee Street
Suite 312
Alexandria, VA 22314

Contact: Jay Jones

Phone: (703) 683-1010

E-mail: jpjones@tpinst.org

BSR/TPI 1-201x, National Design Standard for Metal Plate Connected Wood Truss Construction (revision of ANSI/TPI 1-2014)

UL (Underwriters Laboratories, Inc.)

Office: 12 Laboratory Drive
Research Triangle Park, NC 27709-3995

Contact: Wathma Jayathilake

Phone: (613) 368-4432

E-mail: Wathma.Jayathilake@ul.org

BSR/UL 827-201X, Standard for Safety for Central-Station Alarm Services (revision of ANSI/UL 827-2019)

Call for Members (ANS Consensus Bodies)

GBI (Green Building Initiative)

Office: 7805 SW 40th Ave. #80010, Portland, OR 97219

Contact: Emily Marx, Manager of Standards and Program Support

Phone: 503.274.0448, x103

E-mail: marx@thegbi.org

ANSI GBI 01-2019, Green Globes Assessment Protocol for Commercial Buildings

GBI is reconstituting its Consensus Body for the new Continuous Maintenance process and invites members of the former Consensus Body to reapply and any additional interested parties to apply by August 26, 2019. GBI is looking for members in the following interest categories: Producer, Users and General Interest. For more information and to apply for a Consensus Body or Task Group, please use the appropriate form located at <https://www.thegbi.org/ansi>. You can send completed Consensus Body and/or Task Group applications to Emily Marx, Manager of Standards and Program Support, at marx@thegbi.org.

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.

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.

ASA (ASC S2) (Acoustical Society of America)

New National Adoption

ANSI/ASA S2.73 Amd.1-2019/ISO 10819 Amd.1-2019, Mechanical vibration and shock - Hand-arm vibration - Measurement and evaluation of the vibration transmissibility of gloves at the palm of the hand - Amendment 1 (identical national adoption of ISO 10819 Amd.1:2019): 8/16/2019

Reaffirmation

ANSI/ASA S2.62-2009 (R2019), Shock Test Requirements for Equipment in a Rugged Shock Environment (reaffirmation of ANSI/ASA S2.62-2009 (R2014)): 8/15/2019

ASA (ASC S3) (Acoustical Society of America)

Reaffirmation

ANSI/ASA S3.55-2014/Part 5/IEC 60318-5:2006 (MOD) (R2019), Electroacoustics - Simulators of Human Head and Ear - Part 5: 2 cm3 Coupler for the Measurement of Hearing Aids and Earphones Coupled to the Ear by Means of Ear Inserts (a modified nationally adopted international standard) (reaffirm a national adoption ANSI/ASA S3.55 -2014/Part 5/IEC 60318-5:2006 (MOD)): 8/15/2019

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

Addenda

ANSI/ASHRAE/IES Addendum be to ANSI/ASHRAE/IES Standard 90.1-2019, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2016): 8/19/2019

ANSI/ASHRAE/IES Addendum bp to ANSI/ASHRAE/IES Standard 90.1-2019, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2016): 8/19/2019

ANSI/ASHRAE/IES Addendum br to ANSI/ASHRAE/IES Standard 90.1-2019, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2016): 8/19/2019

ANSI/ASHRAE/IES Addendum bs ANSI/ASHRAE/IES Standard 90.1-2016, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2016): 8/19/2019

ANSI/ASHRAE/IES Addendum cf to ANSI/ASHRAE/IES Standard 90.1-2019, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2016): 8/19/2019

ANSI/ASHRAE/IES Addendum cq to ANSI/ASHRAE/IES Standard 90.1-2019, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2016): 8/19/2019

ANSI/ASHRAE/IES Addendum ct to ANSI/ASHRAE/IES Standard 90.1-2019, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2016): 8/19/2019

ANSI/ASHRAE/IES Addendum cu to ANSI/ASHRAE/IES Standard 90.1-2019, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2016): 8/19/2019

ANSI/ASHRAE/IES Addendum cy to ANSI/ASHRAE/IES Standard 90.1-2019, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2016): 8/19/2019

ASTM (ASTM International)

New Standard

ANSI/ASTM E2073-2019, Reinstatement of Test Method for Photopic Luminance of Photoluminescent (Phosphorescent) Markings (new standard): 7/9/2019

ANSI/ASTM F2797-2019, Reinstatement of Test Method for Evaluating Edge Cleaning Effectiveness of Vacuum Cleaners (new standard): 7/9/2019

ANSI/ASTM WK57930-2019, Specification for Detonation Flame Arresters (new standard): 8/1/2019

Reaffirmation

ANSI/ASTM F707/F707M-1981 (R2019), Specification for Modular Gauge Boards (reaffirmation of ANSI/ASTM F707/F707M-1981 (R2011)): 8/1/2019

ANSI/ASTM F1370-1992 (R2019), Specification for Pressure-Reducing Valves for Water Systems, Shipboard (reaffirmation of ANSI/ASTM F1370-1992 (R2011)): 8/1/2019

ANSI/ASTM F1985-1999 (R2019), Specification for Pneumatic-Operated, Globe-Style, Control Valves (reaffirmation of ANSI/ASTM F1985-1999 (R2011)): 8/1/2019

ANSI/ASTM F1994-2000 (R2019), Test Method for Shipboard Fixed Foam Firefighting Systems (reaffirmation of ANSI/ASTM F1994-2000 (R2011)): 8/1/2019

Revision

ANSI/ASTM F3226-2019, Specification for Metallic Press-Connect Fittings for Piping and Tubing Systems (revision of ANSI/ASTM F3226-2016): 8/1/2019

HL7 (Health Level Seven)

Reaffirmation

ANSI/HL7 V3IG INFOB, R4-2014 (R2019), HL7 Version 3 Implementation Guide: Context-Aware Knowledge Retrieval Application (Infobutton), Release 4 (reaffirmation of ANSI/HL7 V3IG INFOB, R4-2014): 8/15/2019

IEEE (ASC C63) (Institute of Electrical and Electronics Engineers)

Revision

ANSI C63.19-2019, Standard Methods of Measurement of Compatibility between Wireless Communications Devices and Hearing Aids (revision of ANSI C63.19-2011): 8/19/2019

ISEA (International Safety Equipment Association)

Revision

ANSI/ISEA 201-2019, Insulation and Wash Durability Classification of Apparel Used in Cold Work Environments (revision of ANSI/ISEA 201-2012): 8/19/2019

NSF (NSF International)

Revision

ANSI/NSC 373-2019 (i4r1), Sustainability Assessment Natural Dimension Stone (revision of ANSI/NSC 373-2017): 8/12/2019

ANSI/NSF 49-2019 (i120r2), Biosafety Cabinetry - Design, Construction, Performance, and Field Certification (revision of ANSI/NSF 49-2018): 8/19/2019

ANSI/NSF 50-2019 (i152r1), Equipment and Chemicals for Swimming Pools, Spas, Hot Tubs, and Other Recreational Water Facilities (revision of ANSI/NSF 50-2018): 8/14/2019

ANSI/NSF 173-2019 (i84r1), Dietary Supplements (revision of ANSI/NSF 173-2018): 8/19/2019

RESNET (Residential Energy Services Network, Inc.)

Addenda

ANSI/RESNET/ICC 301-2019 Addendum A, Dishwashers, Clothes Washers and Clothes Dryers (addenda to ANSI/RESNET/ICC 301-2014): 8/19/2019

SCTE (Society of Cable Telecommunications Engineers)

Revision

ANSI/SCTE 99-2019, Test Method for Axial Pull Connector/Drop Cable (revision of ANSI/SCTE 99-2014): 8/20/2019

UL (Underwriters Laboratories, Inc.)

Reaffirmation

ANSI/UL 391-2006 (R2019), Standard for Safety for Solid-Fuel and Combination-Fuel Central and Supplementary Furnaces (reaffirmation of ANSI/UL 391-2006 (R2014)): 8/19/2019

ANSI/UL 441-2006 (R2019), Standard for Gas Vents (reaffirmation of ANSI/UL 441-2006 (R2014)): 8/19/2019

ANSI/UL 907-2006 (R2019), Standard for Safety for Fireplace Accessories (reaffirmation of ANSI/UL 907-2006 (R2014)): 8/19/2019

ANSI/UL 959-2006 (R2019), Standard for Safety for Medium Heat Appliance Factory-Built Chimneys (reaffirmation of ANSI/UL 959-2006 (R2014)): 8/19/2019

Revision

ANSI/UL 295-2019, Standard for Safety for Commercial-Industrial Gas Burners (revision of ANSI/UL 295-2017): 8/15/2019

ANSI/UL 347A-2019b, Standard for Safety for Medium Voltage Power Conversion Equipment (revision of ANSI/UL 347A-2019): 8/14/2019

ANSI/UL 710-2019, Standard for Exhaust Hoods for Commercial Cooking Equipment (revision of ANSI/UL 710-2012 (R2017)): 8/20/2019

ANSI/UL 1703-2019, Standard for Safety for Flat-Plate Photovoltaic Modules and Panels (revision of ANSI/UL 1703-2018): 8/20/2019

ANSI/UL 1703-2019a, Standard for Safety for Flat-Plate Photovoltaic Modules and Panels (revision of ANSI/UL 1703-2018): 8/20/2019

ANSI/UL 1739-2019, Standard for Safety for Pilot-Operated Pressure-Control Valves for Fire-Protection Service (revision of ANSI/UL 1739-2017): 8/19/2019

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.

AAMI (Association for the Advancement of Medical Instrumentation)

Contact: Will Vargas, (703) 647-2779, wwargas@aami.org
901 N. Glebe Road, Suite 300, Arlington, VA 22203

New Standard

BSR/AAMI 2700-02-1-201x, Medical Devices and Medical Systems - Essential safety and performance requirements for equipment comprising the patient-centric integrated clinical environment (ICE): Part 2-1: Particular requirements for forensic data logging (new standard)

Stakeholders: Device manufacturers, health care delivery organizations, patients.

Project Need: This standard provides requirements for system data logging capabilities in support of forensic analysis of ICE systems. Data logs, data logging, and data loggers play important roles in the basic safety and essential performance of integrated clinical environments.

This standard provides requirements for system data logging capabilities in support of forensic analysis of ICE systems. Data logs, data logging, and data loggers play important roles in the basic safety and essential performance of integrated clinical environments. This standard is intended to provide additional requirements for users and manufacturers of a data logger as described in AAMI 2700-1, subclause 4.2.4, Medical Devices and Medical Systems - Essential safety requirements for equipment comprising the patient-centric integrated clinical environment (ICE) - Part 1: General requirements and conceptual model (i.e., ICE standard). This standard specifies general functional and interoperability requirements, a model, and a framework for a data logger which is a component in an integrated clinical environment. The standard will identify use cases for the types of data to be collected.

ASC X9 (Accredited Standards Committee X9, Incorporated)

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

Revision

BSR X9.100-160 Part 2-201x, Magnetic Ink Printing (MICR) - Part 2: EPC Field Use (revision of ANSI X9.100-160 Part 2-2014)

Stakeholders: Banks and auditors.

Project Need: Enhance identification of unsigned items.

This standard conveys the state of the art in the industry's thinking about image quality from the perspective of developing common infrastructure and business practices. It is intended for bank managers, technical support personnel, and vendors to the industry who are involved in the provision of image-supported check electronication.

ASSP (Safety) (American Society of Safety Professionals)

Contact: Ovidiu Munteanu, (847) 699-2929, OMunteanu@ASSP.org
520 N. Northwest Highway, Park Ridge, IL 60068

New National Adoption

BSR/ASSP/ISO/IEC 31010-201x, Risk management - Risk assessment techniques (identical national adoption of ISO/IEC 31010:2019 and revision of ANSI/ASSE Z690.3-2011)

Stakeholders: Safety, health, environmental, and risk management professionals.

Project Need: Based on consensus of the United States Technical Advisory Committee to the ISO TC 262, Risk Management, and the leadership of the American Society of Safety Professionals.

This International Standard provides guidance on the selection and application of techniques for assessing risk in a wide range of situations. The techniques are used to assist in making decisions where there is uncertainty, to provide information about particular risks and as part of a process for managing risk. The document provides summaries of a range of techniques, with references to other documents where the techniques are described in more detail.

Revision

BSR/ASSP Z359.14-201x, Safety Requirements for Self-Retracting Devices for Personal Fall Arrest and Rescue Systems (revision and redesignation of ANSI/ASSE Z359.14-2014)

Stakeholders: Manufacturers; distributors; purchasers; occupational safety and health professionals; authorized persons; and individuals who work, manage, or use fall protection and fall arrest equipment.

Project Need: Based upon the consensus of safety, health, and environmental professionals responsible for fall protection and fall arrest, the members of the Z359 Committee and the ASSP leadership.

This standard establishes requirements for the performance, design, qualification testing, markings and instructions, inspections, maintenance and storage, and removal from service of self-retracting devices (SRDs) including self-retracting lanyards (SRLs), self-retracting lanyards with integral rescue capability (SRL-Rs), and self-retracting lanyards, personal (SRL-P's). This standard establishes requirements for SRDs intended for use in personal fall arrest or rescue systems for authorized persons within the capacity range of 130 to 310 pounds (59 to 141 kg).

BSR/ASSP Z359.16-201x, Safety Requirements for Climbing Ladder Fall Arrest Systems (revision and redesignation of ANSI ASSE Z359.16-2016)

Stakeholders: Manufacturers; distributors; purchasers; authorized persons; and safety, health, and environmental professionals who use climbing-ladder fall-arrest systems in occupations requiring personal protection against falls from heights.

Project Need: Based upon the consensus of safety, health, and environmental professionals responsible for fall protection and fall arrest, the members of the Z359 Committee and the ASSP leadership.

This standard establishes requirements for the performance, design, marking, qualification testing, instructions for use, inspection, maintenance, storage, and removal from service of vertically oriented Climbing Ladder Fall Arrest Systems (CLFAS) consisting of flexible and rigid carriers with multiple attachment points and associated carrier sleeves for users within the capacity range of 130 to 310 pounds (59 to 141 kg).

ASTM (ASTM International)

Contact: Laura Klineburger, (610) 832-9744, accreditation@astm.org
100 Barr Harbor Drive, West Conshohocken, PA 19428-2959

New Standard

BSR/ASTM WK69494-201x, New Test Method for Triaxial Shear Strength and Cohesion of Equine Sports Surfaces (new standard)

Stakeholders: Equestrian Surfaces industry.

Project Need: This adapted test method covers the determination of strength and stress-strain relationships of a cylindrical specimen of a compacted, drained cohesive natural or synthetic soil surface used in equine sports surfaces. Specimens are isotropically consolidated and sheared in compression at a constant rate of axial deformation (strain controlled).

The shear strength of an equine sports surface material describes the resistance of the material to sliding of the surface layers. Shear strength influences both slide and penetration of the hoof in the track surface.

BSR/ASTM WK69495-201x, New Guide for Using Fourier Infrared Transform (FTIR) to Evaluate Synthetic Equestrian Surface Components (new standard)

Stakeholders: Equestrian Surfaces industry.

Project Need: Infrared (IR) spectrophotometry involving IR microscopes, coupled with Fourier transform infrared (FTIR) spectrometers, is a valuable method of identifying polymeric fibers (i.e., polypropylene, polyethylene, etc.) and rubber used in synthetic equestrian surfaces. FTIR may also be used to identify organic compounds and other non-metallic elements present in the binder (i.e., high-oil wax) extracted from the surface.

FTIR can quickly be utilized to help identify polymeric fibers as well as some inorganic materials in addition to providing a means to monitoring changes in equine track binder sometimes inorganic, materials, in addition to observing oxidation.

BSR/ASTM WK69496-201x, New Test Method for Gas Chromatography Analysis of Petroleum Waxes Used in Equestrian Synthetic Surfaces (new standard)

Stakeholders: Equestrian Surfaces industry.

Project Need: The slack waxes typically used in equestrian surfaces comprise a blend of different waxes and oils, with various hydrocarbons, chain lengths, and structures.

The determination of the carbon number distribution of petroleum-based waxes used in synthetic equestrian tracks is useful for characterizing the overall molecular composition to aid in binder selection and replenishment. The test data is also very useful for comparing carbon number distributions between different binders and monitoring an existing track binder as it ages over time. The oil extracted from the wax can also be analyzed by this method. Track surface maintenance decisions can be aided by the results of this test.

BSR/ASTM WK69497-201x, New Test Method for Measurement of Transition Temperatures of Slack Waxes used in Equine Sports Surfaces by Differential Scanning Calorimetry (DSC) (new standard)

Stakeholders: Equestrian Surfaces industry.

Project Need: The differential scanning calorimetry (DSC) test is used to determine temperature transitions and melting range of wax samples. DSC can therefore demonstrate differences in heat flow rates between extracted wax samples.

DSC is a convenient and rapid method for determining the temperature limits within which a wax undergoes during transitions. The highest temperature transition is a solid-liquid transition associated with complete melting; it can guide the choice of wax binders used in synthetic equine sports surfaces, provide information on the effect of operational track temperatures on binder melting, as well as giving indications of changes in the binder over time. The solid-solid temperature transition is related to the properties of the solid, that is, hardness and blocking temperature, although these slack-wax wax-based binders typically contain oil contents greater than 20% by mass and consequently are not in a hardened state unless subjected to very cold temperatures (well below -17 C).

BSR/ASTM WK69498-201x, New Test Method for X-Ray Diffraction (XRD) (new standard)

Stakeholders: Equestrian Surfaces industry.

Project Need: X-Ray diffraction (XRD) is one of the most useful tools for identifying the quantity and types of clay present in equestrian surfaces.

Identification of the constituents of a sample is usually a necessary step towards recognition of the properties that may be expected to influence the behavior of the material in its intended use, but identification is not an end in itself. The value of any petrographic examination will depend to a large extent on the representativeness of the samples examined, the completeness and accuracy of the information provided to the petrographer concerning the source and proposed use of the material, and the petrographer's ability to correlate these data with the findings of the examination.

B11 (B11 Standards, Inc.)

Contact: Chris Felinski, (832) 446-6999, cfelinski@b11standards.org
P.O. Box 690905, Houston, TX 77269

Revision

BSR B11.1-201x, Safety Requirements for Mechanical Power Presses (revision of ANSI B11.1-2009 (R2014))

Stakeholders: Machine manufacturers and users.

Project Need: Update current standard with harmonized technical elements

The requirements of this standard apply only to those mechanically powered machine tools commonly referred to as mechanical power presses, which transmit force mechanically to cut, form, or assemble metal or other materials by means of tools or dies attached to or operated by slides.

BSR B11.9-201X, Safety Requirements for Mechanical Power Presses (revision of ANSI B11.9-2010 (R2015))

Stakeholders: Manufacturers and users.

Project Need: Update current standard with harmonized technical elements.

The requirements of this standard apply only to those mechanically powered machine tools commonly referred to as mechanical power presses, which transmit force mechanically to cut, form, or assemble metal or other materials by means of tools or dies attached to or operated by slides.

BSR B11.10-201x, Safety Requirements for Metal Sawing Machines (revision of ANSI B11.10-2003 (R2015))

Stakeholders: Manufacturers and users.

Project Need: Update current standard with harmonized technical elements.

This standard specifies safety requirements for the design, construction, modification, operation, and maintenance (including installation, dismantling, and transport) of a general class of stationary machine tools that use a saw blade (tool) to cut off or change the shape of the workpiece. This standard also applies to ancillary devices integrated into the machine (e.g., part-handling mechanisms, chip-handling systems).

BSR B11.12-201x, Safety Requirements for Roll Forming & Roll Bending Machines (revision of ANSI B11.12-2005 (R2015))

Stakeholders: Manufacturers and users.

Project Need: Update current standard with harmonized technical elements.

The requirements of this standard apply to any power-driven metal-forming machine that changes the shape or the direction, or both, of materials by use of rolls, rotary forming dies, and associated tooling.

HPS (ASC N13) (Health Physics Society)

Contact: Nancy Johnson, (703) 790-1745, nanjohns@verizon.net
1313 Dolley Madison Blvd #402, McLean, VA 22101

Revision**BSR N13.35-201x, Specifications for the Bottle Manikin Absorption Phantom (revision of ANSI N13.35-2009)**

Stakeholders: Industry; government.

Project Need: The BOMAB phantom has been used for a variety of applications. However, the specifications in this standard are intended to provide guidance for BOMAB phantoms used to calibrate in vivo monitoring systems. The current standard needs to be revised to reflect the technical changes made to a referenced standard.

This standard establishes the specifications for the design and fabrication of bottle manikin absorption (BOMAB) phantoms.

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

Contact: Jennifer Santulli, (732) 562-3874, J.Santulli@ieee.org
445 Hoes Lane, Piscataway, NJ 08854

New Standard**BSR N42.62-201x, Performance Criteria for Passive Radiation Imaging Systems (new standard)**

Stakeholders: Includes the USDHS, USDOE, USNRC, USDOD, USDOC, many equipment manufacturers.

Project Need: Several laboratory level passive imaging devices (PIDs) for the detection and identification of radioactive sources were tested against a set of characterization requirements to characterize their functional capabilities. The availability and use of PIDs has increased to a point where a consensus standard is needed.

The consensus standard, if initiated, will establish appropriate and attainable functional and environmental performance requirements based on expected use.

Revision**BSR N42.53-201x, Standard Performance Criteria for Backpack-Based Radiation-Detection Systems Used for Homeland Security (revision of ANSI N42.53-2013)**

Stakeholders: USDHS, USDOE, USNRC, USDOD, USDOC, many equipment manufacturers

Project Need: To revise N42.53 to reflect evolution of equipment and lessons learned from application of previous version of standard.

This standard specifies the basic performance requirements for backpack-based radiation-detection systems (BRDs) used in homeland security applications. BRDs shall detect gamma radiation and may include neutron detection and/or the identification of gamma-ray-emitting radionuclides. They are typically worn by the user during operation but may also be used as temporary area monitors. This standard establishes the radiological performance and testing requirements and those requirements associated with the expected electrical, mechanical, and environmental conditions while in use.

NEMA (ASC C136) (National Electrical Manufacturers Association)

Contact: David Richmond, (703) 841-3234, David.Richmond@nema.org
1300 North 17th Street, Suite 900, Rosslyn, VA 22209

Revision

BSR C136.46-201X, Standard for Roadway and Area Lighting Equipment - Concrete Lighting Poles (revision of ANSI C136.46-2013)

Stakeholders: Roadway and Area Lighting manufactures, utilities, municipalities.

Project Need: This revision is needed to update the standard to reflect current industry practices.

This standard applies to concrete lighting poles used in roadway and area lighting equipment and includes nomenclature, performance criteria, marking, and recordkeeping requirements, and certain minimal material needs. It does not cover concrete poles manufactured with any modified concrete mix incorporating the use of polymers or other modifiers.

NEMA (National Electrical Manufacturers Association)

Contact: Kirk Anderson, (224) 475-7886, Kirk.Anderson@nema.org
1300 N 17th St., Arlington, VA 22209

New Standard

BSR/NEMA WC4-1-201x, Cables for electric vehicles (new standard)

Stakeholders: Regulatory agencies, testing organizations, manufacturers of electric cables, vehicle manufacturers, building owners, charging station owners.

Project Need: Manufacturers of electric cables lack a consistent way to define performance characteristics for cables used in electric vehicle applications. As the number of electric vehicle applications expands, manufacturers of cables and end-users are burdened with developing proprietary specifications. This standard would define common characteristics to ensure an apples-to-apples comparison can be made when comparing cables and to simplify cable selection.

This standard defines performance characteristics (which may include insulation thickness, conductor thickness, ampacity, common voltage ratings, flexibility, nominal diameter, and other physical and electrical characteristics) for cables used in electric-vehicle charging applications.

NSF (NSF International)

Contact: Jessica Evans, (734) 913-5774, jevans@nsf.org
789 N. Dixboro Road, Ann Arbor, MI 48105-9723

New Standard

BSR/NSF 503-201x, Cannabis and Hemp Product Certification (new standard)

Stakeholders: Product and ingredient manufacturers, distributors, packagers, labelers, retailers, industry associations, regulators, consumer organizations, and testing laboratories.

Project Need: Establish a national standard for ensuring the safe production and testing for cannabis and hemp products. This initiative would support standardization and coordination of all impacted stakeholders when looking at good manufacturing practices and product testing.

This Standard is intended to contain manufacturing and product testing requirements for cannabis or hemp products for use by humans. It will assist in the determination of adequate facilities and controls for dietary supplement manufacture with sufficient quality to ensure suitability for intended use. Products and ingredients deemed a hazard to public health or safety by a regulatory agency having jurisdiction shall be excluded from the scope of this document. Conventional foods are excluded from the scope of this Standard. Manufacturers shall exercise due diligence to ensure compliance with all applicable regulatory requirements, but compliance with this Standard in itself does not imply that all regulatory requirements have been met.

TPI (Truss Plate Institute)

Contact: Jay Jones, (703) 683-1010, jpjones@tpinst.org
 218 North Lee Street, Suite 312, Alexandria, VA 22314

Revision

BSR/TPI 1-201x, National Design Standard for Metal Plate Connected Wood Truss Construction (revision of ANSI/TPI 1-2014)

Stakeholders: Architects, building designers, building officials, building owners, consumer associations, contractors, engineers, product associations, quality assurance agencies, regulatory associations, truss designers, truss manufacturers.

Project Need: There have been advances within the industry that should be accommodated by this standard. In addition, there have been specific requests presented to TPI to change specific sections of the standard. The standard is also approaching the required 5-year update/reaffirmation time frame.

The TPI 1 standard establishes minimum requirements for the design and construction of metal-plate-connected wood trusses. This standard describes the materials used in a truss, both lumber and steel, and design procedures for truss members and joints. Methods for evaluating the metal connector plates, manufacturing quality assurance, and responsibilities in the design process involving metal-plate-connected wood trusses are also contained in the standard.

UL (Underwriters Laboratories, Inc.)

Contact: Jeff Prusko, (847) 664-3416, jeffrey.prusko@ul.org
 333 Pfingsten Road, Northbrook, IL 60062-2096

New Standard

BSR/UL 536-201x, Standard for Safety for Flexible Metallic Hose (new standard)

Stakeholders: Manufacturers of flexible metallic hose.

Project Need: To develop safety requirements and publish a standard for safety for flexible metallic hose.

These requirements cover flexible metallic hose supplied with fittings on each end that facilitate connection without twisting the hose. They have a corrugated metal core or a nonmetallic inner core which are covered with a stainless steel braid. They have a nominal inside diameter of not more than 4 inches intended for use in piping systems carrying compressed gases, such as anhydrous ammonia, and combustible fuel gases such as natural gas, liquefied petroleum gas, propane, and butane, at pressures not exceeding 500 psig (3.45 MPa) and temperatures not greater than 450°F (232°C) or lower than minus 40°F (minus 40°C).

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)
- ITI (InterNational Committee for Information Technology Standards)
- 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, 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

Alternatively, you may contact the Procedures & Standards Administration department (PSA) at 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.

AAFS American Academy of Forensic Sciences 410 North 21st Street Colorado Springs, CO 80904 Phone: (719) 453-1036 Web: www.aafs.org	ASHRAE American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. 1791 Tullie Circle, NE Atlanta, GA 30329 Phone: (404) 636-8400 Web: www.ashrae.org	HL7 Health Level Seven 3300 Washtenaw Avenue Suite 227 Ann Arbor, MI 48104 Phone: (734) 677-7777 Web: www.hl7.org	NSF NSF International 789 N. Dixboro Road Ann Arbor, MI 48105-9723 Phone: (734) 913-5774 Web: www.nsf.org
AAMI Association for the Advancement of Medical Instrumentation 901 N. Glebe Road, Suite 300 Arlington, VA 22203 Phone: (703) 647-2779 Web: www.aami.org	ASME American Society of Mechanical Engineers Two Park Avenue New York, NY 10016-5990 Phone: (212) 591-8521 Web: www.asme.org	HPS (ASC N13) Health Physics Society 1313 Dolley Madison Blvd #402 McLean, VA 22101 Phone: (703) 790-1745 Web: www.hps.org	PHTA Pool and Hot Tub Alliance 2111 Eisenhower Ave. Suite 500 Alexandria, VA 22314 Phone: (703) 838-0083 Web: www.apsp.org
AMCA Air Movement and Control Association 30 West University Drive Arlington Heights, IL 60004-1893 Phone: (847) 394-0150 Web: www.amca.org	ASSP (Safety) American Society of Safety Professionals 520 N. Northwest Highway Park Ridge, IL 60068 Phone: (847) 699-2929 Web: www.assp.org	IEEE (ASC C63) Institute of Electrical and Electronics Engineers 445 Hoes Lane Piscataway, NJ 08854 Phone: (732) 562-3874 Web: standards.ieee.org	RESNET Residential Energy Services Network, Inc. 4867 Patina Court Oceanside, CA 92057 Phone: (760) 408-5860 Web: www.resnet.us.com
APA APA - The Engineered Wood Association 7011 South 19th Street Tacoma, WA 98466 Phone: (253) 620-7467 Web: www.apawood.org	ASTM ASTM International 100 Barr Harbor Drive West Conshohocken, PA 19428-2959 Phone: (610) 832-9744 Web: www.astm.org	ISEA International Safety Equipment Association 1901 North Moore Street Suite 808 Arlington, VA 22209 Phone: (703) 525-1695 Web: www.safetysystem.org	RIA Robotic Industries Association 900 Victors Way Suite 140 Ann Arbor, MI 48108-5210 Phone: (734) 994-6088 Web: www.robotics.org
ASA (ASC S2) Acoustical Society of America 1305 Walt Whitman Road Suite 300 Melville, NY 11747 Phone: (631) 390-0215 Web: www.acousticalsociety.org	B11 B11 Standards, Inc. P.O. Box 690905 Houston, TX 77269 Phone: (832) 446-6999 Web: www.esda.org	NEMA (ASC C136) National Electrical Manufacturers Association 1300 North 17th Street Suite 900 Rosslyn, VA 22209 Phone: (703) 841-3234 Web: www.nema.org	SCTE Society of Cable Telecommunications Engineers 140 Philips Rd Exton, PA 19341 Phone: (800) 542-5040 Web: www.scte.org
ASA (ASC S3) Acoustical Society of America 1305 Walt Whitman Road Suite 300 Melville, NY 11747 Phone: (631) 390-0215 Web: www.acousticalsociety.org	EOS/ESD ESD Association, Inc. 7900 Turin Rd., Bldg. 3 Rome, NY 13440 Phone: (315) 339-6937 Web: www.esda.org	NEMA (Canvass) National Electrical Manufacturers Association 1300 N 17th St. Arlington, VA 22209 Phone: (224) 475-7886 Web: www.nema.org	TPI Truss Plate Institute 218 North Lee Street Suite 312 Alexandria, VA 22314 Phone: (703) 683-1010 Web: www.tpinst.org
ASC X9 Accredited Standards Committee X9, Incorporated 275 West Street Suite 107 Annapolis, MD 21401 Phone: (410) 267-7707 Web: www.x9.org	ESTA Entertainment Services and Technology Association 630 Ninth Avenue Suite 609 New York, NY 10036-3748 Phone: (212) 244-1505 Web: www.esta.org	NFPA National Fire Protection Association One Batterymarch Park Quincy, MA 02169 Phone: (617) 984-7246 Web: www.nfpa.org	UL Underwriters Laboratories, Inc. 333 Pfingsten Road Northbrook, IL 60062-2096 Phone: (847) 664-3416 Web: www.ul.com



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 ISO 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

ACOUSTICS (TC 43)

ISO/DIS 10848-5, Acoustics - Laboratory and field measurement of the flanking transmission for airborne, impact and building service equipment sound between adjoining rooms - Part 5: Radiation efficiencies of building elements - 11/8/2019, \$53.00

ANAESTHETIC AND RESPIRATORY EQUIPMENT (TC 121)

ISO/DIS 23371, Anaesthetic and respiratory equipment - Cuff pressure indication devices - 11/3/2019, \$53.00

CONCRETE, REINFORCED CONCRETE AND PRE-STRESSED CONCRETE (TC 71)

ISO/DIS 22502, Simplified design of connections of concrete claddings to concrete structures - 11/2/2019, \$155.00

FASTENERS (TC 2)

ISO/DIS 3506-5, Fasteners - Mechanical properties of corrosion-resistant stainless steel fasteners - Part 5: Special fasteners (also including fasteners from nickel alloys) for high temperature applications - 11/3/2019, \$112.00

PERSONAL SAFETY - PROTECTIVE CLOTHING AND EQUIPMENT (TC 94)

ISO 13688/DAmD1, Protective clothing - General requirements - Amendment 1 - 9/8/2019, \$33.00

PETROLEUM PRODUCTS AND LUBRICANTS (TC 28)

ISO 3839/DAmD1, Petroleum products - Determination of bromine number of distillates and aliphatic olefins - Electrometric method - Amendment 1 - 9/6/2019, \$29.00

REFRIGERATION (TC 86)

ISO 5149-2/DAmD1, Refrigerating systems and heat pumps - Safety and environmental requirements - Part 2: Design, construction, testing, marking and documentation - Amendment 1 - 9/9/2019, \$46.00

ROAD VEHICLES (TC 22)

ISO 18868/DAmD1, Commercial road vehicles - Coupling equipment between vehicles in multiple vehicle combinations - Strength requirements - Amendment 1 - 9/7/2019, \$29.00

ISO/DIS 21806-1, Road vehicles - Media oriented systems transport (MOST) framework - Part 1: General information and document structure definitions - 11/3/2019, \$82.00

ISO/DIS 21806-2, Road vehicles - Media oriented systems transport (MOST) framework - Part 2: Application layer - 11/3/2019, \$185.00

ISO/DIS 21806-3, Road vehicles - Media oriented systems transport (MOST) framework - Part 3: Application layer conformance test plan - 11/3/2019, \$165.00

ISO/DIS 21806-4, Road vehicles - Media oriented systems transport (MOST) framework - Part 4: Transport and network layer - 11/3/2019, \$134.00

ISO/DIS 21806-5, Road vehicles - Media oriented systems transport (MOST) framework - Part 5: Transport and network layer conformance test plan - 11/3/2019, \$102.00

ISO/DIS 21806-6, Road vehicles - Media oriented systems transport (MOST) framework - Part 6: Data link layer - 11/3/2019, \$155.00

ISO/DIS 21806-7, Road vehicles - Media oriented systems transport (MOST) framework - Part 7: Data link layer conformance test plan - 11/3/2019, \$82.00

ISO/DIS 21806-8, Road vehicles - Media oriented systems transport (MOST) framework - Part 8: 150 Mbit/s optical physical layer - 11/3/2019, \$125.00

ISO/DIS 21806-9, Road vehicles - Media oriented systems transport (MOST) framework - Part 9: 150 Mbit/s optical physical layer conformance test plan - 11/3/2019, \$146.00

SCREW THREADS (TC 1)

ISO 68-1/DAmD1, ISO general purpose screw threads - Basic profile - Part 1: Metric screw threads- Amendment 1 - 9/9/2019, \$29.00

ISO 68-2/DAmD1, ISO general-purpose screw threads - Basic profile - Part 2: Inch screw threads - Amendment 1 - 9/9/2019, \$29.00

SOLID MINERAL FUELS (TC 27)

ISO/DIS 1213-1, Solid mineral fuels - Vocabulary - Part 1: Terms relating to coal preparation - 11/4/2019, \$134.00

THERMAL INSULATION (TC 163)

ISO/DIS 19467-2, Thermal Performance of windows and doors - Determination of solar heat gain coefficient using solar simulator - Part 2: Centre of glazing - 11/3/2019, \$98.00

TRANSPORT INFORMATION AND CONTROL SYSTEMS (TC 204)

ISO 15784-2/DAmD1, Intelligent transport systems (ITS) - Data exchange involving roadside modules communication - Part 2: Centre to field device communications using SNMP - Amendment 1: Support for SHA2 encryption - 9/8/2019, \$29.00

WELDING AND ALLIED PROCESSES (TC 44)

ISO 15614-1/DAmD2, 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 2 - 9/8/2019, \$29.00

ISO/DIS 9453, Soft solder alloys - Chemical compositions and forms - 11/4/2019, \$58.00

ISO/IEC JTC 1, Information Technology

ISO/IEC 14496-22/DAmD1, Information technology - Coding of audio-visual objects - Part 22: Open Font Format - Amendment 1: Color font technology and other updates - 11/8/2019, \$82.00

ISO/IEC DIS 24643, Architecture for a distributed real-time access system - 11/4/2019, \$53.00

ISO/IEC DIS 23093-4, Information technology - Internet of media things - Part 4: Reference software and conformance - 11/8/2019, \$53.00

IEC Standards

SMB/6799/QP, ISO/IEC Directives Part 1 - Consolidated JTC 1 Supplement 2019 - Procedures specific to JTC 1, 2019/9/13

8B/44/CD, IEC TS 62898-3-1 ED1: Microgrids - Part 3-1: Technical requirements - Protection and dynamic control, /2019/10/1

27/1114/CDV, IEC 60779 ED3: Installations for electroheating and electromagnetic processing - Test methods for electrosag remelting furnaces, 2019/11/8

31J/295/FDIS, IEC 60079-19 ED4: Explosive atmospheres - Part 19: Equipment repair, overhaul and reclamation, 2019/9/27

32C/569/CDV, IEC 60127-3/AMD1 ED3: Miniature fuses - Part 3: Sub-miniature fuse-links, 2019/11/8

32C/570/CDV, IEC 60127-2/AMD1 ED3: Miniature fuses - Part 2: Cartridge fuse-links, 2019/11/8

40/2693/CD, IEC 60115-4 ED3: Fixed resistors for use in electronic equipment - Part 4: Sectional specification: Fixed power resistors, 2019/11/8

46/735/CD, IEC 62153-4-7 ED3: Metallic cables and other passive components test methods - Part 4-7: Electromagnetic compatibility (EMC) - Test method for measuring of transfer impedance ZT and screening attenuation aS or coupling attenuation aC of connectors and assemblies - Triaxial tube in tube method, 2019/11/8

47E/675/FDIS, IEC 60747-9 ED3: Semiconductor devices - Part 9: Discrete devices - Insulated-gate bipolar transistors (IGBTs), 2019/9/27

48B/2743/CDV, IEC 60512-9-5 ED2: Connectors for electrical and electronic equipment - Tests and measurements - Part 9-5: Endurance tests - Test 9e: Current loading, cyclic, 2019/11/8

48B/2752/CD, IEC 60352-6 ED2: Solderless connections - Part 6: Insulation piercing connections - General requirements, test methods and practical guidance, 2019/11/8

56/1850/CD, IEC 60300-3-17 ED1: Dependability management - Part 3-17: Application guide - Availability, /2019/10/1

59M/113/CDV, IEC 63169 ED1: Electrical household and similar cooling and freezing appliances - Food preservation and storage, 2019/11/8

62D/1706/FDIS, ISO 80601-2-12 ED2: Medical electrical equipment - Part 2-12: Particular requirements for the basic safety and essential performance of critical care ventilators, 2019/9/27

65/761/NP, PNW 65-761: Asset administration shell for industrial applications - Part 1: Administration shell structure, 2019/11/8

65/762/NP, PNW 65-762: International Electrotechnical Vocabulary - Part 352: Industrial IT, 2019/11/8

65/760/CD, IEC 61010-2-202 ED2: Safety requirements for electrical equipment for measurement, control and laboratory use - Part 2 -202: Particular requirements for electrically operated valve actuators, /2019/10/1

76/640/DTR, IEC TR 60825-8 ED3: Safety of laser products - Part 8: Guidelines for the safe use of laser beams on humans, /2019/10/1

81/627A/FDIS, IEC 62858 ED2: Lightning density based on lightning location systems (LLS) - General principles, 019/9/6/

82/1618/FDIS, IEC 60904-4 ED2: Photovoltaic devices - Part 4: Reference solar devices - Procedures for establishing calibration traceability, 2019/9/27

110/1138/NP, PNW 110-1138 ED1: Future 62629-62-11: 3D Display Devices - Part 62-11: Measurement methods for transparent virtual-image type - Optical, /2019/10/1

113/500/CD, IEC TS 62607-6-5 ED1: Nanomanufacturing - Key control characteristics - Part 6-5: Graphene materials - Contact and sheet resistance: Transfer length method, /2019/10/1

113/503/DTS, ISO TS 80004-8 ED2: Review report on Nanotechnologies - Vocabulary - Part 8: Nanomanufacturing processes, 2019/11/8

113/501/DTS, ISO TS 80004-3 ED2: Nanotechnologies - Vocabulary - Part 3: Carbon nano-objects, 2019/11/8

113/502/DTS, ISO TS 80004-6 ED2: Nanotechnologies - Vocabulary - Part 6: Nano-object characterization, 2019/11/8

116/414/CDV, IEC 62841-2-6 ED1: Electric motor-operated tools, transportable tools and lawn and garden machinery - Safety - Part 2 -6: Particular requirements for hand-held hammers, 2019/11/8

125/8/NP, PNW 125-8: Personal e-Transporters - Safety requirements and test methods, 2019/11/8

SyCAAL/158/CD, IEC 60050-871/AMD1 ED1: Amendment 1 - International Electrotechnical Vocabulary (IEV) - Part 871: Active assisted living (AAL), /2019/10/1

JTC1-SC25/2891/CDV, ISO/IEC 17760-103: Information technology - AT Attachment - Part 103: ATA/ATAPI Command Set-3 (ACS-3), 2019/11/8



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. All paper copies are available from Standards resellers (<http://webstore.ansi.org/faq.aspx#resellers>).

ISO Standards

ISO/IEC JTC 1 Technical Reports

[ISO/IEC TR 29106/Amd2:2019](#), Information technology - Generic cabling - Introduction to the MICE environmental classification - Amendment 2, FREE

DENTISTRY (TC 106)

[ISO 20896-1:2019](#), Dentistry - Digital impression devices - Part 1: Methods for assessing accuracy, \$103.00

FLUID POWER SYSTEMS (TC 131)

[ISO 21018-4:2019](#), Hydraulic fluid power - Monitoring the level of particulate contamination in the fluid - Part 4: Use of the light extinction technique, \$68.00

MATERIALS, EQUIPMENT AND OFFSHORE STRUCTURES FOR PETROLEUM AND NATURAL GAS INDUSTRIES (TC 67)

[ISO 19903:2019](#), Petroleum and natural gas industries - Concrete offshore structures, \$232.00

[ISO 10426-3:2019](#), Petroleum and natural gas industries - Cements and materials for well cementing - Part 3: Testing of deepwater well cement formulations, \$45.00

NUCLEAR ENERGY (TC 85)

[ISO 21391:2019](#), Nuclear criticality safety - Geometrical dimensions for subcriticality control - Equipment and layout, \$103.00

[ISO/ASTM 51276:2019](#), Practice for use of a polymethylmethacrylate dosimetry system, \$45.00

PERSONAL SAFETY - PROTECTIVE CLOTHING AND EQUIPMENT (TC 94)

[ISO 16900-1:2019](#), Respiratory protective devices - Methods of test and test equipment - Part 1: Determination of inward leakage, \$185.00

ROAD VEHICLES (TC 22)

[ISO 19380:2019](#), Heavy commercial vehicles and buses - Centre of gravity measurements - Axle lift, tilt-table and stable pendulum test methods, \$162.00

RUBBER AND RUBBER PRODUCTS (TC 45)

[ISO 3384-1:2019](#), Rubber, vulcanized or thermoplastic - Determination of stress relaxation in compression - Part 1: Testing at constant temperature, \$103.00

[ISO 3384-2:2019](#), Rubber, vulcanized or thermoplastic - Determination of stress relaxation in compression - Part 2: Testing with temperature cycling, \$103.00

SHIPS AND MARINE TECHNOLOGY (TC 8)

[ISO 8384:2019](#), Ships and marine technology - Dredgers - Vocabulary, \$45.00

SPORTS AND RECREATIONAL EQUIPMENT (TC 83)

[ISO 6005:2019](#), Alpine skis - Ski binding screws - Test methods, \$68.00

TOBACCO AND TOBACCO PRODUCTS (TC 126)

[ISO 20779/Amd1:2019](#), Cigarettes - Generation and collection of total particulate matter using a routine analytical smoking machine with an intense smoking regime - Amendment 1, \$19.00

TRACTORS AND MACHINERY FOR AGRICULTURE AND FORESTRY (TC 23)

[ISO 25119-2:2019](#), Tractors and machinery for agriculture and forestry - Safety-related parts of control systems - Part 2: Concept phase, \$185.00

WATER QUALITY (TC 147)

[ISO 21253-1:2019](#), Water quality - Multi-compound class methods - Part 1: Criteria for the identification of target compounds by gas and liquid chromatography and mass spectrometry, \$138.00

[ISO 21253-2:2019](#), Water quality - Multi-compound class methods - Part 2: Criteria for the quantitative determination of organic substances using a multi-compound class analytical method, \$68.00

WELDING AND ALLIED PROCESSES (TC 44)

[ISO 15609-1:2019](#), Specification and qualification of welding procedures for metallic materials - Welding procedure specification - Part 1: Arc welding, \$68.00

[ISO 15609-2:2019](#), Specification and qualification of welding procedures for metallic materials - Welding procedure specification - Part 2: Gas welding, \$45.00

ISO Technical Reports

PAINTS AND VARNISHES (TC 35)

[ISO/TR 21555:2019](#), Paints and varnishes - Overview of test methods on hardness and wear resistance of coatings, \$209.00

ISO Technical Specifications

HEALTH INFORMATICS (TC 215)

[ISO/TS 11633-1:2019](#), Health informatics - Information security management for remote maintenance of medical devices and medical information systems - Part 1: Requirements and risk analysis, \$103.00

ISO/IEC Guides

OTHER

[ISO/IEC Guide 63:2019](#), Guide to the development and inclusion of aspects of safety in International Standards for medical devices, \$138.00

ISO/IEC JTC 1, Information Technology

[ISO/IEC 9075-2/Cor1:2019](#), Information technology - Database languages - SQL - Part 2: Foundation (SQL/Foundation) - Corrigendum, FREE

[ISO/IEC 9075-4/Cor1:2019](#), Information technology - Database languages - SQL - Part 4: Persistent stored modules (SQL/PSM) - Corrigendum, FREE

[ISO/IEC 9075-9/Cor1:2019](#), Information technology - Database languages - SQL - Part 9: Management of External Data (SQL/MED) - Corrigendum, FREE

[ISO/IEC 9075-11/Cor1:2019](#), Information technology - Database languages - SQL - Part 11: Information and definition schemas (SQL/Schemata) - Corrigendum, FREE

[ISO/IEC 9075-13/Cor1:2019](#), Information technology - Database languages - SQL - Part 13: SQL Routines and types using the Java TM programming language (SQL/JRT) - Corrigendum, FREE

[ISO/IEC 9075-14/Cor1:2019](#), Information technology - Database languages - SQL - Part 14: XML-Related Specifications (SQL/XML) - Corrigendum, FREE

[ISO/IEC 27102:2019](#), Information security management - Guidelines for cyber-insurance, \$103.00

[ISO/IEC 7816-8:2019](#), Identification cards - Integrated circuit cards - Part 8: Commands and mechanisms for security operations, \$162.00

[ISO/IEC 21000-22:2019](#), Information technology - Multimedia framework (MPEG-21) - Part 22: User Description, \$232.00

IEC Standards

CAPACITORS AND RESISTORS FOR ELECTRONIC EQUIPMENT (TC 40)

[IEC 60062 Amd.1 Ed. 6.0 b:2019](#), Amendment 1 - Marking codes for resistors and capacitors, \$23.00

[IEC 60062 Ed. 6.1 b:2019](#), Marking codes for resistors and capacitors, \$352.00

ELECTRICAL ACCESSORIES (TC 23)

[IEC 60981 Ed. 3.0 en:2019](#), Extra heavy-duty electrical rigid steel conduits, \$199.00

[IEC 63052 Ed. 1.0 b:2019](#), Power frequency overvoltage protective devices (POPs) for household and similar applications, \$375.00

[S+ IEC 60981 Ed. 3.0 en:2019 \(Redline version\)](#), Extra heavy-duty electrical rigid steel conduits, \$259.00

FIBRE OPTICS (TC 86)

[IEC 61300-3-33 Ed. 2.0 b:2012](#), Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-33: Examinations and measurements - Withdrawal force from a resilient alignment sleeve using gauge pins, \$47.00

[IEC 61753-031-6 Ed. 2.0 b:2014](#), Fibre optic interconnecting devices and passive components - Performance standard - Part 031-6: Non-connectorized single-mode 1×N and 2×N non-wavelength-selective branching devices for Category O - Uncontrolled environment, \$117.00

FLAT PANEL DISPLAY DEVICES (TC 110)

[IEC 61747-30-3 Ed. 1.0 en:2019](#), Liquid crystal display devices - Part 30-3: Measuring methods for liquid crystal display modules - Motion artefact measurement of active matrix liquid crystal display modules, \$199.00

INSULATING MATERIALS (TC 15)

[IEC 60684-3-280 Ed. 2.0 b:2019](#), Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheet 280: Heat-shrinkable, polyolefin sleeving, anti-tracking, \$82.00

[IEC 60684-3-283 Ed. 2.0 b:2019](#), Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheet 283: Heat-shrinkable, polyolefin sleeving for bus-bar insulation, \$82.00

[S+ IEC 60684-3-280 Ed. 2.0 en:2019 \(Redline version\)](#), Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheet 280: Heat-shrinkable, polyolefin sleeving, anti-tracking, \$107.00

[S+ IEC 60684-3-283 Ed. 2.0 en:2019 \(Redline version\)](#), Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheet 283: Heat-shrinkable, polyolefin sleeving for bus-bar insulation, \$107.00

SOLAR PHOTOVOLTAIC ENERGY SYSTEMS (TC 82)

[IEC 60904-7 Ed. 4.0 b:2019](#), Photovoltaic devices - Part 7: Computation of the spectral mismatch correction for measurements of photovoltaic devices, \$47.00

[S+ IEC 60904-7 Ed. 4.0 en:2019 \(Redline version\)](#), Photovoltaic devices - Part 7: Computation of the spectral mismatch correction for measurements of photovoltaic devices, \$61.00

WINDING WIRES (TC 55)

[IEC 60317-0-1 Ed. 4.1 b:2019](#), Specifications for particular types of winding wires - Part 0-1: General requirements - Enamelled round copper wire, \$322.00

[IEC 60317-0-1 Amd.1 Ed. 4.0 b:2019](#), Amendment 1 - Specifications for particular types of winding wires - Part 0-1: General requirements - Enamelled round copper wire, \$12.00

[IEC 60317-0-3 Ed. 3.2 b:2019](#), Specifications for particular types of winding wires - Part 0-3: General requirements - Enamelled round aluminium wire, \$264.00

[IEC 60317-0-3 Amd.2 Ed. 3.0 b:2019](#), Amendment 2 - Specifications for particular types of winding wires - Part 0-3: General requirements - Enamelled round aluminium wire, \$12.00

[IEC 60317-0-8 Ed. 2.0 b:2019](#), Specifications for particular types of winding wires - Part 0-8: General requirements - Polyester glass-fibre wound unvarnished and fused, or resin or varnish impregnated, bare or enamelled rectangular copper wire, \$199.00

[IEC 60317-80 Ed. 1.0 b:2019](#), Specifications for particular types of winding wires - Part 80: Polyvinyl acetal enamelled rectangular copper wire, class 120, with a bonding layer, \$47.00

[S+ IEC 60317-0-8 Ed. 2.0 en:2019 \(Redline version\)](#), Specifications for particular types of winding wires - Part 0-8: General requirements - Polyester glass-fibre wound unvarnished and fused, or resin or varnish impregnated, bare or enamelled rectangular copper wire, \$259.00

IEC Technical Reports

ELECTRICAL EQUIPMENT IN MEDICAL PRACTICE (TC 62)

[IEC/TR 61948-2 Ed. 2.0 en:2019](#), Nuclear medicine instrumentation - Routine tests - Part 2: Scintillation cameras and single photon emission computed tomography imaging, \$82.00

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 or notifyus@nist.gov.

Information Concerning

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 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 or by e-mail from standards@scte.org.

Final Actions Correction

There was a typographical error in the approval date for ANSI/ASHRAE/IES Addendum 90.1bx-2019, listed in the July 5, 2019 Final Actions. The correct approval date is 6/27/2019.

ANSI Accredited Standards Developers

Approval of Reaccreditation

ASC O5, Wood Poles and Other Wood Products

The reaccreditation of Accredited Standards Committee O5, Wood Poles and Other Wood Products, has been approved at the direction of ANSI's Executive Standards Council, under its recently revised operating procedures for documenting consensus on ASC O5-sponsored American National Standards, effective August 21, 2019. For additional information, please contact the Secretariat of ASC O5: Mr. Colin McCown, Executive Vice-President, American Wood Protection Association, P.O. Box 361784, Birmingham, AL 35236-1784; phone: 205.733.4077; e-mail: colin@awpa.com.

American Wood Council (AWC)

The reaccreditation of the American Wood Council (AWC), an ANSI member and Accredited Standards Developer (ASD), has been approved at the direction of ANSI's Executive Standards Council, under its recently revised operating procedures for documenting consensus on AWC-sponsored American National Standards, effective August 20, 2019. For additional information, please contact: Mr. Bradford Douglas, Vice-President, Engineering, American Wood Council, 222 Catocin Circle, Suite 201, Leesburg, VA 20175; phone: 202.463.2770; e-mail: bdouglas@awc.org.

Steel Deck Institute (SDI)

The reaccreditation of the Steel Deck Institute (SDI), an ANSI member and Accredited Standards Developer (ASD), has been approved at the direction of ANSI's Executive Standards Council, under its recently revised operating procedures for documenting consensus on SDI-sponsored American National Standards, effective August 20, 2019. For additional information, please contact: Mr. Robert C. Paul, PE, Managing Director, Steel Deck Institute, P.O. Box 426, Glenshaw, PA 15116; phone: 412.487.3325; e-mail: bob@sdi.org.

Reaccreditation

APPA – Leadership in Educational Facilities

Comment Deadline: September 23, 2019

APPA – Leadership in Educational Facilities, an ANSI member and Accredited Standards Developer (ASD), has submitted revisions to its currently accredited operating procedures for documenting consensus on APPA-sponsored American National Standards, under which it was originally accredited in 2013. As the revisions appear to be substantive in nature, the reaccreditation process is initiated.

To obtain a copy of the revised procedures or to offer comments, please contact: Ms. Billie Zidek, Standards & Codes Administrator, APPA, 1643 Prince Street, Alexandria, VA 22314; phone: 703.542.3846; Email: billie@appa.org. You may view/download a copy of the revisions during the public review period at the following URL: www.ansi.org/accredPR. Please submit any public comments on the revised procedures to APPA by September 23, 2019, with a copy to the ExSC Recording Secretary in ANSI's New York Office (e-mail: jthompso@ANSI.org).

International Organization for Standardization (ISO)

ISO Proposal for a New Field of ISO Technical Activity

Machinery to be Used with Foodstuffs

Comment Deadline: September 6, 2019

DIN, the ISO member body for Germany, has submitted to ISO a proposal for a new field of ISO technical activity on Machinery for use with foodstuffs, with the following scope statement:

Standardization of individual machine types and their accessories used in the foodstuffs supply chain, as well as processing systems and complete production lines consisting of these machines.

All these machines process various raw materials and ingredients into intermediate food products and/or ready-to-eat food.

The standards to be created in this TC deal with specific and typical aspects of machines used in the food industry. These aspects include – but are not limited to – health and safety at work for operators (safety of food machinery) and consumer health and safety (food safety). Standards of this TC also focus on hygienic design principles.

Excluded are the fields covered by ISO/TC 23 (Tractors and machinery for agriculture and forestry), ISO/TC 283 (Occupational health and safety management) and ISO/TC 293 (Feed machinery).

Anyone wishing to review the proposal can request a copy by contacting ANSI's ISO Team (isot@ansi.org), with a submission of comments to Steve Cornish (scornish@ansi.org) by close of business on Friday, September 6, 2019.

Natural and Engineered Stones

Comment Deadline: August 30, 2019

UNI, the ISO member body for Italy, has submitted to ISO a proposal for a new field of ISO technical activity standard on natural and engineered stones, with the following scope statement:

Definitions, requirements and test methods for natural stones relating to rough blocks, slabs, semi-finished and finished products intended for use in building and for monuments and for engineered stones with resin or cement binders or a combination of the two, intended for use in countertops and vanities, floor and wall coverings, ancillary uses, for interior and exterior.

Anyone wishing to review the proposal can request a copy by contacting ANSI's ISO Team (isot@ansi.org), with a submission of comments to Steve Cornish (scornish@ansi.org) by close of business on Friday, August 30, 2019.

U.S. Technical Advisory Groups

Application for Accreditation

U.S. Technical Advisory Group (TAG) to ISO TC 45/SC 1, Rubber and Plastic Hoses and Hose Assemblies

Comment Deadline: September 23, 2019

The Association of Rubber Product Manufacturers (ARPM) has submitted an Application for Accreditation for a new proposed U.S. Technical Advisory Group (TAG) to ISO TC 45/SC 1, Rubber and plastic hoses and hose assemblies, and a request for approval as TAG Administrator. The proposed TAG intends to operate using the Model Operating Procedures for U.S. Technical Advisory Groups to ANSI for ISO Activities as contained in Annex A of the ANSI International Procedures.

To obtain a copy of the TAG application or to offer comments, please contact: Ms. Letha Keslar, Managing Director, ARPM, 7321 Shadeland Station Way, Suite 285, Indianapolis, IN 46256; phone: (317) 863-4072; e-mail: lkeslar@arpminc.org. Please submit your comments by September 23, 2019 (please copy jthompso@ansi.org).

Approval of TAG Accreditation

U.S. Technical Advisory Group (TAG) to ISO TC 324, Sharing Economy

ANSI's Executive Standards Council (ExSC) has formally approved the accreditation of the U.S. Technical Advisory Group to ISO TC 324, Sharing economy and the appointment of ANSI as TAG Administrator, effective August 20, 2019. The TAG will operate under the Model Operating Procedures for U.S. Technical Advisory Groups to ANSI for ISO Activities as contained in Annex A of the ANSI International Procedures. For additional information, please contact: Mr. Jason Knopes, Sr. Manager of ISO Outreach and Enhanced Services, ANSI, 25 West 43rd Street, 4th Floor, New York, NY 10036; phone: 212.642.4886; e-mail: jknopes@ansi.org.

Meeting Notices

Meeting for Accredited Standards Committee (ASC) B109 Standards B109.1, B109.2, B109.3, and B109.4

Meeting Date: Monday, September 23, 2019- 8:00 AM – 4:00 PM CST

Meeting Location: Peppermill Reno, 2707 S. Virginia St., Reno, Nevada 89502--(Teleconference information available upon request)

Purpose: This is the annual ANSI B109 meeting. Updates will be given for each of the B109 standards.

Please register on line at www.aga.org. For more information, contact Jeff Meyers, jmeyers@aga.org.

Accredited Standards Committee Z87 on Safety Standards for Eye Protection

The Accredited Standards Committee Z87 on Safety Standards for Eye Protection will next meet as noted:

Date: Wednesday, October 23, 2019

Time: 9:00 AM – 3:30 PM

The Vision Council

222 Reinekers Lane, Suite 700

Alexandria, VA 22314

Meeting space is limited and is available on a first-come, first-serve basis. If you have questions or are interested in attending the Z87 Committee meeting, please contact Cristine Z. Fargo, Vice-President, Operations and Technical Services at 703-525-1695 or cfargo@safetysafetyequipment.org.

CSA America Standards, Inc.

Webex Meeting of the Binational Fuel Technical Committee

Meeting date: September 27, 2019

Time: 1:00-2:30 PM (EST)

Location: Cleveland, Ohio

Contact: scott.lindsay@csagroup.org

Draft Agenda

A.1.1 Opening remarks/Meeting objective/Code of Conduct/Conflict of interest/Anti-trust guidelines

A.1.2 Introductions

A.1.3 Review membership

A.1.4 Review technical committee work plan

A.1.5 Committee week

A.1.6 Meeting adjournment

NOTE: It is permissible to add other Agenda items as applicable to the Committee.



American National Standards (ANS) – Where to find Procedures, Guidance, Interpretations and More...

Please visit ANSI's website (www.ansi.org) for resources that will help you to understand, administer and participate in the American National Standards (ANS) process. Documents posted at these links are updated periodically as new documents and guidance are developed, whenever ANS-related procedures are revised, and routinely with respect to lists of proposed and approved ANS. The main ANS-related link is www.ansi.org/asd and here are some direct links as well as highlights of information that is available:

- *ANSI Essential Requirements: Due process requirements for American National Standards* (always current edition): www.ansi.org/essentialrequirements
- ANSI Standards Action (weekly public review announcements of proposed ANS and standards developer accreditation applications, listing of recently approved ANS, and proposed revisions to ANS-related procedures): www.ansi.org/standardsaction
- Accreditation information – for potential developers of American National Standards (ANS): www.ansi.org/sdoaccreditation
- ANS Procedures, ExSC Interpretations and Guidance (including a slide deck on how to participate in the ANS process and the BSR-9 form): www.ansi.org/asd
- Lists of ANSI-Accredited Standards Developers (ASDs), Proposed ANS and Approved ANS: www.ansi.org/asd
- American National Standards Key Steps: www.ansi.org/anskeysteps
- American National Standards Value: www.ansi.org/ansvalue
- ANS Web Forms for ANSI-Accredited Standards Developers - PINS, BSR8|108, BSR11, Technical Report: www.ansi.org/PSAWebForms
- Information about standards Incorporated by Reference (IBR): www.ansi.org/ibr
- ANSI - Education and Training: www.standardslearn.org

If you have a question about the ANS process and cannot find the answer quickly, please send an email to psa@ansi.org.

Please also visit Standards Boost Business at www.standardsboostbusiness.org for resources about why standards matter, testimonials, case studies, FAQs and more.

If you are interested in purchasing an American National Standard, please visit <https://webstore.ansi.org/>



**BSR/ASHRAE Addendum b to
ANSI/ASHRAE Standard 145.2-2016**

Public Review Draft

**Proposed Addendum b to
Standard 145.2-2016, Laboratory
Test Method for Assessing the
Performance of Gas-Phase Air
Cleaning Systems: Air Cleaning
Devices**

**First Public Review (August 2019)
(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 www.ashrae.org/standards-research--technology/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 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.

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

(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 makes changes to the Title, Purpose, and Scope of Standard 145.2-2016.

[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 b to Standard 145.2-2016

Make changes to the TPS as follows.

Title: Laboratory Test Method for Assessing the Performance of Gas-Phase Air Cleaning Systems: Air Cleaning Devices

1. PURPOSE

To provide a standard laboratory test method for assessing the performance of ~~sorptive media~~ gas-phase air cleaning devices. The results of these tests can provide information to the engineer useful for the design and selection of air cleaning equipment and the design of air cleaning systems for controlling indoor concentrations of gaseous air contaminants.

2. SCOPE

2.1 This standard prescribes a full-scale laboratory test method for measuring the performance of in-duct ~~sorptive media~~ gas-phase air cleaning devices. ~~In this context, sorptive media are defined as the active agent of the air cleaner, whether granular or sheet or pleated, that operate by absorbing and/or chemically reacting with contaminant gases.~~ This test is conducted under steady state conditions at elevated gas challenge concentrations (relative to ventilation applications) and therefore should be used to compare devices rather than directly predict performance in any particular application.

2.2 The method of testing measures the performance of air cleaning devices for removing one or more specified gaseous contaminants or gas mixtures intended to simulate operation during service life. The standard defines procedures for the dispersion of the gases required for conducting the test. The standard also provides a method for determining gas concentrations upstream of the air cleaning device to calculate removal efficiency.

2.3 This standard establishes performance specifications for the equipment required to conduct the tests, defines methods of calculating and reporting results obtained from the test data and establishes a results reporting system that can be applied to gas-phase air cleaning devices covered by this standard.

2.4 The test method defined by this standard is applied to a sample device that is supposed to be representative of other devices marketed with the same brand and model number.

2.5 This standard does not apply to stand-alone room air cleaners.



**BSR/ASHRAE Addendum d to
ANSI/ASHRAE Standard 34-2019**

Public Review Draft

Proposed Addendum d to Standard 34-2019, Designation and Safety Classification of Refrigerants

**First Public Review (August 2019)
(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 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.

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

BSR/ASHRAE Addendum d to ANSI/ASHRAE Standard 34-2019, *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 zeotropic refrigerant blend R-469A in Table 4-2.

[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 d to 34-2019

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

TABLE 4-2 Data and Safety Classifications for Refrigerant Blends

Refrigerant Number = 469A

Composition (Mass %) = R-744 / R-32 / R-125 (35.0 / 32.5 / 32.5)

Composition tolerances = ±2.0 / ±2.0 / ±2.0

OEL = 1600 ppm v/v

Safety Group = A1

RCL = 53,000 ppm v/v; 8 lb/Mcf; 130 g/m³

Highly Toxic or Toxic Under Code Classification = Neither

NOTE: The following data will be added to Informative Appendix D in Table D-2 (Data for Refrigerant Blends) and is not open for public comment.

TABLE D-2 Data for Refrigerant Blends

Refrigerant Number = 469A

Composition (Mass %) = R-744 / R-32 / R-125 (35.0 / 32.5 / 32.5)

Average Relative Molar Mass = 59.1 g/mol

Bubble Point (°F) = -109.3

Dew Point (°F) = -78.7

Bubble Point (°C) = -78.5

Dew Point (°C) = -61.5



**BSR/ASHRAE Addendum e to
ANSI/ASHRAE Standard 34-2019**

Public Review Draft

Proposed Addendum e to Standard 34-2019, Designation and Safety Classification of Refrigerants

**First Public Review (August 2019)
(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 or by calling 404-636-8400 or 1-800-727-4723 (for orders in the U.S. or Canada).

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

BSR/ASHRAE Addendum e to ANSI/ASHRAE Standard 34-2019, *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 zeotropic refrigerant blend R-470A in Table 4-2.

[Note to Reviewers: This addendum makes proposed changes to the current standard. These changes are indicated in the text by underlining (for additions) and ~~striking through~~ (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 e to 34-2019

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

TABLE 4-2 Data and Safety Classifications for Refrigerant Blends

Refrigerant Number = 470A

Composition (Mass %) = R-744 / 32 / 125 / 134a / 1234ze(E) / 227ea (10.0 / 17.0 / 19.0 / 7.0 / 44.0 / 3.0)

Composition tolerances = ±1.0 / ±1.0 / ±1.0 / ±0.5 / ±2.0 / ±0.5

OEL = 1100 ppm v/v

Safety Group = A1

RCL = 77,000 ppm v/v; 17 lb/Mcf; 270 g/m³

Highly Toxic or Toxic Under Code Classification = Neither

NOTE: The following data will be added to Informative Appendix D in Table D-2 (Data for Refrigerant Blends) and is not open for public comment.

TABLE D-2 Data for Refrigerant Blends

Refrigerant Number = 470A

Composition (Mass %) = R-744 / 32 / 125 / 134a / 1234ze(E) / 227ea (10.0 / 17.0 / 19.0 / 7.0 / 44.0 / 3.0)

Average Relative Molar Mass = 84.4 g/mol

Bubble Point (°F) = -80.7

Dew Point (°F) = -32.1

Bubble Point (°C) = -62.7

Dew Point (°C) = -35.6



**BSR/ASHRAE Addendum f to
ANSI/ASHRAE Standard 34-2019**

Public Review Draft

Proposed Addendum f to Standard 34-2019, Designation and Safety Classification of Refrigerants

**First Public Review (August 2019)
(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 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.

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

BSR/ASHRAE Addendum f to ANSI/ASHRAE Standard 34-2019, *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 LFL data to Tables 4-1 and 4-2.

[Note to Reviewers: This addendum makes proposed changes to the current standard. These changes are indicated in the text by underlining (for additions) and ~~strike through~~ (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 f to 34-2019

Make the following changes to Table 4-1.

Reviewer Note: The portions of the table not shown remain unchanged

	Chemical Name	Chemical Formula	OEL (v/v)	Safety Group	RCL			LFL			Highly Toxic or Under Code
					ppm (v/v)	Lb/Mcf	g/m3	ppm (v/v)	Lb/Mcf	g/m3	
Methane Series											
32	difluoromethane (methylene fluoride)	CH ₂ F ₂	1000	A2L	36,000	4.8	77	<u>144,000</u>	<u>19.1</u>	<u>306</u>	Neither
50	methane	CH ₄	1000	A3				<u>50,000</u>			Neither
Ethane Series											
141b	1,1-dichloro-1-fluoroethane	CH ₃ CCl ₂ F	500		2600	0.78	12	<u>60,000</u>	<u>17.8</u>	<u>287</u>	Neither
142b	1-chloro-1,1-difluoroethane	CH ₃ CClF ₂	1000	A2	20,000	5.1	83	<u>80,000</u>	<u>20.4</u>	<u>329</u>	Neither
143a	1,1,1-trifluoroethane	CH ₃ CF ₃	1000	A2L	21,000	4.5	70	<u>82,000</u>	<u>17.5</u>	<u>282</u>	Neither
152a	1,1-difluoroethane	CH ₃ CHF ₂	1000	A2	12,000	2.0	32	<u>48,000</u>	<u>8.1</u>	<u>130</u>	Neither
170	ethane	CH ₃ CH ₃	1000	A3	7000	0.54	8.7	<u>31,000</u>	<u>2.4</u>	<u>38</u>	Neither
Ethers											
E170	methoxymethane (dimethyl ether)	CH ₃ OCH ₃	1000	A3	8500	1.0	16	<u>34,000</u>	<u>4.0</u>	<u>64</u>	Neither
290	propane	CH ₃ CH ₂ CH ₃	1000	A3	5300	0.56	9.5	<u>21,000</u>	<u>2.4</u>	<u>38</u>	Neither
Miscellaneous Organic Compounds											
Hydrocarbons											
600	butane	CH ₃ CH ₂ CH ₂ CH ₃	1000	A3	1000	0.15	2.4	<u>20,000</u>	<u>3.0</u>	<u>48</u>	Neither
600a	2-methylpropane (isobutane)	CH(CH ₃) ₂ CH ₃	1000	A3	4000	0.59	9.6	<u>16,000</u>	<u>2.4</u>	<u>38</u>	Neither
601	pentane	CH ₃ CH ₂ CH ₂ CH ₂ CH ₃	600	A3	1000	0.18	2.9	<u>12,000</u>	<u>2.2</u>	<u>35</u>	Neither
601a	2-methylbutane (isopentane)	(CH ₃) ₂ CHCH ₂ CH ₃	600	A3	1000	0.18	2.9	<u>13,000</u>	<u>2.4</u>	<u>38</u>	Neither
Inorganic Compounds											
717	ammonia	NH ₃	25	B2L	320	0.014	0.22	<u>167,000</u>	<u>7.2</u>	<u>116</u>	Neither
Unsaturated Organic Compounds											
1130(E)	trans-1,2-dichloroethene	CHCl=CHCl	200	B1B2	100	0.25	4	<u>65,000</u>	<u>16</u>	<u>258</u>	Neither
1132a	1,1-difluoroethylene	CF ₂ =CH ₂	500	A2	13,000	2.0	33	<u>50,000</u>	<u>8.1</u>	<u>131</u>	Neither
1150	ethene (ethylene)	CH ₂ =CH ₂	200	A3				<u>31,000</u>	<u>2.2</u>	<u>36</u>	Neither
1234yf	2,3,3,3-tetrafluoro-1-propene	CF ₃ CF=CH ₂	500	A2L	16,000	4.7	75	<u>62,000</u>	<u>18.0</u>	<u>289</u>	Neither
1234ze(E)	trans-1,3,3,3-tetrafluoro-1-propene	CF ₃ CH=CFH	800	A2L	16,000	4.7	75	<u>65,000</u>	<u>18.8</u>	<u>303</u>	Neither
1270	propene (propylene)	CH ₃ CH=CH ₂	500	A3	1000	0.11	1.7	<u>27,000</u>	<u>2.9</u>	<u>46</u>	Neither

Make the following changes to Table 4-2.

Reviewer Note: The portions of the table not shown remain unchanged

Refrigerant Number	Composition (Mass %)	Composition Tolerances	OEL	Safety Group	RCL			LFL			Highly Toxic or Under Code Classification
					ppm (v/v)	Lb/Mcf	g/m3	ppm (v/v)	Lb/Mcf	g/m3	
406A	R-22/600a/142b (55.0/4.0/41.0)	(±2.0/±1.0/±1.0)	1000	A2	21,000	4.7	25	<u>82,000*</u>	<u>18.8*</u>	<u>301.9*</u>	Neither
411A ^e	R-1270/22/152a (1.5/87.5/11.0)	(+0.0, -1.0/+2.0, -0.0/+0.0, -1.0)	990	A2	14,000	2.9	46	<u>55,000~</u>	<u>11.6~</u>	<u>185.6~</u>	Neither
411B ^e	R-1270/22/152a (3.0/94.0/3.0)	(+0.0, -1.0/+2.0, -0.0/+0.0, -1.0)	980	A2	13,000	2.8	45	<u>70,000~</u>	<u>14.8~</u>	<u>238.3~</u>	Neither
412A	R-22/218/142b (70.0/5.0/25.0)	(±2.0/±2.0/±1.0)	1000	A2	22,000	5.1	82	<u>87,000~</u>	<u>20.5~</u>	<u>328.6~</u>	Neither
413A	R-218/134a/600a (9.0/88.0/3.0)	(±1.0/±2.0/+0.0, -1.0)	1000	A2	22,000	5.8	94	<u>88,000~</u>	<u>23.4~</u>	<u>374.9~</u>	Neither
415A	R-22/152a (82.0/18.0)	(±1.0/±1.0)	1000	A2	14,000	2.9	47	<u>56,000*</u>	<u>11.7*</u>	<u>187.9*</u>	Neither
415B	R-22/152a (25.0/75.0)	(±1.0/±1.0)	1000	A2	12,000	2.1	34	<u>47,000</u>	<u>8.4</u>	<u>135.1</u>	Neither
418A	R-290/22/152a (1.5/96.0/2.5)	(±0.5/±1.0/±0.5)	1000	A2	22,000	4.8	77	<u>89,000*</u>	<u>19.2*</u>	<u>308.4*</u>	Neither
419A ^e	R-125/134a/E170 (77.0/19.0/4.0)	(±1.0/±1.0/±1.0)	1000	A2	15,000	4.2	67	<u>60,000*</u>	<u>16.7*</u>	<u>268.6*</u>	Neither
419B	R-125/134a/E170 (48.5/48.0/3.5)	(±1.0/±1.0/±0.5)	1000	A2	17,000	4.6	74	<u>69,000*</u>	<u>18.5*</u>	<u>297.3*</u>	Neither
429A	R-E170/152a/600a (60.0/10.0/30.0)	(±1.0/±1.0/±1.0)	1000	A3	6300	0.81	13	<u>25,000</u>	<u>3.2</u>	<u>83.8</u>	Neither
430A	R-152a/600a (76.0/24.0)	(±1.0/±1.0)	1000	A3	8000	1.3	21	<u>32,000</u>	<u>5.2</u>	<u>44.0</u>	Neither
431A	R-290/152a (71.0/29.0)	(±1.0/±1.0)	1000	A3	5500	0.69	11	<u>22,000</u>	<u>2.7</u>	<u>38.6</u>	Neither
432A	R-1270/E170 (80.0/20.0)	(±1.0/±1.0)	700	A3	1200	0.13	2.1	<u>22,000</u>	<u>2.4</u>	<u>39.2</u>	Neither
433A	R-1270/290 (30.0/70.0)	(±1.0/±1.0)	880	A3	3100	0.34	5.5	<u>20,000</u>	<u>2.4</u>	<u>32.4</u>	Neither
433B	R-1270/290 (5.0/95.0)	(±1.0/±1.0)	950	A3	4500	0.51	8.1	<u>18,000</u>	<u>2.0</u>	<u>32.1</u>	Neither
433C	R-1270/290 (25.0/75.0)	(±1.0/±1.0)	790	A3	3600	0.41	6.6	<u>18,000</u>	<u>2.0</u>	<u>83.8</u>	Neither
434A ^e	R-125/143a/134a/600a (63.2/18.0/16.0/2.8)	(±1.0/±1.0/±1.0/+0.1, -0.2)	1000	A1	73,000	20	320				Neither
435A	R-E170/152a (80.0/20.0)	(±1.0/±1.0)	1000	A3	8500	1.1	17	<u>34,000</u>	<u>4.3</u>	<u>68.2</u>	Neither
436A	R-290/600a (56.0/44.0)	(±1.0/±1.0)	1000	A3	4000	0.50	8.1	<u>16,000</u>	<u>2.0</u>	<u>32.3</u>	Neither
436B	R-290/600a (52.0/48.0)	(±1.0/±1.0)	1000	A3	4000	0.51	8.2	<u>16,000</u>	<u>2.0</u>	<u>32.7</u>	Neither
436C	R-290/600a (95.0/5.0)	(±1.2/±1.2)	990	A3	5000	0.57	9.1	<u>20,000</u>	<u>2.3</u>	<u>36.5</u>	Neither
439A	R-32/125/600a (50.0/47.0/3.0)	(±1.0/±1.0/±0.5)	990	A2	26,000	4.7	76	<u>104,000</u>	<u>18.9</u>	<u>303.3</u>	Neither
440A	R-290/134a/152a (0.6/1.6/97.8)	(±0.1/±0.6/±0.5)	1000	A2	12,000	1.9	31	<u>46,000**</u>	<u>7.8**</u>	<u>124.7**</u>	Neither
441A	R-170/290/600a/600 (3.1/54.8/6.0/36.1)	(±0.3/±2.0/±0.6/±2.0)	1000	A3	3200	0.39	6.3	<u>16,000</u>	<u>2.0</u>	<u>31.7</u>	Neither
443A	R-1270/290/600a (55.0/40.0/5.0)	(±2.0/±2.0/±1.2)	580	A3	1700	0.19	3.1	<u>20,000</u>	<u>2.2</u>	<u>35.6</u>	Neither
444A	R-32/152a/1234ze(E) (12.0/5.0/83.0)	(±1.0/±1.0/±2.0)	850	A2L	21,000	5.1	81	<u>82,000</u>	<u>19.9</u>	<u>324.8</u>	Neither
444B	R-32/152a/1234ze(E) (41.5/10.0/48.5)	(±1.0/±1.0/±1.0)	890	A2L	23,000	4.3	69	<u>93,000</u>	<u>17.3</u>	<u>277.3</u>	Neither
445A	R-744/134a/1234ze(E) (6.0/9.0/85.0)	(±1.0/±1.0/±2.0)	930	A2L	16,000	4.2	67	<u>63,000</u>	<u>2.7</u>	<u>347.4</u>	Neither
446A	R-32/1234ze(E)/600 (68.0/29.0/3.0)	(+0.5, -1.0/+2.0, -0.6/+0.1, -1.0)	960	A2L	16,000	2.5	39	<u>62,000*</u>	<u>13.5*</u>	<u>217.4*</u>	Neither
447A	R-32/125/1234ze(E) (68.0/3.5/28.5)	(+1.5, -0.5/+1.5, -0.5/+1.0, -1.0)	900	A2L	16,000	2.6	42	<u>65,000*</u>	<u>18.9*</u>	<u>303.5*</u>	Neither
447B	R-32/125/1234ze(E) (68.0/8.0/24.0)	(+1.0, -2.0/+2.0, -1.0/+1.0, -2.0)	970	A2L	30,000	23	360	<u>121,000</u>	<u>20.6</u>	<u>312.7</u>	Neither
451A	R-1234yf/134a (89.8/10.2)	(±0.2/±0.2)	520	A2L	18,000	5.3	81	<u>70,000*</u>	<u>20.3*</u>	<u>326.6*</u>	Neither
451B	R-1234yf/134a (88.8/11.2)	(±0.2/±0.2)	530	A2L	18,000	5.3	81	<u>70,000*</u>	<u>20.3*</u>	<u>326.6*</u>	Neither
452B	R-32/125/1234yf (67.0/7.0/26.0)	(±2.0/±1.5/±2.0)	870	A2L	30,000	23	360	<u>119,000</u>	<u>19.3</u>	<u>310.5</u>	Neither
454A	R-32/1234yf (35.0/65.0)	(+2.0/-2.0, +2.0/-2.0)	690	A2L	16,000	28	450	<u>63,000*</u>	<u>18.3*</u>	<u>293.9*</u>	Neither
454B	R-32/1234yf (68.9/31.1)	(+1.0/-1.0, +1.0/-1.0)	850	A2L	19,000	22	360	<u>77,000*</u>	<u>22.0*</u>	<u>352.6*</u>	Neither
454C	R-32/1234yf (21.5/78.5)	(±2.0/±2.0)	620	A2L	19,000	29	460	<u>62,000*</u>	<u>18.0*</u>	<u>289.5*</u>	Neither
455A	R-744/32/1234yf (3.0/21.5/75.5)	(+2.0, -1.0/+1.0, -2.0/±2.0)	650	A2L	30,000	23	380	<u>118,000</u>	<u>26.9</u>	<u>432.1</u>	Neither
457A	R-32/1234yf/152a (18.0/70.0/12.0)	(+0.5, -1.5/+0.5, -1.5/+0.1, -1.9)	650	A2L	15,000	25	400	<u>60,000</u>	<u>13.5</u>	<u>216.3</u>	Neither

459A	R-32/1234yf/1234ze(E) (68.0/26.0/6.0)	(+0.5, -1.5/±2.0/+1.5, -0.5)	870	A2L	27,000	23	360	<u>107,000</u>	<u>17.4</u>	<u>278.7</u>	Neither
459B	R-32/1234yf/1234ze(E) (21.0/69.0/10.0)	(+0.5, -1.0/±2.0/±1.0)	640	A2L	16,000	30	470	<u>99,000</u>	<u>23.3</u>	<u>373.5</u>	Neither
462A	R-32/125/143a/134a/600 (9.0/42.0/2.0/44.0/3.0)	(+1.5, -1.0/±2.0/±1.0/±2.0/±1.0)	1000	A2	16,000	3.9	62	<u>105,000~</u>	<u>16.6~</u>	<u>265.8~</u>	Neither
465A	R-32/290/1234yf (21.0/7.9/71.1)	(+0.5, -1.5/+0.1, -0.9/±1.0)	660	A2	12,000	2.5	40	<u>98,000</u>	<u>10.0</u>	<u>160.9</u>	Neither
510A	R-E170/600a (88.0/12.0)	(±0.5/±0.5)	1000	A3	7300	0.87	14	<u>29,000</u>	<u>3.5</u>	<u>56.1</u>	Neither
511A	R-290/E170 (95.0/5.0)	(±1.0/±1.0)	1000	A3	5300	0.59	9.5	<u>21,000</u>	<u>2.4</u>	<u>38.0</u>	Neither
512A	R-134a/152a (5.0/95.0)	(±1.0/±1.0)	1000	A2	11,000	1.9	31	<u>45,000*</u>	<u>7.7*</u>	<u>123.9*</u>	Neither
516A	R-1234yf/134a/152a (77.5/8.5/14.0)	(±1.4/+0.5, -1.5/+0.1, -1.9)	590	A2L	27,000	7.0	110	<u>50,000</u>	<u>13.1</u>	<u>210.1</u>	Neither

Add the following footnote to Tables 4-1 and 4-2.

LFL is based on WCF @23 C unless otherwise noted.

~ denotes WCFF LFL @60C

*denotes WCFF LFL @23 C

**denotes WCF LFL @100 C



**BSR/ASHRAE/IES Addendum BY
to ANSI/ASHRAE/IES Standard 90.1-2016**

Public Review Draft

**Proposed Addendum BY to
Standard 90.1-2016, Energy Standard
for Buildings Except Low-Rise
Residential Buildings**

**Third Public Review (August 2019)
(Draft Shows Proposed 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 www.ashrae.org/standards-research--technology/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 or by calling 404-636-8400 or 1-800-727-4723 (for orders in the U.S. or Canada).

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

BSR/ASHRAE/IES Addendum BY to ANSI/ASHRAE Standard 90.1-2016, *Energy Standard for Buildings Except Low-Rise Residential Buildings*

Third Public Review Draft – Independent Substantive Changes

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FOREWORD

In response to comments from the second public review of addendum BY, this independent substantive change clarifies the wording of exception 4. The original addendum was determined to be cost effective per ASHRAE's scalar cost effectiveness analysis, and this wording clarification has no impact on cost effectiveness.

[Note to Reviewers: This public review draft makes proposed independent substantive changes to the previous public review draft. 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 previous draft 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 BY to 90.1-2016

Modify the standard as follows (IP and SI Units)

10.5.1.1 On-site renewable energy.

...

Exceptions to 10.5.1.1:

...

4. New construction ~~and~~ or additions in which the sum of the gross conditioned floor area of the three largest floors of the new construction or addition is less than 10,000 ft² (1,000 m²).

...

(portions of section not shown are unchanged)



**BSR/ASHRAE/IES Addendum DA
to ANSI/ASHRAE/IES Standard 90.1-2016**

Public Review Draft

**Proposed Addendum DA to
Standard 90.1-2016, Energy Standard
for Buildings Except Low-Rise
Residential Buildings**

**First Public Review (August 2019)
(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 www.ashrae.org/standards-research--technology/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 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.

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FOREWORD

The proposed addendum aligns documentation (G1.3.2) simulation program (G2.2) climatic data (G2.3) and exceptional calculations (G2.5) requirements of Appendix G with the corresponding requirements of Section 11. In addition, the language of Section G2.4.2 is updated to take into account that the current version of Appendix G prescribes the baseline service water heating and space heating energy source. This proposed addendum has no impact on cost effectiveness.

Note to Reviewers: In this addendum, changes to the current standard are indicated in the text by underlining (for additions) and strikethrough (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 DA to 90.1-2016

Revise the Standard as follows (IP Units)

G1.3 Documentation Requirements

~~Simulated performance shall be documented, and documentation shall be submitted to the rating authority. The information shall be submitted in a report and shall include the following:~~ The following documentation shall be submitted to the rating authority:

- a. ~~A brief description of the project, the key energy efficiency improvements compared with the requirements in Sections 5 through 10, the simulation program used, the version of the simulation program, and the results of the energy analysis including. This summary shall contain the calculated values for the baseline building unregulated energy cost (BBUEC), baseline building regulated energy cost (BBREC), Building Performance Factor (BPF), baseline building performance, the proposed building performance, and the percentage improvement~~ Performance Cost Index (PCI), and Performance Cost Index Target (PCI_t).
- b. An overview of the project that includes the number of stories (above and below *grade*), the typical *floor* size, the uses in the *building* (e.g., office, cafeteria, retail, parking, etc.), the gross area of each use, and whether each use is *conditioned space*.
- c. A list of the *energy*-related features that are included in the design and on which the performance rating is based. This list shall document all *energy* features that differ between the models used in the *baseline building performance* and *proposed building performance* calculations.
- d. A list showing compliance for the *proposed design* with all the requirements of Sections 5.4, 6.4, 7.4, 8.4, 9.4, and 10.4 (mandatory provisions).

e. A list identifying those aspects of the *proposed design* that are less stringent than the requirements of 5.5, 6.5, 7.5, 9.5, and 9.6 (prescriptive provisions).

f. A list identifying those aspects of the *proposed design* that are more stringent than the requirements of Sections 5 through 10.

g. A table with a summary by end use of the *energy cost savings in the proposed building performance*, and *baseline building performance*, with each end use separated into regulated and unregulated components.

h. A site plan showing all adjacent *buildings* and topography that may shade the proposed *building* (with estimated height or number of stories).

i. *Building elevations and floor plans (schematic is acceptable).*

.....

G2.2 Simulation Program

The *simulation program* shall be a computer-based program for the analysis of *energy* consumption in *buildings* (a program such as, but not limited to, DOE 2, BLAST, or EnergyPlus). ~~The *simulation program* shall include calculation methodologies for the *building components being modeled*.~~ For components that cannot be modeled by the *simulation program*, the exceptional calculation methods requirements in Section G2.5 shall be used.

Informative Note

The simulation program should implement the rules of Appendix G that controls simulation inputs and outputs be adopted for the purposes of easier use and simpler compliance.

G2.2.2

The *simulation program* shall have the ability to either directly determine the *proposed building performance* and *baseline building performance* or produce hourly reports of *energy* use by an *energy* source suitable for determining the *proposed building performance* and *baseline building performance* using a separate calculation engine.

G2.2.3

The *simulation program* shall be capable of performing design load calculations to determine required HVAC equipment capacities and air and water flow rates in accordance with ~~generally accepted engineering standards and handbooks (for example, ASHRAE Handbook—Fundamentals)~~ Section 6.4.2 for both the *proposed design* and *baseline building design*.

G2.3 Climatic Data

The *simulation program* shall perform the simulation using hourly values of climatic data, such as including temperature, and humidity, solar radiation, and wind speed and direction from representative climatic data, for the site in which the *proposed design* is to be located. ~~For cities or urban regions with several climatic data entries,~~ For locations for which several climatic data sources are available or ~~and for locations where weather data are is~~ not available, the designer shall select available weather data that best represent the climate at the *construction* site. The selected weather data shall be approved by the *rating authority*.

G2.4.2 Annual Energy Costs

The *design energy cost* and *baseline energy cost* shall be determined using either actual rates for *purchased energy* or state average *energy* prices published by DOE's Energy Information Administration (EIA) for commercial *building* customers, but rates from different sources may not be mixed in the same project. Where *on-site renewable energy* or *site-recovered energy* is used, the *baseline building design* shall be based on the *energy* source used as the backup *energy* source, or the *baseline system energy* source in that category if no backup *energy* source has been specified, except where the baseline energy source is prescribed in Tables G3.1.1-2 and G3.1.1-3.

.....

G2.5 Exceptional Calculation Methods

When the *simulation program* does not model a design, material, or device of the *proposed design*, an exceptional calculation method shall be used as approved by the *rating authority*. Where there are multiple designs, materials, or devices that the *simulation program* does not model, each shall be calculated separately and exceptional savings determined for each. At no time shall the total exceptional savings constitute more than half of the difference between the *baseline building performance* and the *proposed building performance*. All applications for approval of an exceptional method shall include the following:

- a. Theoretical and empirical information verifying the method's accuracy, and Step-by-step documentation of the exceptional calculation method performed, detailed enough to reproduce the results.
- b. Copies of all spreadsheets used to perform the calculations.
- c. A sensitivity analysis of *energy* consumption when each of the input parameters that are estimated is varied from half to double the value assumed.
- d. The calculations shall be performed on a time-step basis consistent with the *simulation program* used.
- e. The ~~performance rating~~ Performance Cost Index calculated with and without the exceptional calculation method.

.....

Table G3.1 Modeling Requirements for Calculating Proposed and Baseline Building Performance

No.	Proposed <i>Building Performance</i>	Baseline <i>Building Performance</i>
-----	--------------------------------------	--------------------------------------

4. Schedule

.....

HVAC Fan Schedules. Schedules for HVAC fans that provide *outdoor air* for *ventilation* shall run continuously whenever *spaces* are occupied and shall be cycled ON and OFF to meet heating and cooling loads during unoccupied hours.

Exceptions:

.....

4. Dedicated outdoor air supply fans shall stay off during unoccupied hours.

1.

Note to Reviewer: Multiple Addenda currently modify sections of the Appendix G.

Addendum o modifies the language in Section G1.3. Addendum cp also modifies the language in Section G2.2. Addendum bk also modifies the language in Section G2.4.2 If these addenda are published then these sections will appear as follows. Text that did not appear in these addenda or in the previous sections of this draft, are shown below in strikethrough/underline:

G1.3 Submittals

G1.3.1 General

Compliance documentation and supplemental information shall be submitted in accordance with Section 4.2.2 of this standard.

G1.3.2 Application Documentation

The following documentation shall be submitted to the *rating authority*:

- a. The *simulation program* used, the version of the *simulation program*, and the results of the *energy* analysis including the calculated values for the baseline building unregulated energy cost (BBUEC), baseline building regulated energy cost (BBREC), Building Performance Factor (BPF), *baseline building performance*, the *proposed building performance* Performance Cost Index (PCI), and Performance Cost Index Target (PCIt).
- b. An overview of the project that includes the number of stories (above and below *grade*), the typical *floor* size, the uses in the *building* (e.g., office, cafeteria, retail, parking, etc.), the gross area of each use, and whether each use is *conditioned space*.
- c. A list of the *energy*-related features that are included in the design and on which the performance rating is based. This list shall document all *energy* features that differ between the models used in the *baseline building performance* and *proposed building performance* calculations.
- d. A list showing compliance for the *proposed design* with all the requirements of Sections 5.4, 6.4, 7.4, 8.4, 9.4, and 10.4 (mandatory provisions).
- e. A list identifying those aspects of the *proposed design* that are less stringent than the requirements of 5.5, 6.5, 7.5, 9.5, and 9.6 (prescriptive provisions).
- f. A list identifying those aspects of the *proposed design* that are more stringent than the requirements of Sections 5 through 10.
- g. A table with a summary by end use of the *proposed building performance* and *baseline building performance*, with each end use separated into regulated and unregulated components.
- h. A site plan showing all adjacent *buildings* and topography that may shade the *proposed building* (with estimated height or number of stories).
- i. *Building* elevations and *floor* plans.

.....

G2.2 Simulation Program

The *simulation program* shall be a computer-based program for the analysis of *energy* consumption in *buildings*. For components that cannot be modeled by the *simulation program*, the exceptional calculation methods requirements in Section G2.5 shall be used.

Exception:

When approved by the *adopting authority*, a separate computer-based program shall be permitted to be used to calculate *on-site renewable energy*.

Informative Note

ASHRAE Standing Standard Project Committee 90.1 recommends that the simulation program implements the rules of Appendix G that controls simulation inputs and outputs be adopted for the purposes of easier use and simpler compliance.

G2.4.2 Annual Energy Costs

The *design energy cost* and baseline *energy cost* shall be determined using either actual rates for *purchased energy* or state average *energy* prices published by DOE's Energy Information Administration (EIA) for commercial *building* customers, but rates from different sources may not be mixed in the same project. Where *on-site renewable energy* or *site-recovered energy* is used, the *baseline building design* shall be based on the *energy* source used as the backup *energy* source, or the baseline *system energy* source in that category if no backup *energy* source has been specified, except where the baseline *energy* source is prescribed in Tables G3.1.1-2 and G3.1.1-3. Where the proposed design includes *on-site electricity generation systems* other than *on-site renewable energy systems*, the baseline design shall include the same generation systems excluding its *site-recovered energy*.

G2.5 Exceptional Calculation Methods

When the *simulation program* does not model a design, material, or device of the *proposed design*, an exceptional calculation method shall be used as approved by the *rating authority*. Where there are multiple designs, materials, or devices that the *simulation program* does not model, each shall be calculated separately and exceptional savings determined for each. At no time shall the total exceptional savings constitute more than half of the difference between the *baseline building performance* and the *proposed building performance*. All applications for approval of an exceptional method shall include the following:

- a. Theoretical and empirical information verifying the method's accuracy, and step-by-step documentation of the exceptional calculation method performed, detailed enough to reproduce the results.
- b. Copies of all spreadsheets used to perform the calculations.
- c. A sensitivity analysis of *energy* consumption when each of the input parameters that is estimated is varied from half to double the value assumed.
- d. The calculations shall be performed on a time-step basis consistent with the *simulation program* used.
- e. The Performance Cost Index calculated with and without the exceptional calculation method.

Table G3.1 Modeling Requirements for Calculating Proposed and Baseline Building Performance

No.	Proposed <i>Building Performance</i>	<i>Baseline Building Performance</i>
4. Schedule		2.
.....		
HVAC Fan Schedules. Schedules for HVAC fans that provide <i>outdoor air</i> for <i>ventilation</i> shall run continuously whenever <i>spaces</i> are occupied and shall be cycled ON and OFF to meet heating and cooling loads during unoccupied hours.		
Exceptions:		
.....		
4. Dedicated outdoor air supply fans shall stay off during unoccupied hours.		



**BSR/ASHRAE/IES Addendum DB
to ANSI/ASHRAE/IES Standard 90.1-2016**

Public Review Draft

Proposed Addendum DB to Standard 90.1-2016, Energy Standard for Buildings Except Low-Rise Residential Buildings

**First Public Review (August 2019)
(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 www.ashrae.org/standards-research--technology/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 or by calling 404-636-8400 or 1-800-727-4723 (for orders in the U.S. or Canada).

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BSR/ASHRAE/IES Addendum DB to ANSI/ASHRAE Standard 90.1-2016, *Energy Standard for Buildings Except Low-Rise Residential Buildings*
First Public Review Draft

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FOREWORD

The addendum clarifies how to establish the Appendix G baseline space conditioning categories that must be used in conjunction with Tables G3.4-1 to G3.4-8.

Currently, the baseline space conditioning categories are the same as in the proposed design and are based on the definition of “space” in Section 3. As a result, if a conditioned space is designed to be low energy, the baseline for that space would end up being modeled based on the semi-heated space envelope requirements rather than the more appropriate conditioned space envelope requirements.

In addition, the space conditioning categories in Section 3 have changed since 2004 (e.g. cooling space threshold has changed from 5 Btu/hr-sf to 3.4 Btu/hr-sf) and may change again in future editions of 90.1. Thus, using Section 3 to establish Appendix G baseline space conditioning categories conflicts with the intent to keep Appendix G baseline unchanged from edition to edition.

The addendum incorporates the thresholds from 90.1 2004 into Appendix G, so that the baseline envelope is not affected by the updates to Section 3. Additionally, it clarifies that heating and cooling loads used to establish baseline space conditioning category are determined by the baseline sizing runs.

This addendum impacts an optional performance path in the standard designed to provide increased flexibility and therefore was not subjected to cost effectiveness analysis.

Note to Reviewers: In this addendum, changes to the current standard are indicated in the text by underlining (for additions) and strikethrough (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 DB to 90.1-2016

Revise the Standard as follows (IP Units)

Table G3.1 Modeling Requirements for Calculating Proposed and **Baseline Building Performance**

No.	Proposed Building Performance	Baseline Building Performance
.....		
5. Building Envelope		
		Equivalent dimensions shall be assumed for each <i>building envelope</i> component type as in the <i>proposed design</i> ; i.e., the total gross area of <i>walls</i> shall be the same in the <i>proposed</i>

BSR/ASHRAE/IES Addendum DB to ANSI/ASHRAE Standard 90.1-2016, *Energy Standard for Buildings Except Low-Rise Residential Buildings*

First Public Review Draft

- a. All components of the *building envelope* in the *proposed design* shall be modeled as shown on architectural drawings or as built for *existing building envelopes*.
...
- design and baseline building design. The same shall be true for the areas of roofs, floors, and doors, and the exposed perimeters of concrete slabs on grade shall also be the same in the *proposed design* and *baseline building design*. The following additional requirements shall apply to the modeling of the *baseline building design*.
- a. ...
- b. Space Conditioning Categories.** *Space conditioning categories* used to determine applicability of the envelope requirements in Tables G3.4-1 to G3.4-8 shall be the same as in the proposed design.
- Exception:** Envelope components, of the HVAC zones that are semi-heated in the proposed design, must meet conditioned envelope requirements in Tables G3.4-1 to G3.4-8 if, based on the sizing runs, these zones are served by a baseline system with sensible cooling output capacity $>5 \text{ Btu/h}\cdot\text{ft}^2$ (15 W/m^2) of floor area, or with heating output capacity greater than or equal to the criteria in Table G3.4-9, or that are *indirectly conditioned spaces*.
- ~~b.~~ ...
{reletter subsequent subsections. remainder of section remains unchanged}

Table G3.4-9 Heated Space Criteria

<u>Climate Zone</u>	<u>Heating Output, Btu/h·ft² (W/m²)</u>
<u>0, 1, 2</u>	<u>>5 (15)</u>
<u>3</u>	<u>>10 (30)</u>
<u>4, 5</u>	<u>>15 (45)</u>
<u>6, 7</u>	<u>>20 (60)</u>
<u>8</u>	<u>>25 (75)</u>

=====

Section G3.1 Part 5 has been previously modified by addendum m and addendum ac, which have been approved for publication and addendum av which has not yet been approved for publication. If this proposal and addendum av are approved for publication, the section will appear as follows. Text that did not appear in addendum m, addendum ac, and addendum av or in the previous sections of this draft, are shown below in strikethrough/underline:

Table G3.1 Modeling Requirements for Calculating Proposed and Baseline Building Performance

No.	Proposed Building Performance	Baseline Building Performance
.....		
5. Building Envelope		

BSR/ASHRAE/IES Addendum DB to ANSI/ASHRAE Standard 90.1-2016, *Energy Standard for Buildings Except Low-Rise Residential Buildings*

First Public Review Draft

- a. All components of the *building envelope* in the *proposed design* shall be modeled as shown on architectural drawings or as built for *existing building envelopes*.

...

Equivalent dimensions shall be assumed for each *building envelope* component type as in the *proposed design*; i.e., the total gross area of *walls* shall be the same in the *proposed design* and *baseline building design*. The same shall be true for the areas of *roofs*, *floors*, and *doors*, and the exposed perimeters of concrete slabs on *grade* shall also be the same in the *proposed design* and *baseline building design*. The following additional requirements shall apply to the modeling of the *baseline building design*:

- a. **Orientation.** The *baseline building performance* shall be generated by simulating the *building* with its actual *orientation* and again after rotating the entire *building* 90, 180, and 270 degrees, then averaging the results. The *building* shall be modeled so that it does not shade itself.

Exceptions:

1. If it can be demonstrated to the satisfaction of the *rating authority* that the *building orientation* is dictated by site considerations.
2. *Buildings* where the *vertical fenestration area* on each *orientation* varies by less than 5%.

- b. **Space Conditioning Categories.** *Space conditioning categories* used to determine applicability of the envelope requirements in Tables G3.4-1 to G3.4-8 shall be the same as in the *proposed design*.

Exception: Envelope components, of the HVAC zones that are semi-heated in the *proposed design*, must meet conditioned envelope requirements in Tables G3.4-1 to G3.4-8 if, based on the sizing runs, these zones are served by a baseline system with sensible cooling output capacity >5 Btu/h·ft² (>15 W/m²) of floor area, or with heating output capacity greater than or equal to the criteria in Table G3.4-9, or that are *indirectly conditioned spaces*.

- c. **Opaque Assemblies.** *Opaque assemblies* used for new *buildings*, *existing buildings*, or additions shall conform with assemblies detailed in [Appendix A](#) and shall match the appropriate assembly maximum *U-factors* in Tables [G3.4-1](#) through [G3.4-8](#):

- *Roofs*—Insulation entirely above deck ([A2.2](#)).
- *Above-grade walls*—Steel-framed ([A3.3](#)).
- *Below-grade walls*—Concrete block ([A4](#)).
- *Floors*—Steel-joist ([A5.3](#)).
- *Slab-on-grade floors* shall match the *F-factor* for unheated slabs from the same tables ([A6](#)).
- *Opaque door types* shall be of the same type of construction as the *proposed design* and conform to the *U-factor* requirements from the same tables ([A7](#)).

- d. **Vertical Fenestration Areas.** For *building area types* included in Table [G3.1.1-1](#), *vertical fenestration areas* for new *buildings* and additions shall equal that in Table [G3.1.1-1](#) based on the area of gross *above-grade walls* that separate *conditioned spaces* and *semiheated spaces* from the exterior. Where a *building* has multiple *building area types*, each type shall use the values in the table. The *vertical fenestration* shall be distributed on each face of the *building* in the same proportion as in the *proposed design*. For *building areas* not shown in Table [G3.1.1-1](#), *vertical fenestration areas* for new *buildings* and additions shall

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equal that in the *proposed design* or 40% of gross *above-grade wall* area, whichever is smaller, and shall be distributed on each face of the *building* in the same proportions in the *proposed design*. The *fenestration area* for an *existing building* shall equal the existing *fenestration area* prior to the proposed work and shall be distributed on each face of the *building* in the same proportions as the *existing building*.

e. **Vertical Fenestration Assemblies.** *Fenestration* for new *buildings*, *existing buildings*, and additions shall comply with the following:

- *Fenestration U-factors* shall match the appropriate requirements in Tables G3.4-1 through G3.4-8 for the applicable glazing percentage for U_{all} .
- *Fenestration SHGCs* shall match the appropriate requirements in Tables G3.4-1 through G3.4-8 using the value for $SHGC_{all}$ for the applicable vertical glazing percentage.
- All *vertical fenestration* shall be assumed to be flush with the *exterior wall*, and no shading projections shall be modeled.
- *Manual* window shading devices such as blinds or shades are not required to be modeled.

f. **Skylights and Glazed Smoke Vents.** *Skylight area* shall be equal to that in the *proposed design* or 3%, whichever is smaller. If the *skylight area* of the *proposed design* is greater than 3%, baseline *skylight area* shall be decreased by an identical percentage in all *roof* components in which *skylights* are located to reach 3%. *Skylight orientation* and tilt shall be the same as in the *proposed design*. *Skylight U-factor* and *SHGC* properties shall match the appropriate requirements in Tables G3.4-1 through G3.4-8 using the value and the applicable *skylight* percentage.

g. **Roof Solar Reflectance and Thermal Emittance.** The exterior *roof* surfaces shall be modeled using a solar *reflectance* of 0.30 and a thermal *emittance* of 0.90.

h. **Roof Albedo.** All *roof* surfaces shall be modeled with a reflectivity of 0.30.

i. The air leakage rate of the *building envelope* (175Pa) at a fixed *building* pressure differential of 0.3 in. (75 Pa) of water shall be 1.0 cfm/ft² (5.1 L/s-m²).

j. Where *linear thermal bridges* and *point thermal bridges* as identified in Section 5.5.5.1 through 5.5.5.5 are modeled in the *proposed design*, they shall be represented as modified *U-factors* by adjusting the *U-factor* in accordance with the default values in Appendix A10. If the proposed design does not have *linear thermal bridges* and *point thermal bridges*, as identified in Section 5.5.5.1 through 5.5.5.5, they shall not be modeled in the *budget building design*.

If the balcony length in the proposed design exceeds the maximum allowed by Section 5.5.5.2, Exception 2(c)(i), the area shall be reduced proportionally for each balcony until the limit set in Section 5.5.5.2, Exception 2(c)(i) is met.

Table G3.4-9 Heated Space Criteria

BSR/ASHRAE/IES Addendum DB to ANSI/ASHRAE Standard 90.1-2016, *Energy Standard for Buildings Except Low-Rise Residential Buildings*

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Climate Zone	Heating Output, Btu/h·ft ² (W/m ²)
0, 1, 2	>5 (15)
3	>10 (30)
4, 5	>15 (45)
6,7	>20 (60)
8	>25 (75)

BSR/UL 147, Standard for Safety for Hand-Held Torches For Fuel Gases

1. Revisions to the Fire Test

PROPOSAL

17 Fire Tests on Torch Units with Integral Containers

17.1 A torch unit incorporating an integral container shall be subjected to the heat of a charcoal fire as specified in 17.2, 17.3, and 17.4. The relief device system provided on the container or the inherent design of the torch unit shall operate to ~~reduce the risk of rupture or propulsion of the torch unit from pressure build-up~~ prevent any part of the torch and container from being propelled or thrown from the assembly.

17.2 Nine samples of the torch assembly, fully charged, are to be used. A charcoal fire, 24 by 18 by 6 inches (610 by 457 by 152 mm) high, is to be prepared within a 3-sided concrete-block, cinder block or brick enclosure. The top and one long side of the enclosure are to be open for observation.

17.3 A metal grate with minimum 1/2 inch spacings or wire screen with minimum 1/4 inch openings on which the samples are placed, is to be placed on top of the charcoals, ~~in which the samples shall be placed. The grate or metal wire screen shall be even with the top of the enclosure (described in 17.2).~~ The ambient temperature shall be measured in the air space between the screen and the charcoals, below the sample. The temperature during the test shall be between 1000 and 1200°F (537 and 649°C). Thermocouples may be used to measure the temperature. Thermocouples and related instruments are to be accurate and calibrated in accordance with good laboratory practice. ~~The thermocouple wires are to comply with the requirements listed in the Tolerances on Initial Values of EMF versus Temperature tables in the Standard Specification and Temperature-Electromotive Force (emf) Tables for Standardized Thermocouples, ANSI/ASTM E230/E230M.~~

17.4 The samples shall be individually tested in the charcoal fire. Three samples in various each positions and orientations that shall include of vertical up, vertical down, and horizontal shall be tested. The test shall be conducted until the entire contents of the container have been exhausted.

BSR/UL 147B, Standard for Safety for Nonrefillable (Disposable) Type Metal Container Assemblies for Butane

1. Revisions to the Fire Test

PROPOSAL

16 Fire Test

16.1 A metal container assembly is to be subjected to the heat of a charcoal fire as specified in 16.2 - 16.4. The relief device(s) or system(s) provided on the container assembly shall operate to reduce the risk of rupture or propulsion of the container from pressure buildup prevent any part of the cylinder from being propelled or thrown from the assembly.

16.2 Nine sample metal container assemblies, fully charged by the manufacturer, are to be used. A charcoal fire, 24 by 18 by 6 inches (610 by 457 by 152 mm) high, is to be prepared within a 3-sided concrete-block, cinder block or brick enclosure. The top and one long side of the enclosure are to be open for observation.

16.3 A metal grate with minimum 1/2 inch spacings or wire screen with minimum 1/4 inch openings on which the samples are placed, is to be placed on top of the charcoals, ~~in which the samples shall be placed.~~ The ambient temperature shall be measured in the air space between the screen and the charcoals, below the sample. The temperature during the test shall be between 1000 and 1200°F (537 and 649°C). Thermocouples may be used to measure the temperature. Thermocouples and related instruments are to be accurate and calibrated in accordance with good laboratory practice. ~~Thermocouple wires are to conform to the requirements listed in the Initial Calibration Tolerances for Thermocouples table in the Standard for Temperature Measurement Thermocouples, ANSI MC96.1.~~

16.4 The samples shall be individually tested in the charcoal fire. Three samples in various each positions and orientations that shall include of vertical up, vertical down, and horizontal shall be tested. The test shall be conducted until the entire contents of the container have been exhausted.

BSR/UL 498, Standard for Safety for Attachment Plugs and Receptacles**1. Proposal to add Requirements for Attachment Fitting & Receptacle for Luminaire and/or Ceiling Fan Load Ratings**

2.4.1 ATTACHMENT FITTING - A male (load connected only) component device intended solely for factory assembly to utilization equipment for the purpose of connection to a luminaire and/or ceiling-suspended fan support receptacle.

2.18.1 RECEPTACLE, CEILING-SUSPENDED FAN SUPPORT — A type of receptacle intended to be secured to a ceiling outlet box. Provides electrical connection and mechanical support of a ceiling-suspended fan by a factory installed attachment fitting secured to a ceiling-suspended fan.

2.24.1 RECEPTACLE, LUMINAIRE SUPPORT – A type of receptacle intended to be secured to a ceiling outlet box. Provides electrical connection and mechanical support of a luminaire by a factory installed attachment fitting secured to the luminaire.

12.7 Attachment Fitting

12.7.1 An attachment fitting may only be factory assembled to utilization equipment for the purpose of connection to a luminaire and/or ceiling-suspended fan support receptacle of the same manufacturer.

12.7.2 An attachment fitting shall have securement redundancy when inserted into either a luminaire and/or ceiling-suspended fan. Compliance is checked by visual inspection.

12.7.3 An attachment fitting when fully inserted as intended into either a luminaire or ceiling-suspended fan receptacle shall bond all dead metal to the receptacle grounding terminal.

12.7.4 An attachment fitting shall be configured in such a manner as to prevent interchangeability of differently rated load attachment fittings. It shall not be possible to mate an attachment fitting with either a luminaire or ceiling-suspended fan support receptacle having a lower rating as identified in Table 12.7.

Table 12.7**Attachment Fitting Load Rating**

<u>Attachment Fitting Load Rating</u>	<u>Intended Receptacle</u>	<u>Outlet Box Rating</u>
50 lb.	Luminaire Support Receptacle	Luminaire/Fixture 50 lb Minimum

<u>35 lb.</u>	<u>Ceiling-suspended Fan Support Receptacle ^a</u>	<u>Fan Support 35 lb. Minimum Luminaire/Fixture 50 lb. Minimum</u>
<u>50 lb.</u>	<u>Ceiling-suspended Fan Support Receptacle ^a</u>	<u>Fan Support 50 lb. Minimum Luminaire/Fixture 50 lb. Minimum</u>
<u>70 lb.</u>	<u>Ceiling-suspended Fan Support Receptacle ^a</u>	<u>Fan Support 70 lb. Minimum Luminaire/Fixture 70 lb. Minimum</u>
<u>Notes: ^a) Identified load rating shall be specified by the manufacturer and so marked. See Tables 193.1 and 193.4 for marking details.</u>		

12.7.5 An attachment fitting and luminaire or ceiling-suspended fan support receptacle which utilizes slip-ring contacts shall comply with the slip-ring connection requirements in accordance with the UL 335 Standard for Cord Reels. Slip-ring testing shall be performed on the complete assembly consisting of the attachment fitting and luminaire or a ceiling-suspended fan support receptacle.

12.7.6 An attachment fitting shall comply with the applicable attachment plug requirements contained in this standard. The attachment plug fitting shall also comply with the UL 514A Standard for Metallic Outlet Boxes as a component of either a luminaire or ceiling-suspended fan support receptacle.

42B Luminaire or Fan Support Receptacle

42B.1 A luminaire or ceiling-suspended fan support receptacle shall comply with the applicable receptacle requirements contained in this standard.

42B.2 Additionally, a luminaire or ceiling-suspended fan support receptacle shall also comply with applicable requirements contained in the UL 514A Standard for Metallic Outlet Boxes.

42B.3 An attachment fitting and luminaire or ceiling-suspended fan support receptacle shall be subjected to the loading test as described in the UL 514A Standard for Metallic Outlet Boxes, except as modified below.

Table 42B.1

Luminaire or Ceiling-Suspended Fan Loading Test

<u>Type of Load (Luminaire or Ceiling-Suspended Fan)^a</u>	<u>UL 514 A, Sections</u>	<u>Applied Load lbf.(N)</u>
<u>Luminaire or Ceiling-suspended fan support</u>	<u>12.17,12.5</u>	<u>See UL 514A, Paragraphs 12.14.1.1 Table 10 and 12.5.4 for applied loads</u>

Notes: ^a See Tables 193.1 and 193.4 for marking details.

42B.4 At the conclusion of the load test identified in Table 42B.3, there shall be no cracking, breaking, or any visible damage to either the attachment fitting or luminaire and/or ceiling-suspended fan support receptacle.

42B.5 Testing shall be performed on three complete assemblies of an attachment fitting and/or luminaire or ceiling-suspended fan support receptacle.

42B.6 The luminaire and/or a ceiling-suspended fan support receptacle shall be installed using a suitable outlet box attached to an appropriate bar hanger having a suitable applied load rating.

42C Ceiling-Suspended Fan Test

42C.1 An attachment fitting and ceiling-suspended fan support receptacle shall also comply with the UL 514A Standard for Metallic Outlet Boxes, ceiling-suspended fan support test.

42C.2 The attachment fitting and ceiling-suspended fan support receptacle shall be investigated with a fan weighing either 35 lb. (15.9 kg), or 50 lb. (23 kg), or 70 lb. (32 kg) as specified by the manufacturer and so marked.

42C.3 The ceiling-suspended fan support test shall be performed on three complete assemblies consisting of an attachment fitting and ceiling-suspended fan support receptacle.

42C.4 The ceiling-suspended fan support receptacle shall be installed in a suitable outlet box attached to an appropriate bar hanger having a suitable applied load rating.

42C.5 At the conclusion of the ceiling-suspended fan support test there shall be no cracking, breaking, or any visible damage to either the attachment fitting or luminaire or a ceiling-suspended fan support receptacle.

Table 193.1

Markings and instructions applicable to attachment plugs and attachment fitting

Description	Reference	Marking	Location
<u>Attachment fitting for use with a Luminaire Support Receptacle with a 50 lb. support rating</u>	<u>15</u>	<u>Luminaire Support</u> <u>50 lb. Max</u>	<u>On the device, on the package or on an Instruction sheet included with the device</u>

		<u>Not removable or interchangeable with another fixture</u>	<u>On the device, visible during installation</u>
		<u>Mate only with Model [model or catalog number]</u>	<u>On the device, visible during installation</u>
<u>Attachment fitting for use with a ceiling-suspended fan support receptacle with a 35 lb. support rating</u>	<u>16</u>	<u>Fan Support 35 lb. Max</u>	<u>On the device, visible during installation</u>
		<u>Not removable or interchangeable with another fixture</u>	<u>On the device, visible during installation</u>
		<u>Mate only with Model [model or catalog number]</u>	<u>On the device, visible during installation</u>
<u>Attachment fitting for use with a ceiling-suspended fan support receptacle with a 50 lb. support rating</u>	<u>17</u>	<u>Fan Support 50 lb. Max</u>	<u>On the device, visible during installation</u>
		<u>Not removable or interchangeable with another fixture</u>	<u>On the device, visible during installation</u>
		<u>Mate only with Model [model or catalog number]</u>	<u>On the device, visible during installation</u>
<u>Attachment fitting for use with a ceiling-suspended fan support receptacle with a 70 lb. support rating</u>	<u>18</u>	<u>Fan Support 70 lb. Max</u>	<u>On the device, visible during installation</u>
		<u>Not removable or interchangeable with another fixture</u>	<u>On the device, visible during installation</u>
		<u>Mate only with Model [model or catalog number]</u>	<u>On the device, visible during installation</u>

Table 193.4

Marking and instructions applicable to receptacles

Description	Reference	Marking	Location
<u>Luminaire Support Receptacle 50 lb. support rating</u>	<u>41</u>	<u>Luminaire Support 50 lb. Max</u>	<u>On the device, visible during installation</u>
<u>Ceiling-suspended fan support receptacle</u>	<u>42</u>	<u>Fan Support 35 lb. Max</u>	<u>On the device, visible AFTER installation</u>

<u>with a 35 lb. support rating</u>			
<u>Ceiling-suspended fan support receptacle with a 50 lb. support rating</u>	<u>43</u>	<u>Fan Support 50 lb. Max</u>	<u>On the device, visible AFTER installation</u>
<u>Ceiling-suspended fan support receptacle with a 70 lb. support rating</u>	<u>44</u>	<u>Fan Support 70 lb. Max</u>	<u>On the device, visible AFTER installation</u>

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BSR/UL 1564, Standard for Industrial Battery Chargers

1. Update reference of component coatings from UL 508 to UL 1332

SA3.13 With reference to SA3.11 and SA3.12, other finishes, including paints, special metallic finishes, and combinations of the two are determined to be equivalent when comparative tests with galvanized sheet steel - without annealing, wiping, or other surface treatment - conforming with SA3.11(a) or SA3.12, as applicable, indicate they provide equivalent protection. Among the factors that are taken into account when judging whether such coating systems meet the intent of the requirement are exposure to salt spray, moist carbon dioxide-sulfur dioxide-air mixtures, moist hydrogen sulfide-air mixtures, ultraviolet light, and water. See Supplement B to the Standard for Industrial Control Equipment, UL 508, for investigation of component coatings. See the Standard for Organic Coatings for Steel Enclosures for Outdoor Use Electrical Equipment, UL 1332.

2. New requirements for industrial battery chargers intended to charge lithium ion batteries

SUPPLEMENT SB - INDUSTRIAL BATTERY CHARGERS INTENDED FOR CHARGING LITHIUM ION (Li-ion) CHEMISTRIES

GENERAL

SB1 Scope

SB1.1 These requirements supplement and in some cases modify the requirements in Sections 1 - 49 and Supplement SA.

SB1.2 These chargers are not intended to provide protection to industrial batteries unless specifically evaluated as a system.

SB1.3 Industrial batteries provided with a Battery Management System (BMS) and intended for use with a specific charger shall comply with either of the following standards:

- a) UL 2271, Batteries for Use in Light Electric Vehicle (LEV) Applications; or
- b) UL 2580, Batteries for Use in Electric Vehicles.

If the Battery Management System or a portion of the protective system and/or Battery Management System resides within external components or within the charger, then the combination of the external components, charger, and the battery pack are critical and shall be evaluated together to the requirements of the respective battery standard and this Standard. The battery pack and charger and shall be provided with marking for correct use.

PERFORMANCE

SB2 Power Input Test

SB2.1 A product having an output rating of more than 20 amperes is to be tested with its intended battery chemistry.

SB3 Temperature Test

SB3.1 During the Temperature Test of a product using a battery load, the battery shall be discharged to 3 V per cell then charged until temperatures on the product reach a maximum and begin to decrease. The Temperature Test is then to be continued using a second battery, also discharged to 3 V per cell, until maximum temperatures are attained. A product provided with a timer and a marked charging time based on the ampere-hour capacity of the battery is to be tested for the marked time period.

Exception: A second battery is not used for products which provide a constant charging current or have a marked charging time such that only one battery can be charged during an 8-hour period.

SB4 Intermediate Abnormal Test

SB4.1 A product tested using a battery as a load as described in SB3.1 shall be subjected to the Intermediate Abnormal Test specified in 31.2 immediately following the Temperature Test. The product shall not emit flame or molten metal or result in a risk of fire or electric shock during the test. The test is to be followed by a Dielectric Voltage-Withstand Test, as specified in 32.1.1(a), applied between the primary and secondary windings of the transformer.

Exception: A product that is current limited during normal charging is not required to be subjected to a continuous load test.

SB5 Reverse Polarity

SB5.1 The external output leads are to be connected in reverse polarity to a fully-charged battery. The product is then to be connected to its maximum test voltage - see Table 27.1 - and operated until the ultimate condition is observed, or 4 hours if cycling of an automatically reset protector occurs. Fuses and other protective devices provided as part of the product are to remain in the circuit.

Exception: Chargers intended for use with specific Industrial Batteries provided with a Battery Management System intended to detect and prevent reverse polarity at the terminals are exempt from this test.

MARKINGS

SB6 General

SB6.1 A product shall be marked with charging instructions, number of cells, and ampere-hour rating.

SB6.2 A product marking or the User Manual shall provide sufficient information concerning any condition necessary to ensure that, when used as prescribed by the manufacturer, the equipment is unlikely to present a hazard as addressed by this Standard or within the Scope of this Standard.

SB6.3 Where the product and industrial battery combination is not identified, the product shall be marked with the following or equivalent statement: "CAUTION: Risk of Fire. Use only battery packs that include the battery management system and all necessary protection for the battery pack integral to the pack."

SB6.4 The unit shall be marked with the following or equivalent: "Industrial Battery Charger for use with Lithium Ion Batteries".

BSR/UL 2515A, Standard for Supplemental Requirements for Extra Heavy Wall Reinforced Thermosetting Resin Conduit (RTRC) and Fittings

1. Clarification on Where to Measure the Minimum Inside Diameter of Socket Specified in Table 3.2

PROPOSAL

Table 3.2

Dimensions for integral couplings - Type XW

		Socket depth		Inside diameter of socket <u>at entrance</u>		Socket wall thickness	
		minimum		minimum		minimum	
Trade size	(metric designator)	mm	(in)	mm	(in)	mm	(in)
3/4	21	50.80	2.00	35.69	1.405	5.59	0.220
1	27	50.80	2.00	42.42	1.670	5.59	0.220
1-1/4	35	50.80	2.00	51.18	2.015	5.59	0.220
1-1/2	41	50.80	2.00	57.28	2.255	5.59	0.220
2	53	50.80	2.00	63.37	2.495	5.59	0.220
2-1/2	63	50.80	2.00	76.07	2.995	5.59	0.220
3	78	50.80	2.00	88.77	3.495	5.59	0.220
3-1/2	91	50.80	2.00	101.47	3.995	5.59	0.220
4	103	57.15	2.25	114.17	4.495	5.59	0.220
5	129	74.68	2.94	139.57	5.495	5.59	0.220
6	155	74.68	2.94	164.97	6.495	5.59	0.220

BSR/UL 2580, Standard for Safety for Batteries for Use in Electric Vehicles

1. Inclusion of cell criteria in Annex D and revision to Overcharge Test.

5 Reference Publications

IEEE 1625, Rechargeable Batteries for Multi-Cell Mobile Computing Devices

IEEE 1725, Rechargeable Batteries for Cellular Telephones

16.2 Secondary lithium cells including lithium ion cells shall comply with 16.2.1, the requirements outlined in either Annex B or Annex D, and be marked as required in 44.7 and 44.8.

16.2.1 With reference to 16.2, secondary lithium cell design shall ensure sufficient safety measures to mitigate internal short circuits and other hazardous conditions during the life of the cells. Safety measures to maintain cell safety include, but are not limited to, the following:

- a) The appropriate choice and placement of insulation. IEEE 1625 and IEEE 1725 provide guidance on placement and application of insulation within cells and general cell design safety considerations;
- b) Sufficient sizing of the negative electrode active materials to cover the positive electrode active materials;
- c) Proper placement of insulation and separation of parts at opposite polarity including insulation and placement of tabs to prevent inadvertent short circuits during the life of the cell;
- d) The use of appropriate protection mechanisms such as separator shutdown, protective coatings and electrolyte additives, etc.; and
- e) The use of separators with sufficient strength, thermal properties and that are sized to prevent short circuit between the positive and negative electrodes during charge and discharge over the life of the cells.

16.2.2 With reference to 16.2.1, compliance to items (a) to (e) is determined through a review of the cell construction as part of a tear down analysis, a review of documentation on the cell construction and components, and the cell tests of Annex B or D.

44.7 With reference to 16.2, a secondary lithium cell shall be legibly and permanently marked with:

- a) The manufacturer's or supplier's name, trade name, or trademark or other descriptive marking by which the organization responsible for the product may be identified;
- b) A distinctive catalog, model or designation number or the equivalent; and
- c) The date or other dating period of manufacture not exceeding any three consecutive months.

Exception No. 1: The manufacturer's identification may be in a traceable code if the product is identified by the brand or trademark owned by a private labeler.

Exception No. 2: The date of manufacture may be abbreviated; or may be in a nationally accepted conventional code or in a code affirmed by the manufacturer, provided that the code:

- a) Does not repeat in less than 10 years; and*
- b) Does not require reference to the production records of the manufacturer to determine when the product was manufactured.*

45.4 Electric vehicle cells shall include specifications for the safe operation of the cell in the EESA including cell operating parameters, installation requirements, etc. Guidance on cell specification information that should be provided on cells can be found in the Cell Specification Sheet, Annex E of IEEE 1625.

B1.1 The cell test program outlined in this annex shall be used to evaluate secondary lithium ion cells for use in EESAs that comply with this standard. Samples used for testing shall be within 6 months of production. The number of samples used for each test and the pass/fail criteria for testing is outlined in Table B3.1. As an

alternate, the Alternative Test Program for Secondary Lithium Cells ~~lithium-ion cell test program~~ outlined in Annex D may be used.

B1.1.1 Before testing, the charge/discharge cycling conditioning per Annex D shall be conducted on secondary lithium metal (i.e. lithium metal anode) cells.

B1.4 Some lithium cells ~~batteries~~ are capable of exploding when the tests described in Section B2 are conducted. It is important that personnel be protected from the flying fragments, explosive force, sudden release of heat, and noise that results from such explosions. The test area shall be well ventilated to protect personnel from possible harmful fumes or gases.

B1.5 As an additional precaution, the temperatures on the surface of the cell ~~battery~~ casings shall be monitored in accordance with B1.6 during the tests described in B2. All personnel involved in the testing of lithium cells ~~batteries~~ shall be instructed never to approach a lithium cell ~~battery~~ while the surface temperature exceeds 90°C (194°F) and not to touch the lithium cell ~~battery~~ while the surface temperature exceeds 45°C (113°F).

B1.6 In accordance with B1.5, the surface temperatures of the cell ~~battery~~ casing shall be measured as follows:

- By thermocouples consisting of wires not larger than 0.21 mm² (24 AWG) and not smaller than 0.05 mm² (30 AWG) and a potentiometer-type instrument; and
- The temperature measurements on the cells ~~batteries~~ shall be made with the measuring junction of the thermocouple held tightly against the ~~metal~~ casing of the cell ~~battery~~.

Exception: Placing the thermocouple ~~with~~ on a thin piece of paper or label between the thermocouple and casing of the cell with enough pressure on the thermocouple to ensure an accurate and repeatable reading, is an acceptable practice.

Table B3.1
Tests samples & results criteria
(NOTE: ONLY SHOWING CHANGES TO TABLE)

Test	Reference	Number of samples	Compliance results
Projectile ^a	B2.10	3 (6)	No: projectiles per B2.10
^a Those cells not complying with the Projectile Test of B2.10 can be used in batteries that comply with the External Fire Exposure Test of Section 42.			

D1.2 Some lithium cells ~~batteries~~ are capable of exploding when the tests described in D3 are conducted. It is important that personnel be protected from the flying fragments, explosive force, sudden release of heat, and noise that results from such explosions. The test area shall be well ventilated to protect personnel from possible harmful fumes or gases.

D1.3 As an additional precaution, the temperatures on the surface of the cell ~~battery~~ casings shall be monitored in accordance with D1.4 during the tests described in D3. All personnel involved in the testing of lithium cells ~~batteries~~ shall be instructed never to approach a lithium cell ~~battery~~ while the surface temperature exceeds 90°C (194°F) and not to touch the lithium cell ~~battery~~ while the surface temperature exceeds 45°C (113°F).

D1.4 In accordance with D1.3, the surface temperatures of the cell ~~battery~~ casing shall be measured as follows:

- By thermocouples consisting of wires not larger than 0.21 mm² (24 AWG) and not smaller than 0.05 mm² (30 AWG) and a potentiometer-type instrument; and
- With the measuring junction of the thermocouple held tightly against the ~~metal~~ casing of the cell ~~battery~~.

Exception: Placing the thermocouple ~~with~~ on a thin piece of paper or label between the thermocouple and casing of the cell with enough pressure on the thermocouple to ensure an accurate and repeatable reading, is an acceptable practice.

D2.1.1 The charge/discharge cycling preconditioning in D2.1.2 shall be done before testing and conducted on secondary lithium metal (i.e. lithium metal anode) cells. Lithium ion cells need not be subjected to charge/discharge cycle preconditioning.

D2.1.2 ~~D2.1.4~~ Secondary lithium metal (i.e. lithium metal anode) cells shall be conditioned at $25 \pm 5^{\circ}\text{C}$ ($77 \pm 9^{\circ}\text{F}$). The cells shall be continuously cycled as specified by the manufacturer. The specification shall be such that the full rated capacity of the cell is utilized and the number of cycles accumulated shall be at least equal to 25% of the advertised cycle life of the cell or cycled continuously for 90 days, whichever is shorter. Cycling shall be done either individually or in groups. Cells shall be recharged prior to testing.

Figure D.1
Impact test
(NOTE: NO CHANGES TO FIGURE, JUST CAPTION)

- A - Steel impact chamber (hinged door not shown)
- B - Weight support rope
- C - Containment tube
- D - 9-kg (20-lb) weight
- E - ~~Cell Battery~~
- F - 16-mm (5/8-in) diameter bar

D3.6.1 A ~~cell battery~~ shall be subjected to simple harmonic motion with an amplitude of 0.8 mm (0.03 in) [1.6 mm (0.06 in) total maximum excursion].

D3.6.2 The frequency shall be varied at the rate of 1 Hz/min between 10 and 55 Hz, and return in not less than 90 or more than 100 min. The ~~cell battery~~ shall be tested in three mutually perpendicular directions. For a ~~cell battery~~ that has only two axes of symmetry, the ~~cell battery~~ shall be tested perpendicular to each axis.

D3.7.1 A ~~cell battery~~ shall be heated in a gravity convection or circulating air oven with an initial temperature of $20 \pm 5^{\circ}\text{C}$ ($68 \pm 9^{\circ}\text{F}$). The temperature of the oven shall be raised at a rate of $5 \pm 2^{\circ}\text{C}$ ($9 \pm 3.6^{\circ}\text{F}$) per minute to a temperature of $130 \pm 2^{\circ}\text{C}$ ($266 \pm 3.6^{\circ}\text{F}$) and remain for 10 min. For ~~cells batteries~~ specified for temperatures above 100°C (212°F), the conditioning temperature shall be increased from $130 \pm 2^{\circ}\text{C}$ ($266 \pm 3.6^{\circ}\text{F}$), to $30 \pm 2^{\circ}\text{C}$ ($86 \pm 3.6^{\circ}\text{F}$) above the manufacturers maximum specified temperature.

Exception: For cells whose weight is greater than 500 g (1.1 lbs), the maximum temperature of the heating test shall be held for 30 min rather than 10 min.

D3.8.1 The cells shall be placed in a test chamber and subjected to the following cycles:

- a) Raising the chamber-temperature to $85 \pm 2^{\circ}\text{C}$ ($185 \pm 3.6^{\circ}\text{F}$) or $T_{\text{max}} + 10^{\circ}\text{C}$ (18°F) (T_{max} is the manufacturer's maximum specified temperature) within 30 min and maintaining this temperature for 4 h;
- b) Reducing the chamber temperature to $20 \pm 2^{\circ}\text{C}$ ($68 \pm 3.6^{\circ}\text{F}$) within 30 min and maintaining this temperature for 2 h;
- c) Reducing the chamber temperature to minus $40 \pm 2^{\circ}\text{C}$ (minus $40 \pm 3.6^{\circ}\text{F}$) within 30 min and maintaining this temperature for 4 h;
- d) Raising the chamber temperature to $20 \pm 2^{\circ}\text{C}$ ($68 \pm 3.6^{\circ}\text{F}$) within 30 min;
- e) Repeating the sequence for a further 9 cycles; and
- f) After the 10th cycle, storing the ~~cells batteries~~ for a minimum of 24 h, at a temperature of $20 \pm 5^{\circ}\text{C}$ ($68 \pm 9^{\circ}\text{F}$) prior to examination.

D3.9.1 Sample ~~cells batteries~~ shall be stored for 6 h at an absolute pressure of 11.6 kPa (1.68 psi) and a temperature of $20 \pm 3^{\circ}\text{C}$ ($68 \pm 5.4^{\circ}\text{F}$).

D3.10.4 The sample shall be heated and shall remain on the screen until it explodes or the cell or ~~battery~~ has ignited and burned out. It is not required to secure the sample in place unless the sample is at risk of falling off

the screen before the test is completed. When required, the sample shall be secured to the screen with a single wire tied around the sample.

Table D.1
Tests samples and results criteria
(NOTE: ONLY SHOWING CHANGES TO TABLE)

Test	Reference	Number of samples	Compliance results
Projectile ^a	D3.10	2 (4)	No: projectiles per D3.10
^a No "OCV" change would be a drop in the open circuit voltage after testing of less than 10% of the before test value.			
^b Those cells not complying with the Projectile Test of D3.10 can be used in batteries that comply with the External Fire Exposure Test of Section 42.			

2. Revision of Production Quality Control Criteria in 17.4.

17.4 Manufacturers of electric energy storage assemblies and electric vehicle cells shall have documented production process controls in place that continually monitor and record the following key elements of the manufacturing process that can affect safety, and shall include measured parametric limits enabling corrective/preventative action to address defects (out of limit parameters) found affecting these key elements:

- a) Supply chain control; and
- b) Assembly processes.

4. Vibration Endurance Test options for EESAs intended for off-road vehicle applications.

5 Reference Publications

~~ISO 12405-1, Electrically Propelled Road Vehicles - Test Specification for Lithium-Ion Traction Battery Packs and Systems - Part 1: High-Power Applications~~

ISO 6469-1, Electrically Propelled Road Vehicles - Safety Specifications - Part 1: Rechargeable Energy Storage System (RESS)

35.2 A sample of the electric energy storage assembly is subjected to a vibration endurance test in accordance with the anticipated end application vehicle vibration profile. In the absence of this information, the vibration method outlined in SAE J2380, shall be used.

Exception No. 1: This test may be conducted at the module level for those electric energy storage assemblies intended for use in applications larger than passenger vehicles. The module level testing shall be representative of the electric energy storage assembly. The vibration profile used shall be from SAE J2380.

Exception No. 2: Electric energy storage assemblies intended for installation in off-road vehicles evaluated to UL 583 may instead be vibration tested in accordance with ISO 6469-1 ~~ISO 12405-1~~. The vibration shall be conducted in an ambient temperature of $25 \pm 5^\circ\text{C}$ ($77 \pm 9^\circ\text{F}$) throughout the test rather than varying the temperature.

7. Revisions to Functional Safety Criteria.

5 Reference Publications

~~IEC 61508-5, Functional Safety of Electrical/Electronic/Programmable Electronic Safety-Related Systems Part 5: Examples of Methods for the Determination of Safety Integrity Levels~~

ISO 26262-2, Road Vehicles - Functional Safety (all parts) Part 2: Management of Functional Safety

~~ISO 26262-3, Road Vehicles - Functional Safety Part 3: Concept Phase~~

13.2 Documents that can be used as guidance for the safety analysis include:

- a) IEC 60812;
- b) IEC 61025;
- c) SAE ARP4761;
- d) SAE J1739;
- e) MIL-STD-1629A;
- f) IEC 61508-5 (all parts);
- g) ISO 26262 (all parts)-3, the Hazard Analysis and Risk Assessment section; and
- h) ISO 13849-1, the Determination of Required Performance Level (PLr) annex.

8. Revision to Internal Fire Test for clarity and addition of Annex E for examples of cell failure methods.

E3.1.2 A ~~thin film heater~~ (e.g. a thin film heater) should be applied to the cell to be failed in a location on the cells that does not directly affect the other cells in the assembly. The other cells should only be affected by the local effects and conduction (electrical and thermal) through the tabs of the failed cell and not the applied heater.

E3.2.4 The speed of indentation at the cell casing/surface should be at a rate of is 0.1 mm/s. The voltage of the cell being failed should be monitored and the indentation should be halted when thermal runaway initiates. ~~there is a voltage drop of 500 mV, which is indicative of an internal short circuit through a limited number of electrode layers.~~

E3.3.4 The rate of indentation of the nail should be 0.1 mm/s. The voltage of the cell being failed is to be monitored and the movement of the nail through the cell should be halted when thermal runaway initiates. ~~there is a voltage drop of at least 500 mV or the nail has gone through approximately half of the cell, whichever comes first. Once the voltage has dropped or the depth of penetration through half the cell has occurred, the nail penetration is stopped and the results of the cell failure is observed.~~

9. Revision to External Fire Test to allow for other recognized test methods.

5 Reference Publications

~~ISO 12405-3, Electrically Propelled Road Vehicles – Test Specification for Lithium-ion Traction Battery Packs and Systems – Part 3: Safety Performance Requirements~~

ISO 6469-1, Electrically Propelled Road Vehicles - Safety Specifications - Part 1: Rechargeable Energy Storage System (RESS)

42.1 The purpose of this test is to determine an electrical energy storage assembly's ability to prevent an explosion as a result of exposure to a simulated fuel or vehicle fire external to the electrical energy storage assembly.

Exception No. 1: If the cells employed in the assembly comply with the projectile test in Annex B or Annex D, the assembly is exempted from this test.

Exception No. 2: Testing may be conducted at the module level that is representative of the energy storage assembly.

Exception No. 3: The "Exposure to Fire" test of ISO 6469-1 "Fire Exposure Test" of ISO 12405-3 may be conducted as an alternative to this test.