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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

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Comment Deadline: May 14, 2017

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

Addenda

BSR/ASHRAE Addendum a to BSR/ASHRAE Standard 15-201x, Safety Standard for Refrigeration Systems (addenda to ANSI/ASHRAE Standard 15 -2013)

This addendum modifies ASHRAE 15 by making necessary changes to defer regulation of ammonia refrigeration systems to ANSI/IIAR 2.

Click here to view these changes in full

Send comments (with copy to psa@ansi.org) to: https://osr.ashrae. org/default.aspx

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

Addenda

BSR/ASHRAE Addendum a to BSR/ASHRAE Standard 34-201x, Designation and Safety Classification of Refrigerants (addenda to ANSI/ASHRAE Standard 15-2013)

This addendum adds the zeotropic refrigerant blend R -125/134a/143a/227ea/600a in Table 4-2 and Table D-2.

Click here to view these changes in full

Send comments (with copy to psa@ansi.org) to: https://osr.ashrae. org/default.aspx

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

Addenda

BSR/ASHRAE Addendum b to BSR/ASHRAE Standard 15-201x, Safety Standard for Refrigeration Systems (addenda to ANSI/ASHRAE Standard 15 -2013)

This addendum makes several minor changes to Standard 15, including the removal of a restriction on the use of higher flammability refrigerants when used in small in portable unit systems, adding a definition and requirements pertaining to the use of low-probability pumps, and the elimination of a requirement for Industrial Occupancies and Refrigerated Rooms pertaining to floor area per occupant.

Click here to view these changes in full

Send comments (with copy to psa@ansi.org) to: https://osr.ashrae. org/default.aspx

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

Addenda

BSR/ASHRAE Addendum b to BSR/ASHRAE Standard 34-201x, Designation and Safety Classification of Refrigerants (addenda to ANSI/ASHRAE Standard 34-2013)

This addendum adds the azeotropic refrigerant blend R-1234yf / 134a / 152a in Table 4-2 and Table D-2.

Click here to view these changes in full

Send comments (with copy to psa@ansi.org) to: https://osr.ashrae. org/default.aspx

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

Addenda

BSR/ASHRAE Addendum c to BSR/ASHRAE Standard 15-201x, Safety Standard for Refrigeration Systems (addenda to ANSI/ASHRAE Standard 34 -2013)

This addendum harmonizes Standard 15 with prior changes to Standard 34 (introduced by Addenda u and t to Standard 34-2007), to use the OEL values as the refrigerant detector set point for refrigerating machinery rooms, to actuate an alarm and mechanical ventilation.

Click here to view these changes in full

Send comments (with copy to psa@ansi.org) to: https://osr.ashrae. org/default.aspx

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

Addenda

BSR/ASHRAE Addendum d to BSR/ASHRAE Standard 34-201x, Designation and Safety Classification of Refrigerants (addenda to ANSI/ASHRAE Standard 34-2013)

This addendum adds the zeotropic refrigerant blend R-32 / 125 / 143a / 134a / 600 $\,$ in Table 4-2 and Table D-2.

Click here to view these changes in full

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

Addenda

BSR/ASHRAE Addendum e to BSR/ASHRAE Standard 34-201x, Designation and Safety Classification of Refrigerants (addenda to ANSI/ASHRAE Standard 34-2013)

This addendum makes several changes with the intent to harmonize verbiage in ASHRAE Standard 34 and ISO 817 (Refrigerants - Designation and Classification), specifically in the use of Molar Mass versus Molecular Mass.

Click here to view these changes in full

Send comments (with copy to psa@ansi.org) to: https://osr.ashrae. org/default.aspx

RESNET (Residential Energy Services Network, Inc.)

Revision

BSR/RESNET/ICC 380-201x Addendum A-201x, Attics & Crawlspaces (revision of ANSI/RESNET/ICC 380-2016)

Revise Standard ANSI/RESNET/ICC 380-2016 to clarify the treatment of attics and crawlspaces in testing and calculations and to provide other clarifications essential to the implementation of the Standard

Click here to view these changes in full

Send comments (with copy to psa@ansi.org) to: Comments are submitted via RESNET's online comment form. See the links from webpage: http://www.resnet.us/blog/resnet-consensus-standards/

UL (Underwriters Laboratories, Inc.)

Revision

BSR/UL 340-201x, Standard for Safety for Tests for Comparative Flammability of Liquids (revision of ANSI/UL 340-2009a)

This proposal for UL 340 covers the addition of requirements for Transformer Mineral Oil, Natural and Synthetic Ester Liquids, and Silicone Liquid to Tables 3.1 and 13.1.

Click here to view these changes in full

Send comments (with copy to psa@ansi.org) to: Derrick Martin, (510) 319 -4271, Derrick.L.Martin@ul.com

UL (Underwriters Laboratories, Inc.)

Revision

BSR/UL 875-201x, Standard for Safety for Electric Dry-Bath Heaters (revision of ANSI/UL 875-2016)

Revision to the scope of UL 875.

Click here to view these changes in full

Send comments (with copy to psa@ansi.org) to: Grace Roh, (919) 549 -1389, Grace.Roh@ul.com

UL (Underwriters Laboratories, Inc.)

Revision

BSR/UL 2108-201x, Standard for Low Voltage Lighting Systems (revision of ANSI/UL 2108-2015)

(1) Address equipment for use in environmental air spaces; (2) Revise requirements for enclosure openings; (3) Addition of electrical ratings for power units and luminaires.

Click here to view these changes in full

Send comments (with copy to psa@ansi.org) to: Ritu Madan, (847) 664 -3297, ritu.madan@ul.com

Comment Deadline: May 29, 2017

ABYC (American Boat and Yacht Council)

Revision

BSR/ABYC H-31-201x, Seat Structures (revision of ANSI/ABYC H-31-2015)

This standard is a guide for the design, construction, installation, and testing of permanently installed seating systems in boats.

Single copy price: \$50.00

Obtain an electronic copy from: www.abycinc.org

Order from: www.abycinc.org

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

ACMA (American Composites Manufacturers Association)

Revision

BSR/ACMA/FGMC-Grating Manual-201x, Fiberglass Composites Grating Manual for Pultruded and Molded Grating and Stair Treads (revision and redesignation of ANSI/ACMA/FGMC-Manual-2014)

The Fiberglass Composites Grating Manual for Pultruded and Molded Grating and Stair Treads was approved in 2014, and provides useful information related to the procedures and practices for the fabrication and installation of pultruded and molded grating and stair treads. This edition revises that standard.

Single copy price: \$75.00

Obtain an electronic copy from: Lcox1225@gmail.com

Order from: Larry Cox, (740) 928-3286, Lcox1225@gmail.com

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ASA (ASC S2) (Acoustical Society of America)

New Standard

BSR ASA S2.75-201x/Part 1, Shaft Alignment Methodology, Part 1: General Principles, Methods, Practices, and Tolerances (new standard)

Establishes methodology consistent with industry best practices for measurement, analysis and correction of alignment of shafts on rotating machinery coupled by means of a flexible coupling where such shafts are supported by two bearings in independent, horizontally mounted machine cases. Addresses conditions for machinery mounting that directly affects shaft alignment, methods for measuring amount of shaft misalignment, and practices for relocating machine cases to achieve proper shaft alignment.

Single copy price: \$120.00

Obtain an electronic copy from: asastds@acousticalsociety.org

Order from: Neil Stremmel, (631) 390-0215, nstremmel@acousticalsociety. org

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

ASABE (American Society of Agricultural and Biological Engineers)

New Standard

BSR/ASABE S640 MONYEAR-201x, Definition of Metrics of Radiation for Plant Growth (Controlled Environment Horticulture) Application (new standard)

This standard provides definitions and descriptions of metrics based on radiation measurements for plant growth and development.

Single copy price: \$58.00

Obtain an electronic copy from: walsh@asabe.org

Order from: Jean Walsh, (269) 932-7027, walsh@asabe.org

ASIS (ASIS International)

Reaffirmation

BSR ASIS PSC.1-2012 (R201x), Management System for Quality of Private Security Company Operations - Requirements with Guidance (reaffirmation of ANSI ASIS PSC.1-2012)

This Standard provides the principles and requirements for a Quality Assurance Management System (QAMS) for Private Security Service Providers including Private Security Companies (collectively "PSCs") to provide quality assurance in all security related activities and functions while demonstrating accountability to law and respect for human rights. PSCs are organizations whose business activities include the provision of security services, either on its own behalf or on behalf of another.

Single copy price: \$100.00

Obtain an electronic copy from: standards@asisonline.org

Order from: Aivelis Opicka, (703) 518-1439, standards@asisonline.org

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ASTM (ASTM International)

New Standard

BSR/ASTM D2239-201x, Specification for Polyethylene (PE) Plastic Pipe (SIDR-PR) Based on Controlled Inside Diameter (new standard)

http://www.astm.org

Single copy price: Free

Obtain an electronic copy from: cleonard@astm.org

Order from: accreditation@astm.org

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ASTM (ASTM International)

New Standard

BSR/ASTM D2464-201x, Specification for Threaded Poly(Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80 (new standard)

http://www.astm.org

Single copy price: Free

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New Standard

BSR/ASTM D2466-201x, Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40 (new standard)

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New Standard

BSR/ASTM D2467-201x, Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80 (new standard)

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New Standard

BSR/ASTM D2564-201x, Specification for Solvent Cements for Poly(Vinyl Chloride) (PVC) Plastic Piping Systems (new standard)

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New Standard

BSR/ASTM D2609-201x, Specification for Plastic Insert Fittings for Polyethylene (PE) Plastic Pipe (new standard)

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New Standard

BSR/ASTM D2657-201x, Practice for Heat Fusion Joining of Polyolefin Pipe and Fittings (new standard) http://www.astm.org Single copy price: Free Obtain an electronic copy from: cleonard@astm.org Order from: accreditation@astm.org Send comments (with copy to psa@ansi.org) to: Same

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New Standard

BSR/ASTM D2683-201x, Specification for Socket-Type Polyethylene Fittings for Outside Diameter-Controlled Polyethylene Pipe and Tubing (new standard)

http://www.astm.org

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BSR/ASTM D2737-201x, Specification for Polyethylene (PE) Plastic Tubing (new standard) http://www.astm.org Single copy price: Free

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New Standard

BSR/ASTM D2749-201x, Symbols for Dimensions of Plastic Pipe Fittings (new standard) http://www.astm.org Single copy price: Free Obtain an electronic copy from: cleonard@astm.org Order from: accreditation@astm.org Send comments (with copy to psa@ansi.org) to: Same

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BSR/ASTM D2774-201x, Practice for Underground Installation of Thermoplastic Pressure Piping (new standard) http://www.astm.org Single copy price: Free

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ASTM (ASTM International)

New Standard

BSR/ASTM D2855-201x, Practice for the Two-Step (Primer and Solvent Cement) Method of Joining Poly(Vinyl Chloride) (PVC) or Chlorinated Poly (Vinyl Chloride) (CPVC) Pipe and Piping Components with Tapered Sockets (new standard)

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New Standard

BSR/ASTM D3035-201x, Specification for Polyethylene (PE) Plastic Pipe (DR-PR) Based on Controlled Outside Diameter (new standard) http://www.astm.org

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New Standard

BSR/ASTM D3122-201x, Specification for Solvent Cements for Styrene-Rubber (SR) Plastic Pipe and Fittings (new standard) http://www.astm.org Single copy price: Free Obtain an electronic copy from: cleonard@astm.org Order from: accreditation@astm.org Send comments (with copy to psa@ansi.org) to: Same

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New Standard

BSR/ASTM D3212-201x, Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals (new standard)

http://www.astm.org

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New Standard BSR/ASTM D3311-201x, Specification for Drain, Waste, and Vent (DWV) Plastic Fittings Patterns (new standard) http://www.astm.org Single copy price: Free Obtain an electronic copy from: cleonard@astm.org Order from: accreditation@astm.org Send comments (with copy to psa@ansi.org) to: Same

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BSR/ASTM D3485-201x, Specification for Coilable High Density Polyethylene (HDPE) Cable in Conduit (CIC) (new standard)

http://www.astm.org

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New Standard

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

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New Standard

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BSR/ASTM F438-201x, Specification for Socket-Type Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 40 (new standard)

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BSR/ASTM F493-201x, Specification for Solvent Cements for Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Pipe and Fittings (new standard)

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BSR/ASTM F1025-201x, Guide for Selection and Use of Full-Encirclement-Type Band Clamps for Reinforcement or Repair of Punctures or Holes in Polyethylene Gas Pressure Pipe (new standard)

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ASTM (ASTM International)

New Standard

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

http://www.astm.org

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BSR/ASTM F1759-201x, Practice for Design of High-Density Polyethylene (HDPE) Manholes for Subsurface Applications (new standard) http://www.astm.org

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BSR/ASTM F1924-201x, Specification for Plastic Mechanical Fittings for Use on Outside Diameter Controlled Polyethylene Gas Distribution Pipe and Tubing (new standard)

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BSR/ASTM F1948-201x, Specification for Metallic Mechanical Fittings for Use on Outside Diameter Controlled Thermoplastic Gas Distribution Pipe and Tubing (new standard)

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BSR/ASTM F1960-201x, Specification for Cold Expansion Fittings with PEX Reinforcing Rings for Use with Cross-Linked Polyethylene (PEX) Tubing (new standard)

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BSR/ASTM F1970-201x, Specification for Special Engineered Fittings, Appurtenances or Valves for use in Poly(Vinyl Chloride) (PVC) or Chlorinated Poly(Vinyl Chloride) (CPVC) Systems (new standard)

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New Standard

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BSR/ASTM F2262-201x, Specification for Crosslinked Polyethylene/Aluminum/Crosslinked Polyethylene Tubing OD Controlled SDR9 (new standard)

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New Standard

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New Standard

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ASTM (ASTM International)

New Standard

BSR/ASTM F2767-201x, Specification for Electrofusion Type Polyamide-12 Fittings for Outside Diameter Controlled Polyamide-12 Pipe and Tubing for Gas Distribution (new standard)

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New Standard

BSR/ASTM F2785-201x, Specification for Polyamide 12 Gas Pressure Pipe, Tubing, and Fittings (new standard) http://www.astm.org Single copy price: Free Obtain an electronic copy from: cleonard@astm.org Order from: accreditation@astm.org Send comments (with copy to psa@ansi.org) to: Same

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New Standard

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ASTM (ASTM International)

New Standard

BSR/ASTM F2807-201x, Specification for Multilayer Polyethylene-Polyamide (PE-PA) Pipe for Pressure Piping Applications (new standard)

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New Standard

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BSR/ASTM F2855-201x, Specification for Chlorinated Poly(Vinyl Chloride) /Aluminum/Chlorinated Poly(Vinyl Chloride) (CPVC-AL-CPVC) Composite Pressure Tubing (new standard)

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BSR/ASTM F2880-201x, Specification for Lap-Joint Type Flange Adapters for Polyethylene Pressure Pipe in Nominal Pipe Sizes 34 in. to 65 in. (new standard)

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New Standard

BSR/ASTM F3124-201x, Practice for Data Recording the Procedure Used to Produce Heat Butt Fusion Joints in Plastic Piping Systems or Fittings (new standard)

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BSR/ASTM F3128-201x, Test Method for Treestand Repetitive Loading Capability (new standard)

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ASTM (ASTM International)

New Standard

BSR/ASTM F3190-201x, Practice for Heat Fusion Equipment (HFE) Operator Qualification on Polyethylene (PE) and Polyamide (PA) Pipe and Fittings (new standard)

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AWS (American Welding Society)

Revision

BSR/AWS F4.1-201X, Safe Practices for the Preparation of Containers and Piping for Welding, Cutting, and Allied Processes (revision of ANSI/AWS F4.1-2007)

This standard informs the reader of the necessary safe practices to be followed in the cleaning and preparation of containers and piping for welding or cutting. It describes various methods for cleaning, including water, steam, hot chemical and mechanical, and techniques to be used for their proper preparation, such as inerting.

Single copy price: \$28.00

Obtain an electronic copy from: steveh@aws.org

Order from: Stephen Hedrick, (305) 443-9353, steveh@aws.org

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EIMA (EIFS Industry Members Association)

New Standard

BSR/EIMA 99A-201x, Standard for Exterior Insulation and Finish Systems (EIFS) and EIFS with Drainage (new standard)

This standard provides the minimum requirements for specifying and installing Exterior Insulation and Finish Systems (EIFS) and Exterior Insulation and Finish Systems (EIFS) with Drainage, as well as the minimum performance requirements for EIFS and EIFS with Drainage.

Single copy price: \$30.00

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Order from: Dustin Antonello, (703) 538-1729, dantonello@eima.com

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NISO (National Information Standards Organization) *Withdrawal*

ANSI/NISO Z39.84-2005 (R2010), Syntax for the Digital Object Identifier (withdrawal of ANSI/NISO Z39.84-2005 (R2010))

ANSI/NISO Z39.84-2005 (R2010) defines the composition and order of the unambiguous alphanumeric identifier string in the Digital Object Identifier (DOI) system used to reference an intellectual property entity in the digital environment. ISO 26324:2012, Information and documentation -- Digital object identifier system, is now available. Experts have noted that material covered in Z39.84 is addressed in the ISO standard, sometimes in more up-to-date ways.

Single copy price: \$35.00

Obtain an electronic copy from: http://www.niso.org/contact/

Order from: http://www.niso.org/contact/

Send comments (with copy to psa@ansi.org) to: nisohq@niso.org

SCTE (Society of Cable Telecommunications Engineers)

Revision

BSR/SCTE 63-201x, Test Method for Voltage/Spark Test of Outer Jacket (revision of ANSI/SCTE 63-2009)

This procedure specifies the spark test method to be used in determining if the outer jacket of a coaxial cable will withstand a specified voltage.

Single copy price: \$50.00

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

Send comments (with copy to psa@ansi.org) to: standards@scte.org

TAPPI (Technical Association of the Pulp and Paper Industry)

Reaffirmation

BSR/TAPPI T 832 om-2012 (R201x), Water absorption of corrugating medium: Float curl method (reaffirmation of ANSI/TAPPI T 832 om-2012)

The water absorptivity of corrugating medium is measured by floating a specimen on the surface of a vessel of water and determining the time for the specimen to become saturated. This method is applicable to corrugating medium as it is commercially produced by all processes. It is generally applicable to relatively unsized (water leaf) paperboards. It may not be applicable for more highly sized boards or to grades produced in different grammage (basis weight) from those normally used in corrugating medium. Single copy price: Free

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UL (Underwriters Laboratories, Inc.)

Reaffirmation

BSR/UL 467-2013 (R201x), Standard for Safety for Grounding and Bonding Equipment (reaffirmation of ANSI/UL 467-2013)

Reaffirmation of the tenth edition of the Standard for Grounding and Bonding Equipment, UL 467.

Single copy price: Contact comm2000 for pricing and delivery options

Obtain an electronic copy from: http://www.comm-2000.com

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Send comments (with copy to psa@ansi.org) to: Mitchell Gold, (847) 664 -2850, Mitchell.Gold@ul.com

UL (Underwriters Laboratories, Inc.)

Revision

BSR/UL 2196-201x, Standard for Fire Test for Circuit Integrity of Fire-Resistive Power, Instrumentation, Control, and Data Cables (revision of ANSI/UL 2196-2006 (R2012))

Document dated 04-14-17 recirculates changes that were originally proposed on 09-23-16.

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Obtain an electronic copy from: http://www.comm-2000.com

Order from: comm2000

Send comments (with copy to psa@ansi.org) to: Mary Huras, (613) 368 -4425, Mary.Huras@ul.com

Comment Deadline: June 13, 2017

ASME (American Society of Mechanical Engineers) *Revision*

BSR/ASME A112.18.6/CSA B125.6-201x, Flexible Water Connectors (revision of ANSI/ASME A112.18.6/CSA B125.6-2009)

This Standard covers flexible water connectors for use in water supply systems under (a) continuous pressure in accessible locations and (b) intermittent pressure in recreational vehicles only.

Single copy price: Free

Order from: Mayra Santiago, ASME; ansibox@asme.org

Send comments (with copy to psa@ansi.org) to: Angel Guzman, (212) 591 -8018, guzman@asme.org

ASME (American Society of Mechanical Engineers)

Revision

BSR/ASME Y14.100-201x, Engineering Drawing Practices (revision of ANSI/ASME Y14.100-2004 (R2013))

This Standard establishes the essential requirements and reference documents applicable to the preparation and revision of manual or computer-generated engineering drawings and associated lists, unless tailored by a specialty standard.

Single copy price: Free

Order from: Mayra Santiago, ASME; ansibox@asme.org

Send comments (with copy to psa@ansi.org) to: Fredric Constantino, (212) 591-8684, constantinof@asme.org

UL (Underwriters Laboratories, Inc.)

New Standard

BSR/UL 60335-2-67-201x, Standard for Safety for Household and Similar Electrical Appliances - Safety - Part 2-67: Particular Requirements for Floor Treatment Machines, for Commercial Use (new standard)

See scope summary on pages 17 - 18.

Single copy price: Contact comm2000 for pricing and delivery options

Obtain an electronic copy from: www.comm-2000.com

Order from: Comm2000, 151 Eastern Avenue, Bensenville, IL 60106 USA, 1 -888-853-3503

Send comments (with copy to psa@ansi.org) to: Anne Marie Jacobs, (919) 549-0954, annemarie.jacobs@ul.com

UL (Underwriters Laboratories, Inc.)

Revision

BSR/UL 1017-201x, Standard for Safety for Vacuum Cleaners, Blower Cleaners, and Household Floor Finishing Machines (revision of ANSI/UL 1017-2015)

Expansion of scope and addition of requirements for grounded currentcarrying hoses, vacuum cleaners intended for installation in recreational vehicle or marine vessel, stand-alone current-carrying hoses, and motorized nozzles. Clarification for conducting the extreme voltage test; Normal Load requirements; French language requirements; running overload test; the temperature limits for switches, relays, controls and circuit breakers; and ampacity limits for commercial products. Allowance for angled attachment plug used with integral ALCI or GFCI plug and cord tag for Markings. Alternative for Lead in 8.4.3 and revision of 2.1.1, 5.12.2, 5.21.7, 7.2 (b) and Public-Use Vacuum Cleaners.

Single copy price: Contact comm2000 for pricing and delivery options Obtain an electronic copy from: www.comm-2000.com

Order from: Comm2000, 151 Eastern Avenue, Bensenville, IL 60106 USA, 1 -888-853-3503

Send comments (with copy to psa@ansi.org) to: Anne Marie Jacobs, (919) 549-0954, annemarie.jacobs@ul.com

Projects Withdrawn from Consideration

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

ASME (American Society of Mechanical Engineers)

BSR/ASME A112.6.5-201x, Hydrants (revision and redesignation of ANSI/ASME A112.21.3-1985 (R2007))

This Standard covers definitions, connections, materials, variations, testing and operation, and general requirements for hydrants including non-freeze wall, ground, post, and floor types, and moderate climate wall and floor types, which are used in buildings and grounds as water supply terminals, employed principally for lawn and flower bed watering hoses and normal building maintenance functions.

Inquiries may be directed to Mayra Santiago, (212) 591-8521, ansibox@asme.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.

API (American Petroleum Institute)

ANSI/API RP 5C5/ISO 13679, 3rd Edition-1990 (R2015), Recommended Practice on Procedures for Testing Casing and Tubing Connections

Questions may be directed to: Benjamin Coco, (202) 682-8056, cocob@api. org

API (American Petroleum Institute)

ANSI/API Spec 7-2/ISO 10424-2-2008 (R2015), Specification for Threading and Gauging of Rotary Shouldered Thread Connections

Questions may be directed to: Benjamin Coco, (202) 682-8056, cocob@api. org

Correction

Revised Designation

ANSI/ICC A117.1-2017

In last week's issue of Standards Action, the year on the designation of this standard was changed to 2015. At the request of the developer, the standard will retain its 2017 designation. The correct designation of this standard is ANSI/ICC A117.1-2017.

Scope of BSR/UL 60335-2-67-201x

This clause of Part 1 is replaced by the following.

This International Standard deals with the safety of powered floor treatment machines intended for commercial indoor or outdoor use for the following applications:

- scrubbing,
- wet or dry pick-up,
- polishing and dry buffing,
- application of wax, sealing products and powder based detergents,
- shampooing,
- stripping, grinding and scarifying of floors with an artificial surface.

Their cleaning motion is more lateral or periodic than linear.

NOTE 101: By contrast, the cleaning motion of machines covered by IEC 60335-2-72 is more linear than lateral or periodic.

NOTE 102: This standard applies to machines for COMMERCIAL USE. The following list, although not comprehensive, gives an indication of locations that are included in the scope:

- public use areas such as hotels, schools, hospitals;
- industrial locations, for example factories and manufacturing shops;
- retail outlets, for example shops and supermarkets;
- business premises, for example offices and banks;
- all uses other than normal housekeeping purposes.

They are not equipped with a TRACTION DRIVE. The following power systems are covered:

- internal combustion engines,

 mains powered motors up to a RATED VOLTAGE of 250 V for single-phase appliances and 480 V for other appliances,

- battery-powered motors.

Battery powered machines may be equipped with a built-in battery charger.

This standard does not apply to

- vacuum cleaners and water-suction cleaning appliances for household use (IEC 60335-2-2);
- floor treatment appliances for household use according to IEC 60335-2-10;
- spray extraction machines for COMMERCIAL USE (IEC 60335-2-68);

- wet and dry vacuum cleaners, including power brush, for COMMERCIAL USE (IEC 60335-2-69);

– floor treatment machines with or without TRACTION DRIVE, for COMMERCIAL USE, according to IEC 60335-2-72;

- hand-held and transportable motor-operated electric TOOLS (IEC 60745 series, IEC 61029 series);

- machines designed for use in corrosive or explosive environments (dust, vapour or gas);

– machines designed for picking up hazardous dusts (as defined in IEC 60335-2-69), inflammable substances, or glowing particles;

- machines designed for use in vehicles or on board of ships or aircraft.

NOTE 103: Attention is drawn to the fact that in many countries, additional requirements on the safe use of the equipment covered can be specified by the national health authorities, the national authorities responsible for the protection of labour, the national water supply authorities and similar authorities. 1DV DE: Modify Clause 1 of the Part 2 as follows:

1DV.1: In the paragraph following NOTE 102, replace the second sentence and the dashed list with the following:

They include the following energy sources or power systems, or combinations of them:

 mains up to a rated voltage of 250 V for single-phase appliances and 480 V for other appliances;

- internal combustion engines;

- batteries supplying 150 V or less;
- double layer (ultra) capacitors;
- fuel cells.

Energy sources or power systems utilizing both BATTERY and mains are excluded.

1DV.2: Modify the first six dashed items under "This standard does not apply to" in the Part 2 as follows: – First dashed item: replace IEC 60335-2-2 with CAN/CSA C22.2 No. 243 / UL 1017

- Second dashed item: replace IEC 60335-2-10 with CAN/CSA E60335-2-10 / CSA C22.2 No. 243 / UL 1017

Third dashed item: replace IEC 60335-2-68 with CAN/CSA E60335-2-68 /CSA C22.2 No. 10 /UL 561

- Fourth dashed item: replace IEC 60335-2-69 with CAN/CSA E60335-2-69 / CSA C22.2 No. 243 /UL 1017

Fifth dashed item: replace IEC 60335-2-72 with CAN/CSA C22.2 No. 60335-2-72/ UL 60335-2-72

– Sixth dashed item: replace IEC 60745 with CAN/CSA C22.2 No. 60745 / UL 60745, and IEC 61029 with CAN/CSA E61029 / CAN/CSA C22.2 No. 62841 / UL 62841.

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.

ACMA (American Composites Manufacturers Association)

Office:	3033 Wilson Boulevard, Suite 420 Arlington, VA 22201
Contact:	Larry Cox
Phone:	(740) 928-3286
Fax:	(703) 525-0743

E-mail: Lcox1225@gmail.com

BSR/ACMA/FGMC-Grating Manual-201x, Fiberglass Composites Grating Manual for Pultruded and Molded Grating and Stair Treads (revision and redesignation of ANSI/ACMA/FGMC-Manual-201x)

ASABE (American Society of Agricultural and Biological Engineers)

Office:	2950 Niles Road
	St Joseph, MI 49085
Contact:	Jean Walsh
Phone:	(269) 932-7027
Fax:	(269) 429-3852
E-mail:	walsh@asabe.org

BSR/ASABE AD17225-4-201x MONYEAR, Solid biofuels - Fuel specifications and classes - Part 4: Graded wood chips (national adoption with modifications of ISO 17225-4:2014)

ASSE (Safety) (American Society of Safety Engineers)

Office:	520 N. Northwest Highway
	Park Ridge, IL 60068

Contact: Ovidiu Munteanu

Phone: (847) 232-2012

Fax: (847) 699-2929

E-mail: OMunteanu@ASSE.org

BSR/ASSE Z9.3-201x, Spray Finishing Operations: Safety Code for Design, Construction and Ventilation (revision and redesignation of ANSI/AIHA Z9.3-2007)

CTA (Consumer Technology Association)

Office:	1919 South Eads Street
	Arlington, VA 22202

Contact: Veronica Lancaster

Phone: (703) 907-7697

Fax: (703) 907-4197

E-mail: vlancaster@cta.tech

BSR/CTA 2069-201x, Definitions and Characteristics of Augmented and Virtual Reality Technologies (new standard) BSR/CTA 2070-201x, Best Practices for Creating Content for Augmented Reality Technologies (new standard)

BSR/CTA 2071-201x, Best Practices for Creating Content for Virtual Reality Technologies (new standard)

MSS (Manufacturers Standardization Society)

Office:	127 Park Street, NE
	Vienna, VA 22180-4602
Contact:	Robert O'Neill
Phone:	(703) 281-6613
Fax:	(703) 281-6671
E-mail:	boneill@mss-hq.org

BSR/MSS SP-105-201x, Instrument Valves for Code Applications (new standard)

NEMA (ASC ESS) (National Electrical Manufacturers Association)

Office:	1300 N 17th St
	Rosslyn, VA 22209
Contact:	Brian Marchionini
Phone:	(703) 841-3279
Fax:	(703) 841-3379
E-mail:	Brian.Marchionini@nema.org

BSR/ESS 1-201x, Protocol for Uniformly Measuring and Expressing the Performance of Energy Storage Systems (new standard)

UL (Underwriters Laboratories, Inc.)

Office:	333 Pfingsten Road Northbrook, IL 60062
Contact:	Ritu Madan
Phone:	(847) 664-3297
E-mail:	ritu.madan@ul.com

BSR/UL 2108-201x, Standard for Low Voltage Lighting Systems (revision of ANSI/UL 2108-2015)

VITA (VMEbus International Trade Association (VITA))

Office:	929 W. Portobello Avenue Mesa, AZ 85210
Contact:	Jing Kwok
Phone:	(602) 281-4497
E-mail:	jing.kwok@vita.com

BSR/VITA 68.1-201x, VPX Compliance Channel - Fixed Signal Integrity Budget Standard (new standard)

Call for Members (ANS Consensus Bodies)

ADA Seeks Participants for SNODENT Review

The American Dental Association is seeking qualified individuals who may be interested in or materially affected by the ADA Systemized Nomenclature of Dentistry (SNODENT) to join an ADA Canvass Committee to consider approval of the next revision of SNODENT as an American National Standard. SNODENT was approved by ANSI as an American National Standard in 2016 and will be revised annually. The ADA SNODENT Canvass Committee is a volunteer group that is administered by the ADA Department of Standards that agrees to review, comment and vote on whether revisions of SNODENT should be forwarded to ANSI for approval as an American National Standard. The proposed revision was prepared by the ADA SNODENT Maintenance Committee, a group of volunteers representing all dental specialty groups as well as academic, insurance and government organizations.

SNODENT is a clinical terminology designed for use with electronic health records that enables the capture, aggregation and analysis of detailed oral health data. SNODENT provides a standardized oral health terminology for the recording of clinical detail and patient characteristics to provide consistent retrieval, transmission, and analysis of data across healthcare systems and interoperability with electronic health records.

Participation in the SNODENT Canvass Committee is free and open to all interested parties. All canvass activities will be conducted electronically through the ADA's collaborative website for standards development; no in-person meetings are planned. For more information or to join the SNODENT Canvass Committee, please contact Paul Bralower at 800-621-8099, Ext. 4129, or e-mail <u>bralowerp@ada.org.</u>

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:

- o General Interest
- o Government
- o Producer
- o 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.

ANS (American Nuclear Society)

Reaffirmation

ANSI/ANS 3.2-2012 (R2017), Managerial, Administrative, and Quality Assurance Controls for the Operational Phase of Nuclear Power Plants (reaffirmation of ANSI/ANS 3.2-2012): 4/4/2017

ASC X9 (Accredited Standards Committee X9, Incorporated)

Reaffirmation

ANSI X9.111-2011 (R2017), Penetration Testing within the Financial Services Industry (reaffirmation of ANSI X9.111-2011): 4/6/2017

ASCE (American Society of Civil Engineers)

New Standard

* ANSI/ASCE/CI 67-2017, Schedule Delay Analysis Standard (new standard): 4/4/2017

ASME (American Society of Mechanical Engineers) Revision

ANSI/ASME B18.18-2017, Quality Assurance for Fasteners (revision of ANSI/ASME B18.18-2011): 4/6/2017

ASTM (ASTM International)

New Standard

- ANSI/ASTM F1282-2017, Specification for Polyethylene/Aluminum/Polyethylene (PE-AL-PE) Composite Pressure Pipe (new standard): 3/28/2017
- ANSI/ASTM F1807-2017, Specification for Metal Insert Fittings Utilizing a Copper Crimp Ring for SDR9 Cross-linked Polyethylene (PEX) Tubing and SDR9 Polyethylene of Raised Temperature (PE-RT) Tubing (new standard): 3/28/2017
- ANSI/ASTM F2135-2017, Specification for Molded Drain, Waste, and Vent (DWV) Short-Pattern Plastic Fittings (new standard): 3/28/2017

Revision

- ANSI/ASTM D4068-2017, Specification for Chlorinated Polyethylene (CPE) Sheeting for Concealed Water-Containment Membrane (revision of ANSI/ASTM D4068-2015): 3/28/2017
- 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 (revision of ANSI/ASTM D5677-2016): 3/28/2017
- ANSI/ASTM E2169-2017, Practice for Selecting Antimicrobial Pesticides for Use in Water-Miscible Metalworking Fluids (revision of ANSI/ASTM E2169-2012): 3/28/2017
- ANSI/ASTM F2389-2017, Specification for Pressure-rated Polypropylene (PP) Piping Systems (revision of ANSI/ASTM F2389 -2017): 3/28/2017

Withdrawal

- ANSI/ASTM E1384-2007, Practice for Content and Structure of the Electronic Health Record (EHR) (withdrawal of ANSI/ASTM E1384 -2007 (R2013)): 3/28/2017
- ANSI/ASTM E1633-2008, Specification for Coded Values Used in the Electronic Health Record (withdrawal of ANSI/ASTM E1633-2008 (R2013)): 3/28/2017

- ANSI/ASTM E1715-2001, Practice for an Object-Oriented Model for Registration, Admitting, Discharge, and Transfer (RADT) Functions in Computer-Based Patient Record Systems (withdrawal of ANSI/ASTM E1715-2001 (R2013)): 3/28/2017
- ANSI/ASTM E1762-1997, Guide for Electronic Authentication of Health Care Information (withdrawal of ANSI/ASTM E1762-1997 (R2013)): 3/28/2017
- ANSI/ASTM E1869-2014, Guide for Confidentiality, Privacy, Access, and Data Security Principles for Health Information Including Electronic Health Records (withdrawal of ANSI/ASTM E1869-2014): 3/28/2017
- ANSI/ASTM E1972-2004, Practice for Minimizing Effects of Aerosols in the Wet Metal Removal Environment (withdrawal of ANSI/ASTM E1972-2004 (R2011)): 3/28/2017
- ANSI/ASTM E1985-1998, Guide for User Authentication and Authorization (withdrawal of ANSI/ASTM E1985-1998 (R2013)): 3/28/2017
- ANSI/ASTM E1986-2009, Guide for Information Access Privileges to Health Information (withdrawal of ANSI/ASTM E1986-2009 (R2013)): 3/28/2017
- ANSI/ASTM E2145-2007, Practice for Information Modeling (withdrawal of ANSI/ASTM E2145-2007 (R2013)): 3/28/2017
- ANSI/ASTM E2147-2009, Specification for Audit and Disclosure Logs for Use in Health Information Systems (withdrawal of ANSI/ASTM E2147-2009 (R2013)): 3/28/2017
- ANSI/ASTM E2171-2002, Practice for Rating-Scale Measures Relevant to the Electronic Health Record (withdrawal of ANSI/ASTM E2171-2002 (R2013)): 3/28/2017
- ANSI/ASTM E2595-2007, Guide for Privilege Management Infrastructure (withdrawal of ANSI/ASTM E2595-2007 (R2013)): 3/28/2017

ATIS (Alliance for Telecommunications Industry Solutions)

Stabilized Maintenance

ANSI/ATIS 0700004-2007 (S2017), High Capacity - Spatial Division Multiple Access (HC-SDMA) Radio Interface Standard (stabilized maintenance of ANSI/ATIS 0700004-2007): 4/4/2017

AWWA (American Water Works Association)

Revision

ANSI/AWWA C530-2017, Pilot-Operated Control Valves (revision of ANSI/AWWA C530-2012): 4/6/2017

IEEE (Institute of Electrical and Electronics Engineers)

New Standard

- ANSI/IEEE 400.4-2015, Guide for Field Testing of Shielded Power Cable Systems Rated 5 kV and Above with Damped Alternating Current (DAC) Voltage (new standard): 4/7/2017
- ANSI/IEEE 29119-4-2015, ISO/IEC/IEEE International Standard for Software and systems engineering - Software testing - Part 4: Test techniques (new standard): 4/10/2017
- ANSI/IEEE C57.130-2015, Guide for the Use of Dissolved Gas Analysis Applied to Factory Temperature Rise Tests for the Evaluation of Mineral Oil-Immersed Transformers and Reactors (new standard): 4/7/2017

ANSI/IEEE C57.157-2015, Guide for Conducting Functional Life Tests on Switch Contacts Used in Insulating Liquid-Immersed Transformers (new standard): 4/7/2017

Revision

- ANSI/IEEE 1106-2015, Recommended Practice for Installation, Maintenance, Testing, and Replacement of Vented Nickel-Cadmium Batteries for Stationary Applications (revision of ANSI/IEEE 1106 -2005 (R2011)): 4/6/2017
- ANSI/IEEE C57.637-2015, Guide for the Reclamation of Mineral Insulating Oil and Criteria for Its Use (revision and redesignation of ANSI/IEEE 637-1985 (R2007)): 4/10/2017

NCPDP (National Council for Prescription Drug Programs)

Revision

- ANSI/NCPDP Audit Transaction v32-2017, NCPDP Audit Transaction Standard v32 (revision and redesignation of ANSI/NCPDP Audit Transaction v31-2016): 4/4/2017
- ANSI/NCPDP PA Transfer v22-2017, NCPDP Prior Authorization Transfer Standard v22 (revision and redesignation of ANSI/NCPDP PA Transfer v21-2016): 4/4/2017
- ANSI/NCPDP Post Adj v46-2017, NCPDP Post Adjudication Standard v46 (revision and redesignation of ANSI/NCPDP Post Adj v45 -2016): 4/4/2017
- ANSI/NCPDP TC vEB-2017, NCPDP Telecommunication Standard vEB (revision and redesignation of ANSI/NCPDP TC vE9-2016): 4/4/2017
- ANSI/NCPDP Uniform Healthcare Payer Data Standard v23-2017, NCPDP Uniform Healthcare Payer Data Standard v23 (revision and redesignation of ANSI/NCPDP Uniform Healthcare Payer Data Standard v22-2014): 4/4/2017

TAPPI (Technical Association of the Pulp and Paper Industry)

New Standard

- ANSI/TAPPI T 411 om-2015, Thickness (caliper) of paper, paperboard, and combined board (new standard): 4/6/2017
- ANSI/TAPPI T 456 om-2015, Tensile breaking strength of watersaturated paper and paperboard (wet tensile strength) (new standard): 4/6/2017

TIA (Telecommunications Industry Association)

New Standard

ANSI/TIA 4957.500-2017, Smart Utility Network - Security (new standard): 4/6/2017

Revision

ANSI/TIA 4957.000-A-2017, Overview and Architecture for a Field Area Network (revision and redesignation of ANSI/TIA 4957.000 -2010): 4/6/2017

UL (Underwriters Laboratories, Inc.)

New National Adoption

ANSI/UL 60950-22-2017, Standard for Safety for Information Technology Equipment - Safety - Part 22: Equipment to be Installed Outdoors (national adoption of IEC 60950-22 with modifications and revision of ANSI/UL 60950-22-2011): 3/31/2017

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. To view information about additional standards for which a PINS has been submitted and to search approved ANS, please visit www.NSSN.org, which is a database of standards information. Note that this database is not exhaustive.

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.

ASABE (American Society of Agricultural and Biological Engineers)

Office:	2950 Niles Road
	St Joseph, MI 49085
Contact:	Jean Walsh
Fax:	(269) 429-3852

E-mail: walsh@asabe.org

BSR/ASABE AD17225-4-201x MONYEAR, Solid biofuels - Fuel specifications and classes - Part 4: Graded wood chips (national adoption with modifications of ISO 17225-4:2014)

Stakeholders: Wood chip heating fuel suppliers, manufacturers of wood chip heating fuel boilers and fuel storage/conveying equipment, wood chip heating fuel processing equipment, consumers of wood chip heating fuel.

Project Need: The U.S. Department of Agriculture has provided funding to develop a national wood chip heating fuel technical quality standard. Project has elected to adopt ISO 17225-4:2014 with deviations rather than develop a unique U.S. national standard.

This part of ISO 17225 determines the fuel quality classes and specifications of graded wood chips. This part of ISO 17225 covers only wood chips produced from the following raw materials:

- Forest, plantation and other virgin wood;
- By-products and residues from wood processing industry; and
- Chemically untreated used wood.

ASC X9 (Accredited Standards Committee X9, Incorporated)

Office:	275 West Street
	Suite 107
	Annapolis, MD 21401
Contact:	Ambria Frazier

E-mail: Ambria.frazier@x9.org

BSR X9.80-201x, Prime Number Generation, Primality Testing, and Primality Certificates (revision of ANSI X9.80-2005 (R2013))

Stakeholders: Financial institutions, product manufacturers, application manufacturers, service (cloud) providers, security professionals. Project Need: This standard defines methods for generating large prime numbers as needed by public key cryptographic algorithms. It also provides testing methods for testing candidate primes presented by a third party.

In the current state of the art in public key cryptography, all methods require, in one way or another, the use of prime numbers as parameters to the various algorithms. This document presents a set of accepted techniques for generating primes. This standard defines methods for generating large prime numbers as needed by public key cryptographic algorithms. It also provides testing methods for testing candidate primes presented by a third party.

ASME (American Society of Mechanical Engineers)

Office:	Two Park Avenue New York, NY 100	16
Contact:	Mayra Santiago	
Fax:	(212) 591-8501	

E-mail: ansibox@asme.org

BSR/ASME Y14.48-201x , Universal Direction and Load Indicators (new standard)

Stakeholders: Designers, manufacturers, aerospace, automotive, medical devices.

Project Need: To create a standard standardizing methods to clearly and unambiguously specify directional requirements and loads and loading requirements for products, which will ensure that the requirements are understood by people reading the dataset and software parsing the dataset directly.

Standardization of methods to unambiguously define and specify directions, directional requirements, loads, and loading requirements in product definition data sets.

ASSE (Safety) (American Society of Safety Engineers)

Office:	520 N. Northwest Highway Park Ridge, IL 60068
Contact:	Ovidiu Munteanu
Fax:	(847) 699-2929

E-mail: OMunteanu@ASSE.org

BSR/ASSE Z9.3-201x, Spray Finishing Operations: Safety Code for Design, Construction and Ventilation (revision and redesignation of ANSI/AIHA Z9.3-2007)

Stakeholders: Occupational safety and health professionals or those stakeholders working, managing, or addressing laboratory ventilation systems.

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

This standard is intended to help manufacturers and users protect the health of personnel from injurious effects of contact with gases, vapors, mists, dusts, powders, or solvents used in, created, released, or disseminated during or by spray finishing operations.

Office:	100 Barr Harbor Drive		
	West Conshohocken, PA	19428-2959	
Contact:	Corice Leonard		

Fax: (610) 834-3683

E-mail: accreditation@astm.org

BSR/ASTM WK58446-201x, New Guide for Cybersecurity and Cyberattack Mitigation (new standard)

Stakeholders: Computer Applications industry.

Project Need: This guide addresses the company or government organizational need to mitigate the likelihood of cyberattacks and reduce the extent of potential cyberattacks, which can leave sensitive personal data, corporate information, and critical infrastructure vulnerable to attackers.

https://www.astm.org/DATABASE.CART/WORKITEMS/WK58446.htm

ATIS (Alliance for Telecommunications Industry Solutions)

Office: 1200 G Street NW Suite 500 Washington, DC 20005

Contact: Alexandra Blasgen

E-mail: ablasgen@atis.org

BSR/ATIS 0100523-201x, ATIS Telecom Glossary 2018 (revision of ANSI/ATIS 0100523-2011)

Stakeholders: Communications industry.

Project Need: The ATIS Telecom Glossary is in need of updates to ensure current definitions.

The purpose of this standard is to aid interdisciplinary technical communications, and to disseminate the advances in communications technologies benefiting users, vendors, researchers, and developers. Additionally, this standard provides an authoritative source of definitions for standards developers, teachers, technical writers, and all who are active in the telecommunications field.

BSR/ATIS 1000678.v4-201x, Lawfully Authorized Electronic Surveillance (LAES) for Voice over Internet Protocol in Wireline Telecommunications Networks (revision and redesignation of ANSI/ATIS 1000678.v3.2015)

Stakeholders: Communications industry.

Project Need: There is a problem with the obtaining of location information at the end of a call in certain scenarios, and this problem needs to be corrected.

This Standard defines the interfaces between a Telecommunication Service Provider (TSP) and a Law Enforcement Agency (LEA) to assist the LEA in conducting lawfully authorized electronic surveillance for Voice over Internet Protocol (VoIP) in Wireline Telecommunications Networks. This document provides the mechanisms to perform lawfully authorized electronic surveillance of VoIP subject to the appropriate legal and regulatory environment. It is not the intent of this document to imply or impact any pending Communications Assistance for Law Enforcement Act (CALEA) regulatory decisions related to VoIP.

CTA (Consumer Technology Association)

Office:	1919 South Eads Street Arlington, VA 22202
Contact:	Veronica Lancaster
Fax:	(703) 907-4197
E-mail:	vlancaster@cta.tech

* BSR/CTA 2069-201x, Definitions and Characteristics of Augmented and Virtual Reality Technologies (new standard)

Stakeholders: Consumers, manufacturers, and retailers.

Project Need: To define terms related to Augmented and Virtual Reality Technologies.

This document will define terms related to Augmented and Virtual Reality Technologies. Where appropriate, the document will provide both consumer messaging and industry definition for the terms.

* BSR/CTA 2070-201x, Best Practices for Creating Content for Augmented Reality Technologies (new standard)

Stakeholders: Consumers, manufacturers, and retailers.

Project Need: To define best practices for creating content for augmented reality technologies.

This document will outline best practices for creating content for augmented reality technologies. The best practices will include but will not be limited to optimum experience length, frame/refresh rate, and user input.

* BSR/CTA 2071-201x, Best Practices for Creating Content for Virtual Reality Technologies (new standard)

Stakeholders: Consumers, manufacturers, and retailers.

Project Need: To define best practices for creating content for virtual reality technologies.

This document will outline best practices for creating content for virtual reality technologies. The best practices will include but will not be limited to optimum experience length, frame/refresh rate, and user input.

EOS/ESD (ESD Association, Inc.)

BSR/ESD SP3.5-201x, ESD Association Standard Practice for the Protection of Electrostatic Discharge Susceptible Items - Test Methods for Air Assist Bar Ionizers, Soft X-ray (Photon) Ionizers, and Room Ionization Alternatives (new standard)

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

Project Need: This document describes test methods that define ionization qualification and periodic verification tests for air assist bar ionizers, soft x-ray (photon) ionizers, and room ionization alternatives which are not delineated in ANSI/ESD STM3.1 or ANSI/ESD SP3.3.

This document provides measurement techniques, under specified conditions, to determine ion balance and charge neutralization time for ionizers for qualification and periodic verification tests in production locations. This document does not include measurements of electromagnetic interference (EMI) or uses of ionizers in connection with ordnance, flammables, explosive items, or electrically initiated explosive devices.

BSR/ESD SP19.1-201x, ESD Association Work in Progress for the Development of an Electrostatic Discharge Control Program for High Reliability Electrical and Electronic Parts, Assemblies and Equipment (Excluding Electrically Initiated Explosive Devices) (new standard)

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

Project Need: The purpose of this document is to provide administrative and technical considerations for high-reliability applications and/or for devices with ESD withstand voltages that are below the limits listed in the scope of ANSI/ESD S20.20 that, when combined with the requirements in ANSI/ESD S20.20, can be used for defining, establishing, implementing, and maintaining an enhanced ESD control program.

This document when used in conjunction with ANSI/ESD S20.20 requirements applies to activities that support the design, manufacture, assemble, process, install, package, label, store, service, test, inspect, transport, or otherwise handle electrical or electronic parts, assemblies, and equipment susceptible to damage by electrostatic discharge in high-reliability applications and/or devices having withstand voltages lower than those specified in ANSI/ESD S20.20.

MSS (Manufacturers Standardization Society)

Office: 127 Park Street, NE Vienna, VA 22180-4602

Contact: Robert O'Neill Fax: (703) 281-6671 E-mail: boneill@mss-hq.org

BSR/MSS SP-105-201x, Instrument Valves for Code Applications (new standard)

Stakeholders: Power, nuclear, oil and gas, chemical/petrochemical, and refining.

Project Need: This MSS standard warrants elevation to national status as it has been widely referenced and accepted as a code standard in multiple valve and piping industries since 1990 and is referenced in ASME B31.1, B31.3, and B31.12 as well as Code Cases N-756 and N -757-1 in BPVC Section III.

Applies to small valves and manifold valves developed for and predominately used in instrument, control, and sampling piping systems; covering steel and alloy valves NPS 2 and smaller, and pressure ratings of 15000 psi and lower at 100°F. Instrument valve designs include, but are not limited to, needle, packless, ball, plug, check, and manifold valves. Instrument valves are generally of proprietary design and this Standard is not intended to define or limit designs, construction, performance, envelope dimensions, or valve types. The application of valve type, size, rating, materials of construction, and suitability for the service are outside the Scope.

NEMA (ASC ESS) (National Electrical Manufacturers Association)

Office:	1300 N 17th St
	Rosslyn, VA 22209
Contact:	Brian Marchionini
Fax:	(703) 841-3379
E-mail:	Brian.Marchionini@nema.org

* BSR/ESS 1-201x, Protocol for Uniformly Measuring and Expressing the Performance of Energy Storage Systems (new standard)

Stakeholders: Energy, electrical.

Project Need: Measuring and expressing the performance characteristics for energy storage systems.

Enables a more informed manner of considering the performance of energy storage systems, and provides a platform for more comparable consideration of system options.

SPRI (Single Ply Roofing Institute)

Office:	465 Waverley Oaks Road
	Suite 421
	Waltham, MA 02452
Contact:	Linda King
Fax:	(781) 647-7222

E-mail: info@spri.org

BSR/SPRI/RCI NT-1-2012 (R201x), Detection and Location of Latent Moisture in Building Roofing Systems by Nuclear Radioisotopic Thermalization (reaffirmation of ANSI/SPRI/RCI NT-1-2012)

Stakeholders: Building owners, roof system manufacturers, designers, contractors, roof consultants, testing firms, and manufacturers that use these devices for the purpose of identifying moisture in roofing assemblies.

Project Need: 5 year review.

Radioisotopic thermalization can effectively be used in the roofing industry to: locate and quantify latent moisture contained in the roofing material and/or roof deck materials; locate hidden sources of moisture entry by tracing subsurface paths of moisture migration, and to provide a basis for measuring roofing material and/or roof deck material degradation over a period of years when used as part of a preventive maintenance program. This standard shall apply to all roofing moisture surveys conducted using nuclear moisture gauges. It shall address:

- the effect of roof construction, material differences and roof
- conditions on the performance of the nuclear gauge;
- limitations in the use of radioisotopic inspection;

- the governmental control of the equipment used to conduct nuclear moisture surveys; and

- operating procedures, operator qualifications, verification, and reporting procedures.

VITA (VMEbus International Trade Association (VITA))

Office: 929 W. Portobello Avenue Mesa, AZ 85210

Contact: Jing Kwok

E-mail: jing.kwok@vita.com

BSR/VITA 68.1-201x, VPX Compliance Channel - Fixed Signal Integrity Budget Standard (new standard)

Stakeholders: Manufacturers and users of embedded VPX modules. Project Need: Specify electrical requirements for serial fabrics on VPX modules.

This standard defines a VPX compliance channel fixed signal Integrity budget including module performance criteria and common backplane performance criteria required to support multiple fabric types across a range of defined baud rates.

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)
- AAMVA (American Association of Motor Vehicle Administrators)
- 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 (The Green Building Initiative)
- GEIA (Greenguard Environmental Institute)
- HL7 (Health Level Seven)
- IESNA (The Illuminating Engineering Society of North America)
- MHI (ASC MH10) (Material Handling Industry)
- NAHBRC (NAHB Research Center, Inc.)
- NBBPVI (National Board of Boiler and Pressure Vessel Inspectors)
- NCPDP (National Council for Prescription Drug Programs)
- NISO (National Information Standards Organization)
- NSF (NSF International)
- PRCA (Professional Ropes Course Association)
- RESNET (Residential Energy Services Network)
- 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 <u>www.ansi.org/asd</u>, select "Standards Activities," click on "Public Review and Comment" and "American National Standards Maintained Under Continuous Maintenance." This information is also available directly at <u>www.ansi.org/publicreview</u>.

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.

ABYC

American Boat and Yacht Council

613 Third Street, Suite 10 Annapolis, MD 21403 Phone: (410) 990-4460 Web: www.abycinc.org

ACMA

American Composites Manufacturers Association

3033 Wilson Boulevard, Suite 420 Arlington, VA 22201 Phone: (740) 928-3286 Fax: (703) 525-0743 Web: www.icpa-hq.org

ANS

American Nuclear Society

555 North Kensington Avenue La Grange Park, IL 60526 Phone: (708) 579-8268 Fax: (708) 579-8248 Web: www.ans.org

ASA (ASC S2)

Acoustical Society of America

1305 Walt Whitman Road Suite 300 Melville, NY 11747 Phone: (631) 390-0215 Fax: (631) 923-2875 Web: www.acousticalsociety.org

ASABE

American Society of Agricultural and Biological Engineers

2950 Niles Road St Joseph, MI 49085 Phone: (269) 932-7027 Fax: (269) 429-3852 Web: www.asabe.org

ASC X9

Accredited Standards Committee X9, Incorporated

275 West Street Suite 107 Annapolis, MD 21401 Phone: (410) 267-7707 Web: www.x9.org

ASCE

American Society of Civil Engineers 1801 Alexander Bell Dr Reston, VA 20191 Phone: 703-295-6176 Web: www.asce.org

ASHRAE

American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. 1791 Tullie Circle NE

Atlanta, GA 30329 Phone: (678) 539-1209 Fax: (678) 539-2209 Web: www.ashrae.org

ASIS ASIS International

1625 Prince Street Alexandria, VA 22314-2818 Phone: (703) 518-1439 Fax: (703) 518-1517 Web: www.asisonline.org

ASME

American Society of Mechanical Engineers Two Park Avenue New York, NY 10016 Phone: (212) 591-8521 Fax: (212) 591-8501 Web: www.asme.org

ASSE (Safety)

American Society of Safety Engineers 520 N. Northwest Highway Park Ridge, IL 60068 Phone: (847) 232-2012 Fax: (847) 699-2929 Web: www.asse.org

ASTM

ASTM International 100 Barr Harbor Drive West Conshohocken, PA 19428-2959 Phone: (610) 832-9744 Fax: (610) 834-3683 Web: www.astm.org

ATIS

Alliance for Telecommunications Industry Solutions 1200 G Street NW Suite 500 Washington, DC 20005 Phone: (202) 434-8840 Web: www.atis.org AWS

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American Welding Society 8669 NW 36 Street, #130 Miami, FL 33166 Phone: (305) 443-9353 Web: www.aws.org

AWWA

American Water Works Association 6666 W. Quincy Ave. Denver, CO 80235

Phone: (303) 347-6178 Fax: (303) 795-7603 Web: www.awwa.org

СТА

Consumer Technology Association 1919 South Eads Street Arlington, VA 22202 Phone: (703) 907-7697 Fax: (703) 907-4197 Web: www.cta.tech

EIMA

EIFS Industry Members Association 513 West Broad Street Suite 210 Falls Church, VA 22046-3257 Phone: (703) 538-1729 Web: www.eima.com

EOS/ESD

ESD Association 7900 Turin Rd., Bldg. 3 Rome, NY 13440 Phone: (315) 339-6937 Fax: (315) 339-6793 Web: www.esda.org

IEEE

Institute of Electrical and Electronics Engineers (IEEE)

445 Hoes Lane Piscataway, NJ 08854 Phone: (732) 562-3854 Fax: (732) 796-6966 Web: www.ieee.org

MSS

Manufacturers Standardization Society

127 Park Street, NE Vienna, VA 22180-4602 Phone: (703) 281-6613 Fax: (703) 281-6671 Web: www.mss-hq.org

NCPDP

National Council for Prescription Drug Programs 9240 East Raintree Drive Scottsdale, AZ 85260 Phone: (480) 296-4584 Fax: (480) 767-1042

NEMA (ASC ESS)

Web: www.ncpdp.org

National Electrical Manufacturers Association

1300 N 17th St Rosslyn, VA 22209 Phone: (703) 841-3279 Fax: (703) 841-3379 Web: www.nema.org

Fax: (410) 685-5278

Web: www.niso.org

NISO

National Information Standards Organization 3600 Clipper Mill Road Suite 302 Baltimore, MD 21211 Phone: (301) 654-2512

RESNET

Residential Energy Services Network, Inc. 4867 Patina Court Oceanside, CA 92057 Phone: (760) 408-5860 Fax: (760) 806-9449 Web: www.resnet.us.com

SCTE

Society of Cable Telecommunications Engineers 140 Philips Rd Exton, PA 19341 Phone: (800) 542-5040 Fax: (800) 542-5040 Web: www.scte.org

SPRI

Single Ply Roofing Institute 465 Waverley Oaks Road Suite 421 Waltham, MA 02452 Phone: (781) 647-7026 Fax: (781) 647-7222 Web: www.spri.org

TAPPI

Technical Association of the Pulp and Paper Industry

15 Technology Parkway South Peachtree Corners, GA 30092 Phone: (770) 209-7276 Fax: (770) 446-6947 Web: www.tappi.org

TIA

Telecommunications Industry Association

1320 North Courthouse Road Suite 200 Arlington, VA 22201 Phone: (703) 907-7706 Fax: (703) 907-7727 Web: www.tiaonline.org

UL

Underwriters Laboratories, Inc.

12 Laboratory Dr. Research Triangle Park, NC 27709 Phone: (919) 549-0954 Web: www.ul.com

VITA

VMEbus International Trade Association (VITA)

929 W. Portobello Avenue Mesa, AZ 85210 Phone: (602) 281-4497 Web: www.vita.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); 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.

ISO Standards

AIR QUALITY (TC 146)

- ISO/DIS 20435-1, Workplace Atmospheres Part 1: Gas detectors -Performance requirements of detectors for toxic gases - 6/30/2017, \$119.00
- ISO/DIS 16000-34, Indoor air Part 34: Strategies for the measurement of airborne particles 4/29/2017, \$119.00

AIRCRAFT AND SPACE VEHICLES (TC 20)

ISO/DIS 8153-2, Aerospace fluid systems and components -Vocabulary - Part 2: Fittings and couplings - 6/29/2017, \$58.00

ANAESTHETIC AND RESPIRATORY EQUIPMENT (TC 121)

- ISO/DIS 80601-2-79, Medical electrical equipment Part 2-79: Particular requirements for basic safety and essential performance of ventilatory support equipment for ventilatory impairment -6/28/2017, \$155.00
- ISO/DIS 80601-2-80, Medical electrical equipment Part 2-80: Particular requirements for basic safety and essential performance of ventilatory support equipment for ventilatory insufficiency -6/28/2017, \$155.00

DIMENSIONAL AND GEOMETRICAL PRODUCT SPECIFICATIONS AND VERIFICATION (TC 213)

ISO 14405-2/DAmd1, Geometrical product specifications (GPS) -Dimensional tolerancing - Part 2: Dimensions other than linear sizes - Amendment 1 - 6/30/2017, \$46.00

EARTH-MOVING MACHINERY (TC 127)

ISO 7132/DAmd1, Earth-moving machinery - Dumpers - Terminology and commercial specifications - Amendment 1 - 6/30/2017, \$33.00

FASTENERS (TC 2)

ISO/DIS 4042, Fasteners - Electroplated coating systems - 6/24/2017, \$125.00

FIRE SAFETY (TC 92)

ISO/DIS 23932-1, Fire safety engineering - General principles - Part 1: General - 6/30/2017, \$93.00

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.

FLUID POWER SYSTEMS (TC 131)

- ISO/DIS 8139, Pneumatic fluid power Cylinders, 1 000 kPa (10 bar) series Mounting dimensions of rod-end spherical eyes 6/30/2017, \$33.00
- ISO/DIS 8140, Pneumatic fluid power Cylinders, 1 000 kPa (10 bar) series - Mounting dimensions of rod-end clevises - 6/30/2017, \$33.00

HYDROGEN ENERGY TECHNOLOGIES (TC 197)

ISO/DIS 16111, Transportable gas storage devices - Hydrogen absorbed in reversible metal hydride - 6/29/2017, \$107.00

IMPLANTS FOR SURGERY (TC 150)

- ISO/DIS 23500-1, Guidance for the preparation and quality management of fluids for haemodialysis and related therapies - Part 1: General requirements - 4/30/2017, \$155.00
- ISO/DIS 23500-2, Guidance for the preparation and quality management of fluids for haemodialysis and related therapies - Part 2: Water treatment equipment for haemodialysis applications and related therapies - 4/30/2017, \$107.00
- ISO/DIS 23500-3, Guidance for the preparation and quality management of fluids for haemodialysis and related therapies - Part 3: Water for haemodialysis and related therapies - 4/30/2017, \$77.00
- ISO/DIS 23500-4, Guidance for the preparation and quality management of fluids for haemodialysis and related therapies - Part 4: Concentrates for haemodialysis and related therapies -4/30/2017, \$88.00
- ISO/DIS 23500-5, Guidance for the preparation and quality management of fluids for haemodialysis and related therapies - Part 5: Quality of dialysis fluid for haemodialysis and related therapies -4/30/2017, \$71.00

OPTICS AND OPTICAL INSTRUMENTS (TC 172)

ISO/DIS 11990, Lasers and laser-related equipment - Determination of laser resistance of tracheal tube shaft and tracheal cuffs - 4/29/2017, \$67.00

PACKAGING (TC 122)

- ISO/DIS 14375, Child-resistant non-reclosable packaging for pharmaceutical products - Requirements and testing - 4/30/2017, \$62.00
- ISO/DIS 28862, Packaging Child-resistant packaging Requirements and testing procedures for non-reclosable packages for nonpharmaceutical products - 4/30/2017, \$62.00

PLASTICS (TC 61)

- ISO/DIS 2555, Plastics Resins in the liquid state or as emulsions or dispersions Determination of apparent viscosity using a single cylinder type rotational viscometer method 4/27/2017, \$71.00
- ISO/DIS 15033, Plastics Determination of caprolactam and its cyclic and linear oligomers by HPLC - 4/30/2017, \$67.00
- ISO/DIS 11357-3, Plastics Differential scanning calorimetry (DSC) -Part 3: Determination of temperature and enthalpy of melting and crystallization - 4/29/2017, \$40.00
- ISO/DIS 11357-6, Plastics Differential scanning calorimetry (DSC) -Part 6: Determination of oxidation induction time (isothermal OIT) and oxidation induction temperature (dynamic OIT) - 4/29/2017, \$58.00
- ISO/DIS 14855-2, Determination of the ultimate aerobic biodegradability of plastic materials under controlled composting conditions - Method by analysis of evolved carbon dioxide - Part 2: Gravimetric measurement of carbon dioxide evolved in a laboratoryscale test - 4/30/2017, \$67.00

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

ISO/DIS 11297-4, Plastics piping systems for renovation of underground drainage and sewerage networks under pressure -Part 4: Lining with cured-in-place pipes - 4/26/2017, \$62.00

PULLEYS AND BELTS (INCLUDING VEEBELTS) (TC 41)

ISO/DIS 20238, Conveyor belts - Drum friction testing - 4/27/2017, \$58.00

QUALITY MANAGEMENT AND QUALITY ASSURANCE (TC 176)

- ISO/DIS 10001, Quality management Customer satisfaction -Guidelines for codes of conduct for organizations - 6/25/2017, \$82.00
- ISO/DIS 10002, Quality management Customer satisfaction -Guidelines for complaints handling in organizations - 6/25/2017, \$102.00
- ISO/DIS 10003, Quality management Customer satisfaction -Guidelines for dispute resolution external to organizations -6/25/2017, \$107.00
- ISO/DIS 10004, Quality management Customer satisfaction -Guidelines for monitoring and measuring - 6/25/2017, \$107.00

ROAD VEHICLES (TC 22)

- ISO/DIS 19825, Road vehicles Liquefied petroleum gas (LPG) refuelling connector 6/29/2017, \$82.00
- ISO/DIS 20766-1, Road vehicles Liquefied petroleum gas (LPG) fuel systems components Part 1: General requirements and definitions 6/28/2017, \$46.00

- ISO/DIS 20766-2, Road vehicles Liquefied petroleum gas (LPG) fuel systems components - Part 2: Performance and general test methods - 6/28/2017, \$58.00
- ISO/DIS 20766-3, Road vehicles Liquefied petroleum gas (LPG) fuel systems components Part 3: 80% stop valve 6/28/2017, \$40.00
- ISO/DIS 20766-4, Road vehicles Liquefied petroleum gas (LPG) fuel system components - Part 4: Level indicator - 6/28/2017, \$40.00

RUBBER AND RUBBER PRODUCTS (TC 45)

- ISO/DIS 3858, Rubber compounding ingredients Carbon black -Determination of light transmittance of toluene extract - 12/9/2025, \$46.00
- ISO/DIS 7781, Styrene-butadiene rubber, raw Determination of soap and organic-acid content - 6/30/2017, \$58.00
- ISO/DIS 4666-4, Rubber, vulcanized Determination of temperature rise and resistance to fatigue in flexometer testing Part 4: Constant-stress flexometer 4/28/2017, \$82.00

SHIPS AND MARINE TECHNOLOGY (TC 8)

ISO/DIS 20313, Ships and marine technology - Cathodic protection of ships - 4/27/2017, \$125.00

TERMINOLOGY (PRINCIPLES AND COORDINATION) (TC 37)

ISO/DIS 24623-1, Language resource management - Corpus query lingua franca (CQLF) - Part 1: Metamodel - 6/25/2017, \$62.00

THERMAL INSULATION (TC 163)

ISO/DIS 9869-2, Thermal insulation - Building elements - In-situ measurement of thermal resistance and thermal transmittance - Part 2: Infrared method for frame structure dwelling - 4/29/2017, \$98.00

TRACTORS AND MACHINERY FOR AGRICULTURE AND FORESTRY (TC 23)

- ISO/DIS 5687, Equipment for harvesting Combine harvesters -Determination and designation of grain tank capacity and unloading device performance - 4/30/2017, \$33.00
- ISO/DIS 7714, Agricultural irrigation equipment Volumetric valves -General requirements and test methods - 6/30/2017, \$67.00

TRADITIONAL CHINESE MEDICINE (TC 249)

ISO/DIS 21371, Traditional Chinese medicine - Labelling requirements of products intended for oral or topical use in and as traditional Chinese medicine (TCM) - 4/30/2017, \$40.00

TRANSPORT INFORMATION AND CONTROL SYSTEMS (TC 204)

- ISO/DIS 18750, Intelligent transport systems Co-operative ITS Local dynamic map 4/27/2017, \$155.00
- ISO/DIS 13185-3, Intelligent transport systems Vehicle interface for provisioning and support of ITS Services - Part 3: Unified vehicle interface protocol (UVIP) server and client API specification -4/26/2017, \$112.00
- ISO/DIS 17572-2, Intelligent transport systems (ITS) Location referencing for geographic databases Part 2: Pre-coded location references (pre-coded profile) 4/28/2017, \$134.00

WATER QUALITY (TC 147)

ISO/DIS 19040-1, Water quality - Determination of the estrogenic potential of water and waste water - Part 1: Yeast estrogen screen (Saccharomyces cerevisiae) - 6/30/2017, \$125.00

WELDING AND ALLIED PROCESSES (TC 44)

ISO/DIS 10042, Welding - Arc-welded joints in aluminium and its alloys - Quality levels for imperfections - 4/30/2017, \$82.00

WOOD-BASED PANELS (TC 89)

ISO/DIS 2426-4, Plywood - Classification by surface appearance - Part 4: Palm-plywood - 6/28/2017, \$33.00

ISO/IEC JTC 1, Information Technology

ISO/IEC 23008-2/DAmd1, Information technology - High efficiency coding and media delivery in heterogeneous environments - Part 2: High efficiency video coding - Amendment 1: Range extensions -11/12/2015, \$53.00

- ISO/IEC DIS 18039, Information technology Mixed and augmented reality (MAR) reference model 4/28/2017, \$134.00
- ISO/IEC DIS 12034-1, Information technology Archive eXchange Format (AXF) - Part 1: Structure and semantics - 6/25/2017, \$155.00
- ISO/IEC/IEEE DIS 42020, Enterprise, systems and software -Architecture processes - 6/25/2017, \$175.00

IEC Standards

- 9/2243/CDV, IEC 62973-1 ED1: Railway applications Batteries for auxiliary power supply systems - Part 1: General requirements, 017/5/5/
- 11/253/CD, IEC 61897 ED2: Overhead lines Requirements and tests for Aeolian vibration dampers, 017/5/5/
- 11/254/CD, IEC 61854 ED2: Overhead lines Requirements and tests for spacers, 017/5/5/
- 48B/2559/CD, IEC 60512-23-3 ED2: Electromechanical components for electronic equipment - Basic testing procedures and measuring methods - Part 23-3: Test 23c: Shielding effectiveness of connectors and accessories, 017/5/5/
- 62B/1041/NP, PNW 62B-1041: Evaluation and routine testing in medical imaging departments - Part 3-6 Acceptance and constancy tests - Imaging performance of mammographic tomosynthesis mode of operation of mammographic x-ray equipment, 017/5/5/
- 62C/683A/CD, IEC TR 62926 ED1: Medical electrical system -Recommendations for safe integration and operation of adaptive external-beam radiotherapy system for intra-fractionally moving target volumes, 2017/3/31
- 69/495/CD, IEC 61851-23-1 ED1: Electric vehicle conductive charging system - Part 23-1: DC Charging with an automatic connection system, 017/5/5/
- 79/570/CDV, IEC 62676-5 ED1: Video surveillance systems for use in security applications Part 5: Data specifications and image quality performance for camera devices, 017/5/5/
- 82/1253/NP, PNW TS 82-1253: Photovoltaic systems Power conditioners - Part X: Energy evaluation method, 017/5/5/
- 82/1232/CDV, IEC 62892-1 ED1: Testing of PV modules to differentiate performance in multiple climates and applications - Part 1: Requirements for testing, 017/5/5/
- 91/1419/CDV, IEC 61760-4/AMD1 ED1: Surface mounting technology - Part 4: Classification, packaging, labelling and handling of moisture sensitive devices, 017/5/5/

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

ACOUSTICS (TC 43)

- ISO 3745/Amd1:2017, Acoustics Determination of sound power levels and sound energy levels of noise sources using sound pressure - Precision methods for anechoic rooms and hemianechoic rooms - Amendment 1, \$19.00
- ISO 11819-2:2017, Acoustics Measurement of the influence of road surfaces on traffic noise Part 2: The close-proximity method, \$209.00

AGRICULTURAL FOOD PRODUCTS (TC 34)

- ISO 3656/Amd1:2017, Animal and vegetable fats and oils -Determination of ultraviolet absorbance expressed as specific UV extinction - Amendment 1, \$19.00
- ISO 16654/Amd1:2017, Microbiology of food and animal feeding stuffs
 Horizontal method for the detection of Escherichia coli O157 -Amendment 1: Annex B: Result of interlaboratory studies, \$19.00
- ISO 10273:2017. Microbiology of the food chain Horizontal method for the detection of pathogenic Yersinia enterocolitica, \$185.00
- <u>ISO 22964:2017.</u> Microbiology of the food chain Horizontal method for the detection of Cronobacter spp., \$138.00

APPLICATIONS OF STATISTICAL METHODS (TC 69)

ISO 7870-8:2017, Control charts - Part 8: Charting techniques for short runs and small mixed batches, \$162.00

GEARS (TC 60)

ISO 14104:2017, Gears - Surface temper etch inspection after grinding, chemical method, \$103.00

PLAIN BEARINGS (TC 123)

<u>ISO 13778:2017</u>, Plain bearings - Quality assurance of thin-walled half bearings - Selective assembly of bearings to achieve a narrow clearance range, \$68.00

QUALITY MANAGEMENT AND QUALITY ASSURANCE (TC 176)

ISO 10007:2017, Quality management - Guidelines for configuration management, \$68.00

SMALL TOOLS (TC 29)

<u>ISO 4229:2017</u>, Assembly tools for screws and nuts - Single-head engineers wrenches for lower torque applications - Maximum outside dimensions of heads and test torques, \$45.00

TRANSPORT INFORMATION AND CONTROL SYSTEMS (TC 204)

ISO 24102-1/Amd1:2017, Intelligent transport systems -

Communications access for land mobiles (CALM) - ITS station management - Part 1: Local management - Amendment 1, \$19.00

- ISO 24102-3/Amd1:2017, Intelligent transport systems -Communications access for land mobiles (CALM) - ITS station management - Part 3: Service access points - Amendment 1, \$162.00
- <u>ISO 24102-5/Amd1:2017</u>, Intelligent transport systems -Communications access for land mobiles (CALM) - ITS station management - Part 5: Fast service advertisement protocol (FSAP) -Amendment 1, \$19.00
- ISO 29281-1/Amd1:2017. Intelligent transport systems -Communication access for land mobiles (CALM) - Non-IP networking - Part 1: Fast networking & transport layer protocol (FNTP) - Amendment 1, \$19.00

TYRES, RIMS AND VALVES (TC 31)

- <u>ISO 4251-1:2017</u>. Tyres (ply rating marked series) and rims for agricultural tractors and machines Part 1: Tyre designation and dimensions, and approved rim contours, \$138.00
- <u>ISO 4251-2:2017</u>, Tyres (ply rating marked series) and rims for agricultural tractors and machines Part 2: Tyre load ratings, \$103.00

ISO Technical Specifications

ACOUSTICS (TC 43)

- ISO/TS 11819-3:2017, Acoustics Measurement of the influence of road surfaces on traffic noise Part 3: Reference tyres, \$103.00
- ISO/TS 13471-1:2017, Acoustics Temperature influence on tyre/road noise measurement - Part 1: Correction for temperature when testing with the CPX method, \$103.00

ISO/IEC JTC 1, Information Technology

- <u>ISO/IEC 19514:2017</u>, Information technology Object management group systems modeling language (OMG SysML), \$232.00
- <u>ISO/IEC 24759:2017.</u> Information technology Security techniques -Test requirements for cryptographic modules, \$232.00
- ISO/IEC 18013-3:2017, Information technology Personal identification - ISO-compliant driving licence - Part 3: Access control, authentication and integrity validation, \$209.00

IEC Standards

AUDIO, VIDEO AND MULTIMEDIA SYSTEMS AND EQUIPMENT (TC 100)

IEC 62766-4-2 Ed. 1.0 en:2017, Consumer terminal function for access to IPTV and open internet multimedia services - Part 4-2: Examples of IPTV protocol sequences, \$352.00

ELECTRICAL INSTALLATIONS OF BUILDINGS (TC 64)

IEC 60364-7-708 Ed. 3.0 en:2017, Low-voltage electrical installations -Part 7-708: Requirements for special installations or locations -Caravan parks, camping parks and similar locations, \$82.00

IEC 60364-7-712 Ed. 2.0 b:2017, Low voltage electrical installations -Part 7-712: Requirements for special installations or locations -Solar photovoltaic (PV) power supply systems, \$352.00

ELECTROACOUSTICS (TC 29)

IEC 61252 Ed. 1.2 b:2017, Electroacoustics - Specifications for personal sound exposure meters, \$293.00

IEC 61260-2 Amd.1 Ed. 1.0 b:2017, Amendment 1 - Electroacoustics -Octave-band and fractional-octave band filters - Part 2: Pattern evaluation tests, \$12.00

IEC 61672-2 Ed. 2.1 b:2017, Electroacoustics - Sound level meters -Part 2: Pattern evaluation tests, \$322.00

IEC 61672-2 Amd.1 Ed. 2.0 b:2017, Amendment 1 - Electroacoustics -Sound level meters - Part 2: Pattern evaluation tests, \$12.00

EQUIPMENT FOR ELECTRICAL ENERGY MEASUREMENT AND LOAD CONTROL (TC 13)

IEC 62056-8-6 Ed. 1.0 b:2017, Electricity metering data exchange -The DLMS/COSEM suite - Part 8-6: High speed PLC ISO/IEC 12139-1 profile for neighbourhood networks, \$235.00

FUEL CELL TECHNOLOGIES (TC 105)

IEC 62282-4-102 Ed. 1.0 b:2017, Fuel cell technologies - Part 4-102: Fuel cell power systems for industrial electric trucks - Performance test methods, \$235.00

LAMPS AND RELATED EQUIPMENT (TC 34)

IEC 60570 Ed. 4.1 b:2017. Electrical supply track systems for luminaires, \$235.00

IEC 60570 Amd.1 Ed. 4.0 b:2017. Amendment 1 - Electrical supply track systems for luminaires, \$12.00

MARITIME NAVIGATION AND RADIOCOMMUNICATION EQUIPMENT AND SYSTEMS (TC 80)

IEC 62287-1 Ed. 3.0 en:2017, Maritime navigation and radiocommunication equipment and systems - Class B shipborne equiment of the automatic identification system (AIS) - Part 1: Carrier-sense time division multiple access (CSTDMA) techniques, \$375.00

S+ IEC 62287-1 Ed. 3.0 en:2017 (Redline version), Maritime

navigation and radiocommunication equipment and systems - Class B shipborne equiment of the automatic identification system (AIS) -Part 1: Carrier-sense time division multiple access (CSTDMA) techniques, \$488.00

PIEZOELECTRIC AND DIELECTRIC DEVICES FOR FREQUENCY CONTROL AND SELECTION (TC 49)

IEC 60444-8 Ed. 2.0 b:2016. Measurement of quartz crystal unit parameters - Part 8: Test fixture for surface mounted quartz crystal units, \$82.00

POWER SYSTEM CONTROL AND ASSOCIATED COMMUNICATIONS (TC 57)

IEC 62325-451-4 Ed. 2.0 en:2017, Framework for energy market communications - Part 451-4: Settlement and reconciliation business process, contextual and assembly models for European market, \$317.00

SAFETY OF HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES (TC 61)

IEC 62115 Ed. 2.0 b:2017, Electric toys - Safety, \$375.00

IEC 60335-2-36 Ed. 6.0 en:2017, Household and similar electrical appliances - Safety - Part 2-36: Particular requirements for commercial electric cooking ranges, ovens, hobs and hob elements, \$235.00

IEC 60335-2-37 Ed. 6.0 en:2017, Household and similar electrical appliances - Safety - Part 2-37: Particular requirements for commercial electric doughnut fryers and deep fat fryers, \$235.00

SEMICONDUCTOR DEVICES (TC 47)

IEC 60749-5 Ed. 2.0 en:2017, Semiconductor devices - Mechanical and climatic test methods - Part 5: Steady-state temperature humidity bias life test, \$47.00

IEC 62951-1 Ed. 1.0 en:2017, Semiconductor devices - Flexible and stretchable semiconductor devices - Part 1: Bending test method for conductive thin films on flexible substrates, \$82.00

SURFACE MOUNTING TECHNOLOGY (TC 91)

IEC 62090 Ed. 2.0 en:2017, Product package labels for electronic components using bar code and two-dimensional symbologies, \$235.00

IEC 61188-7 Ed. 2.0 en:2017, Printed boards and printed board assemblies - Design and use - Part 7: Electronic component zero orientation for CAD library construction, \$117.00

ULTRASONICS (TC 87)

IEC 60500 Ed. 2.0 b:2017. Underwater acoustics - Hydrophones -Properties of hydrophones in the frequency range 1 Hz to 500 kHz, \$164.00

IEC Technical Reports

TOOLS FOR LIVE WORKING (TC 78)

IEC/TR 61328 Ed. 3.0 en:2017. Live working - Guidelines for the installation of transmission and distribution line conductors and earth wires - Stringing equipment and accessory items, \$352.00

IEC Technical Specifications

MARINE ENERGY - WAVE, TIDAL AND OTHER WATER CURRENT CONVERTERS (TC 114)

<u>IEC/TS 62600-100 Ed. 1.0 en cor.1:2017</u>, Corrigendum 1 - Marine energy - Wave, tidal and other water current converters - Part 100: Electricity producing wave energy converters - Power performance assessment, \$0.00

SOLAR PHOTOVOLTAIC ENERGY SYSTEMS (TC 82)

IEC/TS 62916 Ed. 1.0 en:2017, Photovoltaic modules - Bypass diode electrostatic discharge susceptibility testing, \$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 <u>http://www.nist.gov/notifyus/</u>.

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-regulatoryprograms/usa-wto-tbt-inquiry-point

Contact the USA TBT Inquiry Point at:(301) 975-2918; Fax: (301) 926-1559; E-mail: <u>usatbtep@nist.gov</u> or <u>notifyus@nist.gov</u>.

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 ANS 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 and 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.

ANSI Accredited Standards Developers

Reaccreditation

American Iron and Steel Institute (AISI)

Comment Deadline: May 15, 2017

The American Iron and Steel Institute (AISI), an ANSI member and Accredited Standards Developer (ASD), has submitted revisions to its currently accredited operating procedures for documenting consensus on AISI-sponsored American National Standards, under which it was last reaccredited in 2014. As the current 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: Mr. Jay W. Larson, P.E., F. ASCE, Managing Director, Construction Technical, American Iron and Steel Institute, 3425 Drighton Court, Bethlehem, PA 18020-1335; phone: 610.691.6334; e-mail: jlarson@steel.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 ISA by May 15, 2017, with a copy to the ExSC Recording Secretary in ANSI's New York Office (jthompso@ANSI.org).

Meeting Notices

B11 Standards, Inc.

B11.26 Subcommittee – Functional Safety

The B11.26 Subcommittee on safety control systems (functional safety) for machines and sponsored by the Secretariat (B11 Standards, Inc.), will hold a standards development meeting on May 8-10, 2017 at Pilz Automation Safety in Canton, MI.

The B11 is an ANSI Accredited Standards Committee on machine safety, and the purpose of this meeting is to continue the revision work on B11.26, which itself is a revision of ANSI B11.TR6. This meeting is open to anyone with an interest in safety and the safe use of machines, particularly as it relates to functional safety, and who wishes to participate in standards development.

If you have an interest in participating in any of these meetings or would like more information, please contact David Felinski at (dfelinski@b11standards.org).

B11 Accredited Standards Committee

The ANSI B11 Accredited Standards Committee, sponsored by the Secretariat (B11 Standards, Inc.), will hold its semiannual meeting on July 20-21, 2017 at the Minster Training Facility in St. Marys, OH.

The B11 is an ANSI Accredited Standards Committee on machine safety, and the purpose of this meeting is to discuss ongoing issues and the business of the B11 ASC. This meeting is open to anyone with an interest in safety and the safe use of machines, however, any voting will be restricted to full members of this Committee.

If you have an interest in participating in this meeting as an observer or would like more information, please contact David Felinski at (dfelinski@b11standards.org).

B11.19 Subcommittee – Performance Requirements for Risk Reduction Measures: Safeguarding and other Means of Reducing Risk

The B11.19 Subcommittee, sponsored by the Secretariat (B11 Standards, Inc.), will hold its sixth meeting on July 18-19, 2017 at the Minster Training Facility in St. Marys, OH. The B11 Committee is an ANSI-Accredited Standards Committee on machine safety, and the B11.19 Subcommittee deals with the overall safeguarding and related equipment requirements common to machines.

The purpose of this meeting is to continue revising the 2010 version of the ANSI B11.19 Type-B standard. This meeting is open to anyone with an interest in machine safety, particularly as it relates to general safeguarding equipment and requirements for machines, and who wishes to participate in standards development.

If you have an interest in participating in this meeting or would like more information, please contact David Felinski at (dfelinski@b11standards.org).

Information Concerning

Call for U.S. TAG Participants

ISO/TC 135 – Non-destructive testing and 8 subcommittees

Please be advised that the American Society for Nondestructive Testing (ASNT), the ANSIaccredited administrator of the U.S. TAG to ISO/TC 135, is seeking participants for the U.S. TAG. All U.S. stakeholder organizations in relevant fields and industries are strongly encouraged to get involved.

ISO/TC 135 – Non-destructive testing operates under the following scope:

Standardization covering non-destructive testing as applied generally to constructional materials, components and assemblies, by means of:

- glossary of terms;
- methods of test;
- performance specifications for testing equipment and ancillary apparatus.

Excluded:

- quality levels;
- specifications for electrical equipment and apparatus, which fall within the range of IEC Committees.

ISO/TC 135 has the following active subcommittees:

- SC 2 Surface methods
- SC 3 Ultrasonic testing
- SC 4 Eddy current testing
- SC 5 Radiographic testing
- SC 6 Leak testing
- SC 7 Personnel qualification
- SC 8 Thermographic testing
- SC 9 Acoustic emission testing

Organizations requiring additional information or interesting in participating on the U.S. TAG should contact U.S. TAG Administrator James Bennett at <u>ibennett@asnt.org</u> or ANSI's ISO Team at <u>isot@ansi.org</u>.

Information Concerning

ANSI Accredited Standards Developers

Seeking Participants in the ANSI/NEMA Energy Storage Systems Protocol Canvass Group

The National Electrical Manufacturers Association (NEMA) is working to convert the Protocol for Uniformly Measuring and Expressing the Performance of Energy Storage Systems (ESS) into an ANSI/NEMA standard. We are seeking volunteers to participate in a canvassing committee for the purpose of developing an American National Standard. The Pacific Northwest National Laboratory (PNNL) and Sandia National Laboratories (SNL) facilitated the development of the Protocol. The focus of the protocol is to provide a uniform way of measuring, quantifying, and reporting the performance of ESSs in various applications; something that does not exist today and, as such, is hampering the consideration and use of this technology in the market.

We are seeking participants in the following categories 1) General Interest: Organization or individual that has an interest in the use of equipment included in the scope of this standard, but doesn't use it directly; 2) Producer: Manufacturer of equipment included in the scope of this standard; 3) Testing Laboratory: Organization that tests equipment included in the scope of this standard to established specifications; and 4) User: Organization that uses equipment included in the scope of this standard. We specifically need additional participants in the User category.

If you are interested in participating please contact NEMA Senior Program Manager Brian Marchionini (<u>brian.marchionini@nema.org</u>). Please indicate your Interest Category as well as your area of expertise.

Information Concerning

Call for Members (USNC)

USNC Needs Members/Representatives to join various US and IEC Groups

Response Deadline: April 21, 2017

These Groups are as follows:

New IEC Systems Evaluation Group – Smart Home/Office Building Systems (SEG 9)

Scope:

- Evaluate technology trends and market evolution trends.
- Review the inventory of existing standards and standardization projects within the IEC and external to the IEC, and advise the SMB where duplication of activity and potential dilution of technical resources is occurring.
- Evaluate and prioritize gaps in standardization.
- Recommend to the SMB the structure most appropriate for standardization of Smart Home/Office Building Systems.

2. US Representative on IEC Advisory Committee on Environmental Aspects (ACEA) and Chair of US Coordinating Committee on Natural Environmental Aspects (USCCNEA)

Scope:

ACEA (Advisory Committee on Environmental Aspects), which reports to the SMB (Standardization Management Board), considers all aspects of the protection of the natural environment against detrimental impacts from a product, group of products or a system using electrical technology, including electronics and telecommunications. EMC aspects are excluded as they are covered by ACEC (Advisory Committee on Electromagnetic Compatibility).

ACEA advises the SMB on environmental matters and guides. It helps to coordinate IEC work on environmental issues to ensure consistency and avoid duplication and conflict in IEC International Standards. Its role is also to ensure that the IEC's standard developers take environmental protection concerns into account in their standardization work.

ACEA activities are focused on current issues covered by legislation that relate to ecodesign, environmental declaration and more specifically to substance management end of life treatment, or environmental labelling.

Guides

ACEA is responsible for IEC Guide 109: Environmental aspects - Inclusion in electrotechnical product standards. TCs (Technical Committees) are strongly recommended to consult this guide for advice on the consideration of environmental aspects when drafting product standards.

3. US Representative on IEC Advisory Committee on Energy Efficiency (ACEE) and Chair of US Coordinating Committee on Energy Efficiency (USCCEE)

Scope:

ACEE deals with energy efficiency matters which are not specific to one single technical committee of the IEC. It coordinates activities related to energy efficiency. ACEE is responsible for the assignment of horizontal energy efficiency aspects and requirements. ACEE provides guidance for implementation in a general perspective and for specific sectors. It encourages a systems perspective for the development of standards for energy efficiency and provides support for system considerations.

If you are interested in participating in any of these groups, please contact Kendall Szulewski-Francis (<u>ksfrancis@ansi.org</u>) <u>no later than APRIL 21, 2017</u>.

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BSR/ASHRAE Addendum a ANSI/ASHRAE Standard 15-2016

First Public Review Draft

Safety Standard for

Refrigeration Systems

First Public Review (March 2017) (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 <u>www.ashrae.org/standards-research--technology/public-review-drafts</u> and access the online comment database. The draft is subject to modification until it is approved for publication by the Board of Directors and ANSI.

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

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

- 1 (This foreword is not part of this standard. It is merely informative and does not contain requirements
- 2 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.)

5 FOREWORD

- 6 This addendum modifies ASHRAE 15 by making necessary changes to defer regulation of ammonia refrigeration
- 7 systems to ANSI/IIAR 2. ASHRAE 15 and ANSI/IIAR 2 have historically served as additive standards for
- 8 regulation of ammonia systems, with ASHRAE addressing general design and IIAR addressing ammonia-specific
- 9 topics. The arrangement has burdened ASHRAE 15 with a variety of ammonia-specific exceptions, and it challenges
- 10 designers, engineers, operators, and regulators with the task of deciphering regulations from overlapping standards.
- 11 These stakeholder groups, which include OSHA and EPA, have questioned the need for two independent standards
- 12 for ammonia refrigeration systems and have encouraged the elimination of this unnecessary complexity.
- 13 In response, a comprehensive rewrite of ANSI/IIAR 2 was completed to consolidate necessary regulations for safe
- 14 design of ammonia systems into ANSI/IIAR 2. Following publication of the resulting edition of ANSI/IIAR 2-2014,
- a gap analysis with ASHRAE 15 was conducted to validate ANSI/IIAR 2's suitability to serve as a standalone
- 16 design standard for ammonia refrigeration.
- 17 ANSI/IIAR 2-2014 has since been adopted as a reference standard by all U.S. model fire and mechanical codes. In
- addition, based on the comprehensive nature of ANSI/IIAR 2-2014, the 2018 International Fire Code no longer
- 19 references ASHRAE 15 for ammonia systems, and the 2018 Uniform Mechanical Code is proposing to entirely drop
- 20 requirements for ammonia refrigeration in favor of a mandatory reference to ANSI/IIAR 2. The UMC change
- 21 recognizes that ANSI/IIAR 2 now includes necessary content to serve as both a code and a standard. The changes
- 22 proposed by this addendum delete requirements and exceptions that are unique to ammonia and R-717, and add a
- 23 new mandatory reference to follow ANSI/IIAR 2 for ammonia refrigeration systems.
- 24 Note that some of the text of the standard that is not changed but is included so that the proposed changes will make
- 25 sense to the reader. Only proposed changes are open to public review; text that is not changed is not open for public
- 26 review.
- 27 [Note to Reviewers: This addendum makes proposed changes to the current standard. Some of the text of the
- 28 standard is not changed but is included so that the proposed changes will make sense to the reader. These
- 29 changes are indicated in the text by <u>underlining</u> (for additions) and strikethrough (for deletions) except where the
- 30 reviewer instructions specifically describe some other means of showing the changes. Only proposed changes are
- 31 open to public review; text that is not changed is not open for public review.

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33 2. SCOPE

34 <u>2.3 This standard shall not apply to refrigeration systems using ammonia (R-717) as the refrigerant. Such systems</u>
 35 shall comply with IIAR 2.

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37 **3. DEFINITIONS**

sealed ammonia / water absorption system: An absorption system where Ammonia (R 717) is the refrigerant and
 water (R 718) is the absorbent and all refrigerant containing parts are made permanently tight by welding or brazing.

40 7. RESTRICTIONS ON REFRIGERANT USE

41 7.2.2 Industrial Occupancies and Refrigerated Rooms.

e. Open flames and surfaces exceeding 800°F (426.7°C) are not permitted where any Group A2, B2, A3, or
B3 refrigerant other than R 717 (ammonia) is used.

f. All electrical equipment conforms to Class 1, Division 2, of NFPA 705 where the quantity of any Group
A2, B2, A3, or B3 other than R 717 (ammonia) in an independent circuit would exceed 25% of the lower
flammability limit (LFL) upon release to the space based on the volume determined by Section 7.3.

47 **TABLE 7.4 Special Quantity Limits for Sealed Ammonia/Water Absorption and Self-Contained Systems** 48

	Maximum lb (kg) for Various Occupancies				
Type of		Public/Large			
Refrigeration System	Institutional Mercantile		Residential	Commercial	
Sealed Ammonia/Water Absorption System					
In public hallways or lobbies	0 (0)	0 (0)	3.3 (1.5)	3.3 (1.5)	
In adjacent outdoor locations	0 (0)	0 (0)	22 (10)	22 (10)	
In other than public hallways or lobbies	0 (0)	6.6 (3)	6.6 (3)	22 (10)	
Unit Systems					
In other than public hallways or lobbies	0-(0)	0 (0)	6.6 (3)	22 (10)	

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7.4 Location in a Machinery Room or Outdoors. All components containing refrigerant shall be located either in
 a machinery room or outdoors, where the quantity of refrigerant needed exceeds the limits defined by Section 7.2

52 and Section 7.3

53 a. the quantity of refrigerant needed exceeds the limits defined by Section 7.2 and Section 7.3, or

b. direct fired absorption equipment, other than sealed absorption systems not exceeding the refrigerant quantity
 limits indicated in Table 7.4 is used.

56 Exception: Self-contained systems are permitted outside of a machinery room provided that such systems are not

- 57 located in public hallways or lobbies and are limited to the following occupancies and refrigerant quantities:
- 58 <u>1. 6.6 pounds (3 kg) of refrigerant where located in residential occupancies.</u>
- 59 <u>2. 22 pounds (10 kg) of refrigerant where located in commercial occupancies.</u>
- 60

61 7.5 Additional Restrictions

7.5.1.1 Flammable Refrigerants. The total of all Group A2, B2, A3, and B3 refrigerants other than R 717
 (ammonia) shall not exceed 1100 lb (500 kg) without approval by the AHJ.

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65 8. INSTALLATION RESTRICTIONS

8.11.2.1 Each refrigerating machinery room shall contain a detector, located in an area where refrigerant
from a leak will concentrate, that actuates an alarm and mechanical ventilation in accordance with Section
8.11.4 at a value not greater than the corresponding TLV-TWA (or toxicity measure consistent therewith).
The alarm shall annunciate visual and audible alarms inside the refrigerating machinery room and outside
each entrance to the refrigerating machinery room. The alarms required in this section shall be of the manual
reset type with the reset located inside the refrigerating machinery room.

Alarms set at other levels (such as IDLH) and automatic reset alarms are permitted in addition to those required by this section. The meaning of each alarm shall be clearly marked by signage near the annunciators.

75 Exceptions:

1. For ammonia, refer to Section 8.12(g).

- Detectors are not required when only systems using R-718 (water) are located in the refrigerating machinery room.
- 80 8.11.6 No open flames that use combustion air from the machinery room shall be installed where any
 81 refrigerant is used. Combustion equipment shall not be installed in the same machinery room with refrigerant
 82 containing equipment except under one of the following conditions:
- a. Combustion air is ducted from outside the machinery room and sealed in such a manner as to prevent any refrigerant leakage from entering the combustion chamber.
- b. A refrigerant detector, conforming to Section 8.11.2.1, is employed to automatically shut down the combustion process in the event of refrigerant leakage.

Exceptions:

- 1. Machinery rooms where only carbon dioxide (R-744) or water (R-718) is the refrigerant.
- 2. Machinery rooms where only ammonia (R-717) is the refrigerant and internal combustion engines are used as the prime mover for the compressors.

92 **8.12 Machinery Room, Special Requirements.** In cases specified in the rules of Section 7.4, a

refrigerating machinery room shall meet the following special requirements in addition to those in Section8.11:

- a. There shall be no flame-producing device or continuously operating hot surface over 800°F (427°C)
 permanently installed in the room.
- b. Doors communicating with the building shall be approved, self-closing, tight-fitting fire doors.
- 98 c. Walls, floor, and ceiling shall be tight and of noncombustible construction. Walls, floor, and ceiling separating the refrigerating machinery room from other occupied spaces shall be of at least one-hour fire-resistive construction.
- 101 d. Exterior openings, if present, shall not be under any fire escape or any open stairway.

- e. All pipes piercing the interior walls, ceiling, or floor of such rooms shall be tightly sealed to the walls, ceiling, or floor through which they pass.
- f. When refrigerants of Groups A2, A3, B2, and B3 are used, the machinery room shall conform to Class 1,
 Division 2, of the National Electrical Code.5 When refrigerant Groups A1 and B1 are used, the machinery
 room is not required to meet Class 1, Division 2, of the National Electrical Code.
- Exception: When ammonia is used, the requirements of Class 1, Division 2, of the National Electrical Code shall
 not apply, providing the requirements of Section 8.12(h) are met.
- 109 h. When ammonia (R 717) is used, the machinery room is not required to meet Class 1, Division 2, of the

110 National Electrical Code!' provided (a) the mechanical ventilation system in the machinery room is run

- continuously and failure of the mechanical ventilation system actuates an alarm or (b) the machinery room is
 equipped with a detector, conforming to Section 8.11.2.1, except the detector shall alarm at 1000 ppm.
- h. ÷. Remote control of the mechanical equipment in the refrigerating machinery room shall be provided
 immediately outside the machinery room door solely for the purpose of shutting down the equipment in an
 emergency. Ventilation fans shall be on a separate electrical circuit and have a control switch located
 immediately outside the machinery room door.
- 116 117

122

123

118 9. DESIGN AND CONSTRUCTION OF EQUIPMENT AND SYSTEMS

- 119 9.1 Materials
- 9.1.1 Copper and its alloys shall not be used in contact with ammonia except as a component of bronze alloys for
 bearings or other non-refrigerant containing uses.
 - 9.1.2 Aluminum and its alloys are suitable for use in ammonia systems.

124 Table 9.7.5 Relief Devices Capacity Factor

	R-717				0.5 (0.041)	_			
125						-			
126 127	9.7 shall-dis	7 <mark>.8.4.1 Amr</mark> 5 charge in	n <mark>onia (R-7</mark> accordance	17). Pressure with one of th	relief valve e following:	s serving syst	tems u	ising ammonia	i as a refrigerant
128 129 130 131	a. To a b. Inter c. To a	tmosphere in nally in acco treatment s) accordanc ordance wit ystem appr	e with Section h Section 9.7.8 oved by the a	<u>9.7.8.2</u> 3.3 uthority hav	ing jurisdiction	ən		
132	INFOR	MATIVE AI	PPENDIX	Α					
133	INFOR	MATIVE RI	EFERENC	ES					
134 135 136	14. IIA Con	R. 2014. IIA 1970 - nents. 1	R Bulletin I Arlington, V	14, <i>Guideline</i> A: Internation	s <i>for Identific</i> al Institute c	ca tion of Am of Ammonia I	monia Refrige	Refrigeration I pration.	Piping and System
137	INFORMA	TIVE APP	ENDIX C						
138 139	METHOD COMPRES	FOR C SSOR PRE	ALCULAT SSURE RE	TING DISC LIEF DEVIC	HARGE (CE	CAPACITY	OF	POSITIVE	DISPLACEMENT
140 141	Table C-1 C	Constants fo	r Calculatin	g Discharge C	Capacity				
	R-717	1.422	17.0	358.0	1.28	_			
142									
143									

144 Example

- Determine the flow capacity of a relief device for a CO2 (R-744) compressor with a swept volume (Q) of 160 ft3/min
 (0.0755 m3/s). The compressor is equipped with capacity control that is actuated at 90% of the pressure relief device
- 147 set pressure and has a minimum regulated flow of 10%.
- **148** Q = 160 ft3/min (I-P)
- 149
 Q = 0.0755 m3/s (SI)

 150
 hv = 0.90, assumed

$$\underline{PL} = 0.1$$

152
153
$$\underline{vg} = 0.1185 \text{ ft}3/\text{lbm}$$
 (I-P)

154
$$yg = 0.0074 \text{ m}3/\text{kg}$$
 (SI)

$$W_r = \frac{\frac{160 \frac{\text{ft}^3}{\text{min}} \times 0.1 \times 0.9}{0.1185 \frac{\text{ft}^3}{\text{lb}_m}} = 121.52 \frac{\text{lb}_m}{\text{min}} (\text{I-P [see C-1]})$$

156

155

157
$$W_r = \frac{0.0755 \frac{\text{m}^3}{\text{s}} \times 0.1 \times 0.9}{0.0074 \frac{\text{m}^3}{\text{kg}}} = 0.92 \frac{\text{kg}}{\text{s}} \underline{\text{(SI [see C-1])}}$$

158

159
$$W_a = W_r \times r_w = 121.52 \times 0.65 = 78.99 \frac{\text{lb}_m}{\text{min}} \text{ of air } (I-P [see C-2])$$

160

161
$$W_a = W_r \times r_w = 0.92 \times 0.65 = 0.60 \frac{\text{kg}}{\text{s}} \text{ of air (SI [see C-1])}$$

162

163Converting to standard cubic feet per minute (scfm), where Va = specific volume of air = 13.1 ft3/lbm (0.818 m3/kg)164for dry air at 60°F (15.6°C):165SCFM = 13.1 (78.99) = 1,035 ft3/min (I-P)166SCFM = 0.818 (0.60) = 0.49 m3/s (SI)

167



BSR/ASHRAE Addendum a to ANSI/ASHRAE Standard 34-2016

First Public Review Draft

Proposed Addendum a to

Standard 34-2016, Designation and

Safety Classification of Refrigerants

First Public Review (March 2017) (Draft shows Proposed Changes to Current Standard)

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

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FOREWORD

This addendum adds the zeotropic refrigerant blend R-125/134a/143a/227ea/600a in Table 4-2 and Table D-2.

[Note to Reviewers: This addendum makes proposed changes to the current standard. These changes are indicated in the text by <u>underlining</u> (for additions) and strikethrough (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 a to 34-2016

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

TABLE 4-2 Data and Safety Classifications for Refrigerant Blends

Refrigerant Number = $\underline{461A}$ Composition (Mass %) = $\underline{R-125/134a/143a/227ea/600a}$ (55.0/5.0/32.0/5.0/3.0) Composition Tolerances = $\underline{\pm 1.0/ \pm 0.5 / \pm 1.0 / \pm 0.5 / \pm 0.1, -0.4}$ OEL = $\underline{1000}$ ppm v/v Safety Group = $\underline{A1}$ RCL = $\underline{61,000}$ ppm v/v; $\underline{17}$ lb/Mcf; $\underline{270}$ g/m3 Highly Toxic or Toxic Under Code Classification = $\underline{Neither}$

TABLE D-2 Data for Refrigerant Blends

Refrigerant Number = $\underline{461A}$ Composition (Mass %) = $\underline{R-125/134a/143a/227ea/600a}$ (55.0/5.0/32.0/5.0/3.0) Average Molecular Mass = $\underline{113.1}$ g/mol Bubble Point (°F) = $\underline{-44}$ Bubble Point (°C) = $\underline{-42}$ Dew Point (°F) = $\underline{-38}$ Dew Point (°C) = $\underline{-37}$

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BSR/ASHRAE Addendum b ANSI/ASHRAE Standard 15-2016

First Public Review Draft

Safety Standard for

Refrigeration Systems

First Public Review (March 2017) (Draft shows Proposed Changes to Current Standard)

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5 FOREWORD

- 6 Several relatively small changes have been included in this addenda as the result of continuous maintenance
- 7 proposals from users of ASHRAE 15, or improvements suggested by committee members.
- 8 1. Removal of a restriction on the use of higher flammability refrigerants when used in small in portable unit9 systems.
- 10 The use of higher flammability refrigerants is only restricted by the total refrigerant charge in the self-contained
- system (limited to 0.331 lb (150 g) of Group A3 refrigerants).
- 12 2. Adding a definition and requirements pertaining to the use of low-probability pumps.
- 13 Recognition of low-probability pumps acknowledges the superior leak resistance of these pumps and encourages
- 14 their use to increase safety. The approach is modeled after current allowances for low-probability systems. Because
- 15 low-probability systems are inherently more resistant to atmospheric releases than high-probability systems,
- 16 ASHRAE 15 permits more widespread use of low-probability systems. With respect to pumps, experience has
- 17 shown that pump leaks are typically associated with failed seals on rotating (dynamic) parts, which can result in
- 18 events ranging from a simple nuisance release to a hazardous condition requiring an emergency response. This
- 19 proposal will encourage the use of liquid pumps that are hermetically sealed or similar in lieu of pumps that rely on
- 20 dynamic seals to contain refrigerant.
- 21 This change is consistent with the 2018 IMC (changes proposed) and with IIAR 2.
- 22 3. Elimination of a requirement for Industrial Occupancies and Refrigerated Rooms pertaining to floor area23 per occupant
- 24
- 25 While the requirement has been in place for some time, upon re-examination by the committee, there is no logical
- reason for this section to establish a maximum occupancy limit based on providing a minimum floor area per
- 27 occupant simply because someone is in a refrigerated area. This change is consistent with the 2018 IMC (changes
- 28 proposed) and IIAR 2.
- 29 [Note to Reviewers: This addendum makes proposed changes to the current standard. Some of the text of the
- 30 standard is not changed but is included so that the proposed changes will make sense to the reader. The changes
- 31 are indicated in the text by <u>underlining</u> (for additions) and strikethrough (for deletions) except where the
- 32 reviewer instructions specifically describe some other means of showing the changes. Only proposed changes are
- 33 open to public review; text that is not changed is not open for public review.

34 3. DEFINITIONS

- 35 *Low-Probability Pump*: 1. A pump that is permanently sealed to prevent atmospheric release of the
- 36 pumped fluid, 2. a pump that incorporates a static seal to prevent atmospheric release of the pumped
- 37 <u>fluid, or 3. a pump that incorporates not less than two sequential dynamic shaft seals and automatically</u>
- 38 shuts down upon failure of any seal to prevent atmospheric release of the pumped fluid.

39 7. RESTRICTIONS ON REFRIGERANT USE

40 7.5.3 Higher-Flammability Refrigerants. Group A3 and B3 refrigerants shall not be used except where
 41 approved by the AHJ.

42 Exceptions:

- 1. This restriction does not apply to laboratories with more than $100 \text{ ft}^2 (9.3 \text{ m}^2)$ of space per person.
- 2. This restriction does not apply to industrial occupan- cies.
- 45 3. This restriction does not apply to listed portable unit <u>self-contained</u> systems containing no more than
 46 0.331 lb (150 g) of Group A3 refrigerant, provided that the equipment is installed in accordance with
 47 the listing and the man- ufacturer's installation instructions.

49 7.2.2 Industrial Occupancies and Refrigerated Rooms.

- 50 c. The floor area per occupant is not less than $100 \text{ ft}^2 (9.3 \text{ m}^2)$.
- 51 Exception: The minimum floor area shall not apply where the space is provided with egress directly to the
 52 outdoors or into approved building exits.
 53

g. All refrigerant-containing parts in systems exceeding 100 hp (74.6 kW) compressor drive power,
 except evaporators used for refrigeration or dehumidification, condensers used for heating, control and
 pressure-relief valves for either, <u>low-probability pumps</u>, and connecting piping, are located either in a
 machinery room or outdoors.

58

43 44

48



BSR/ASHRAE Addendum b to ANSI/ASHRAE Standard 34-2016

First Public Review Draft

Proposed Addendum b to

Standard 34-2016, Designation and

Safety Classification of Refrigerants

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FOREWORD

This addendum adds the azeotropic refrigerant blend R-1234yf / 134a / 152a in Table 4-2 and Table D-2.

[Note to Reviewers: This addendum makes proposed changes to the current standard. These changes are indicated in the text by <u>underlining</u> (for additions) and <u>strikethrough</u> (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 34-2016

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

TABLE 4-2 Data and Safety Classifications for Refrigerant Blends

Refrigerant Number = $\underline{516A}$ Composition (Mass %) = $\underline{R-1234yf / 134a / 152a (77.5 / 8.5 / 14.0)}$ Composition Tolerances = $\underline{\pm 1.4 / \pm 0.5, \pm 1.5 / \pm 0.1, \pm 1.9}$ OEL = $\underline{870}$ ppm v/v Safety Group = $\underline{A2L}$ RCL = $\underline{27,000}$ ppm v/v; $\underline{22}$ lb/Mcf; $\underline{350}$ g/m3 Highly Toxic or Toxic Under Code Classification = $\underline{Neither}$

TABLE D-2 Data for Refrigerant Blends

Refrigerant Number = 516AComposition (Mass %) = R-1234yf / 134a / 152a (77.5 / 8.5 / 14.0)Azeotropic Temperature (°C)5 to 90Azeotropic Temperature (°F)41 to 194Azeotropic molar mass102.6 g/molNormal Boiling Point (°C)-29.4Normal Boiling Point (°F)-20.9

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BSR/ASHRAE Addendum c ANSI/ASHRAE Standard 15-2016

Public Review Draft

Safety Standard for

Refrigeration Systems

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5 FOREWORD

- 6 The 2010 edition of ASHRAE Standard 34 revised the toxicity classification definition to use "Occupational Exposure
 7 Limit" (OEL) in place of "Threshold Limit Value Time-Weighted Average" (TLV-TWA), and added OEL values
 8 to the refrigerant tables. These changes were introduced by the 2008 approval of Addendum u and Addendum t to the
 9 2007 edition of Standard 34.
- 10 This addendum harmonizes Standard 15 with those prior changes to Standard 34, to use the OEL values as the 11 refrigerant detector set point for refrigerating machinery rooms, to actuate an alarm and mechanical ventilation.
- 12
- 13
- 14 [Note to Reviewers: This addendum makes proposed changes to the current standard. These changes are
- 15 *indicated in the text by <u>underlining</u> (for additions) and strikethrough (for deletions) except where the reviewer*
- 16 instructions specifically describe some other means of showing the changes. Only these changes to the current
- 17 standard are open for review and comment at this time. Additional material is provided for context only and is not
- 18 open for comment except as it relates to the proposed changes.]

19 3. DEFINITIONS

- 20 lower flammability limit (LFL): the minimum concentration of refrigerant that propagates a flame through a
- 21 homogeneous mixture of refrigerant and air
- 22 *lower flammability limit (LFL):* see definition in ANSI/ASHRAE Standard 34¹.
- 23 *occupational exposure limit (OEL):* see definition in ANSI/ASHRAE Standard 34¹.
- 24 refrigerant concentration limit (RCL): the refrigerant concentration limit, in air, determined in accordance with
- 25 ANSI/ASHRAE Standard 34⁴ and intended to reduce the risks of acute toxicity, asphyxiation, and flammability
- 26 hazards in normally occupied, enclosed spaces.
- 27 *refrigerant concentration limit (RCL):* see definition in ANSI/ASHRAE Standard 34¹.
- 28 threshold limit value time-weighted average (TLV-TWA[†]): the refrigerant concentration in air for a normal eight hour
- 29 workday and a 40 hour workweek to which repeated exposure, day after day, will not cause an adverse effect in most
- 30 persons.
- 31 ...
- 32 ⁺ TLV[®] is a registered trademark of the American Conference of Governmental Industrial Hygienists (ACGIH[®]).
- 33

34 8. INSTALLATION RESTRICTIONS

. . .

35 8.11 Refrigerating Machinery Room, General Requirements.

36

37 **8.11.2.1** Each refrigerating machinery room shall contain a detector, located in an area where refrigerant from 38 a leak will concentrate, that actuates an alarm and mechanical ventilation in accordance with Section 8.11.4 39 at a valueset point not greater than the corresponding TLV TWA (or toxicity measure consistent therewith) 40 Occupational Exposure Limit (OEL) value as published in ASHRAE Standard 34. For refrigerants that do 41 not have a published OEL value in Standard 34, a set point determined in accordance with the OEL as defined by Standard 34 shall be approved by the AHJ. The alarm shall annunciate visual and audible alarms inside 42 the refrigerating machinery room and outside each entrance to the refrigerating machinery room. The alarms 43 44 required in this section shall be of the manual reset type with the reset located inside the refrigerating 45 machinery room. Alarms set at other levels (such as IDLH) and automatic reset alarms are permitted in 46 addition to those required by this section. The meaning of each alarm shall be clearly marked by signage 47 near the annunciators.

48

49 INFORMATIVE APPENDIX E EMERGENCIES IN REFRIGERATING MACHINERY ROOMS

- 50 ...
- 51 E1. ALARM LEVELS

52 A refrigerant level above the TLV-TWA OEL activates the alarms required by Section 8.11.2.1. If personnel working

- 53 in the refrigerating machinery room are not provided with and trained to use respiratory protection equipment
- 54 appropriate for the refrigerant (such as canister respirators or self-contained breathing apparatus), they must leave the 55 room immediately.
- 56 Presence of refrigerant above the TLV TWA OEL does not by itself signal an emergency; many routine service
- 57 operations can create such levels. Local or national regulations often prescribe that steps be taken to protect the health
- and safety of personnel working in the machinery room when refrigerant concentrations rise above the TLV-TWA
- 59 <u>OEL</u>.
- 60 ...

61 E2. ALTERNATE REFRIGERANT LEVEL MEASUREMENTS

- 62 The required alarms signal only that refrigerant was detected at concentrations above the <u>TLV TWA OEL</u>. Some
- facilities may find it useful to have multiple levels of alarms or to provide an instrument that indicates the actual
- refrigerant level (digital readout in parts per million of refrigerant). Selecting proper respiratory protection for
- technicians or other responders, as mentioned above, is one reason. This is perfectly acceptable, provided that the
- additional alarms or indicators are clearly distinguished from the main alarm. Bystanders should not be confused by
- 67 the alarm arrangements.
- 68 ...

69 E4. EXAMPLE EMERGENCY PROCEDURES

As an example (and there are many other possibilities), consider a facility that wishes to use its own technicians to handle minor problems in the refrigerating machinery room. The facility

72 a. provides the refrigerant alarm required by Section 8.11.2.1, along with signage warning "Authorized Personnel

73 Only. Stay Out When Refrigerant Alarm Sounds; Call Facilities Management Immediately"; This alarm triggers at

74 the $\frac{\text{TLV TWA}}{\text{OEL}}$.



BSR/ASHRAE Addendum d to ANSI/ASHRAE Standard 34-2016

First Public Review Draft

Proposed Addendum d to

Standard 34-2016, Designation and

Safety Classification of Refrigerants

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FOREWORD

This addendum adds the zeotropic refrigerant blend R-32 / 125 / 143a / 134a / 600 in Table 4-2 and Table D-2.

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Addendum d to 34-2016

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

TABLE 4-2 Data and Safety Classifications for Refrigerant Blends

Refrigerant Number = $\underline{462A}$ Composition (Mass %) = $\underline{R-32 / 125 / 143a / 134a / 600 (9.0 / 42.0 / 2.0 / 44.0 / 3.0)}$ Composition Tolerances = $\underline{+1.5,-1.0 / \pm 2.0 / \pm 1.0 / \pm 2.0 / \pm 1.0}$ OEL = $\underline{1000}$ ppm v/v Safety Group = $\underline{A2}$ RCL = $\underline{16,000}$ ppm v/v; $\underline{3.9}$ lb/Mcf; $\underline{62}$ g/m3 Highly Toxic or Toxic Under Code Classification = $\underline{Neither}$

TABLE D-2 Data for Refrigerant Blends

Refrigerant Number = $\underline{462A}$ Composition (Mass %) = $\underline{R-32 / 125 / 143a / 134a / 600 (9.0 / 42.0 / 2.0 / 44.0 / 3.0)}$ Average Molecular Mass = $\underline{97.1}$ g/mol Bubble Point (°F) = $\underline{-44.7}$ Bubble Point (°C)= $\underline{-42.6}$ Dew Point (°F) = $\underline{-33.9}$ Dew Point (°C)= $\underline{-36.6}$



BSR/ASHRAE Addendum e to ANSI/ASHRAE Standard 34-2016

First Public Review Draft

Proposed Addendum e to

Standard 34-2016, Designation and

Safety Classification of Refrigerants

First Public Review (March 2017) (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 <u>www.ashrae.org/standards-research--technology/public-review-drafts</u> 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 <u>www.ashrae.org/bookstore</u> 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, <u>www.ashrae.org</u>.

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

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

First Public Review Draft

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

FOREWORD

This addendum makes several changes with the intent to harmonize verbiage in ASHRAE Standard 34 and ISO 817 (Refrigerants – Designation and Classification), specifically in the use of Molar Mass versus Molecular Mass.

[Note to Reviewers: This addendum makes proposed changes to the current standard. These changes are indicated in the text by <u>underlining</u> (for additions) and <u>strikethrough</u> (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 34-2016

9.5.2 Refrigerant Data

- 9.5.2.1 Individual Compounds
- d. Molecular Relative molar mass

9.5.2.2 Azeotropic Blends

- c. Molecular Relative molar mass as formulated
- d. Molecular Relative molar mass of the saturated vapor at 140°F (60°C)

9.5.2.3 Zeotropic Blends

- b. Molecular Relative molar mass as formulated
- c. Molecular Relative molar mass of the vapor at 140°F (60°C)

3. DEFINITIONS AND TERMS

relative molecular molar mass: the ratio of the mass of a molecule to 1/12 of that of carbon-12. The relative molecular molar mass is numerically equivalent to the molecular weight expressed in g/mol, but it is dimensionless.

4.6.1 For compounds with relative molecular molar masses less than 100, the number shall be the sum of 700 and the relative molecular molar mass, rounded to the nearest integer.
4.6.2 For compounds with relative molecular molar masses equal to or greater than 100, the number shall be the sum of 7000 and the relative molecular molar mass, rounded to the nearest integer.
4.6.3 When two or more inorganic refrigerants have the same relative molecular molar masses, uppercase letters (i.e., "A," "B," "C," etc.) shall be added,

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

7.4 Units Conversion 7.4.1 Mass per U

7.4.1 Mass per Unit Volume

M = the molecular <u>relative molar</u> mass of the refrigerant in lb/mol (g/mol)

B1.1 Test Conditions

c. For those refrigerants that show flame propagation in accordance with step (a) or (b), flammability testing shall also be conducted at 73.4°F (23.0°C) and 14.7 psia (101.3 kPa) to determine the LFL. The LFL normally is expressed as refrigerant percentage by volume percent; multiply this by $0.00041 \times \frac{\text{molecular relative molar mass}}{\text{molecular relative molar mass}}$ (g·mol) to obtain kg/m3, or by $0.000026 \times \frac{\text{molecular relative molar mass}}{\text{molecular relative molar mass}}$ (g·mol) to obtain lb/ft3. For refrigerant blends, these tests shall be conducted on the WCF and the WCFF.2

INFORMATIVE APPENDIX D

REFRIGERANT DATA

This appendix provides refrigerant data such as molecular relative molar mass and normal boiling point for the refrigerants listed. It also provides bubble points and dew points for zeotropic blends.

TABLE D-1 Refrigerant Data <u>Molecular Relative Molar</u> Mass

TABLE D-2 Data for Refrigerant Blends <u>Molecular Relative Molar</u> Mass

Draft PDS-01 Sections of BSR/RESNET/ICC 380-2016 Addendum A-201x As Revised by Draft PDS-02

4.3 Procedure to Install the Test Apparatus and Prepare for Airtightness Test

There are two acceptable methods for attaching the Duct Leakage Tester to the duct system. <u>Method 1 is permitted to be used for all systems.</u> Method <u>+2</u> is permitted only <u>if:</u>

i) the for-duct systems has with three or fewer return grilles, or

ii) the total duct leakage is less than 50 cfm (25 L/s) at 25 Pa, or

iii) local codes require licensing in order to remove the blower access panel, that parties conducting the test have not obtained, or

iv) the air handler blower access is in an attic or crawlspace that has limited or restricted entry or exit¹⁵

- <u>Method 1 Installation</u>. The air handler blower access panel shall be removed and the Duct Leakage Tester attached to the blower compartment access.
- *Method* <u>*H*</u><u>2</u>*Installation*. The Duct Leakage Tester shall be attached to the <u>largest</u> return grille <u>in the system</u>. For systems with multiple returns of equal largest size, <u>the return closest</u> to the air handler <u>shall be used</u>. The remaining opening in the return grille <u>and all other return grilles</u> shall be temporarily sealed.
- *Method 2 Installation*. The air handler blower access panel shall be removed and the Duct Leakage Tester attached to the blower compartment access.

Exception 1: Method 1 is permitted to be used where there are more than three returns and local codes require licensing, that parties conducting the test have not obtained, in order to remove the blower access panel. Method 2 is permitted to be used for all systems.

Exception 2: If the total duct leakage is less than 50 cfm (25 L/s) at 25 Pa then either method is permitted to be used.

¹⁵ (Informative Note) For example, ladders, and temporary, movable, spiral, or articulated stairs will usually be considered a limited or restricted means of entry or exit.

Informative Annex A

Space Type_	Included In the Following Categories?			
	<u>Conditioned</u> Space Volume	<u>Un-Conditioned</u> <u>Space Volume</u>	<u>Conditioned</u> <u>Floor Area</u>	Infiltration Volume
Space conditioned to 68/78F (excluding attics, basements, crawlspaces, garages, and sunrooms, which are addressed below)	Yes		Yes	Yes
Attic air sealed & insulated at roof deck, and conditioned ¹	Yes			Yes
Attic air sealed & insulated at roof deck, but not conditioned		Yes		<u>Yes</u>
Attic not air sealed & insulated at roof deck		Yes		
Wall cavity, with at least one horizontally- adjacent space conditioned	<u>Yes</u>		<u>Yes</u>	<u>Yes</u>
Wall cavity, with both horizontally-adjacent spaces unconditioned		Yes		
Floor cavity, with volume above & below conditioned	Yes			Yes
Floor cavity, with either volume above or below unconditioned		<u>Yes</u>		<u>Yes</u>
Floor cavity, with both volume above and below unconditioned		Yes		
Unvented crawlspace, conditioned 1	Yes			Sometimes <u>3</u>
Unvented crawlspace, not conditioned		<u>Yes</u>		Sometimes 3
Vented crawlspace		Yes		
Basement, conditioned ²	Yes		Yes	Sometimes 3
<u>All other basements</u>		<u>Yes</u>		Sometimes 3
<u>Garage, even if conditioned</u>		<u>Yes</u>		
Thermally isolated sunroom		Yes		

1) <u>To be considered conditioned, the party conducting evaluations must obtain an ACCA Manual J. S. and</u> <u>either B or D report and verify that both the heating and cooling equipment and distribution system are</u> <u>designed to offset the entire design load of the volume.</u>

2) To be considered conditioned, the party conducting evaluations must: obtain an ACCA Manual J. S. and either B or D report and verify that both the heating and cooling equipment and distribution system are designed to offset the entire design load of the volume; or verify through visual inspection that both the heating and cooling equipment and distribution system serve the volume and, in the judgement of the party conducting evaluations, are capable of maintaining the heating and cooling temperatures specified by the Thermostat section in Table 4.2.2(1) of ANSI/RESNET 301-2104.

3) <u>Include attic, basement or crawl space in Infiltration Volume if the door(s) or hatch(es) between that</u> <u>space and Conditioned Space Volume are open during enclosure air leakage testing (Section 3.2.3, 3.2.4,</u> <u>and 3.2.5).</u>

BSR/UL 340, Standard for Tests for Comparative Flammability of Liquids

PROPOSAL

1. Addition of Requirements for Transformer Mineral Oil, Natural and Synthetic Ester Liquids, and Silicone Liquid to Tables 3.1 and 13.1

Table 3.1

General Classification	Numerical Classification		
Diethyl ether	100		
Gasoline	90 to 100		
Ethyl alcohol	60 to 70		
Kerosene	30 to 40 ^a		
Paraffin oil	10 to 20 ^b		
Water or nonflammable 0 or nonflammable			
^a A standard kerosene of 100°F (37.8°C) flash point (closed cup) is rated 30 to 40.			
^b A paraffin oil of 440°F (226.7°C) flash point (closed cup) is rated 10 to 20.			

Table 13.1

Fire hazard classification scale

Numerical fire hazard rating	General classification	Flammability temperature limit °F (°C)
100	With diethyl ether	-49 (-45) or lower
90 to 100	With gasoline	13 (-10.6) to -48 (-44.4)
80 to 90	Between gasoline and ethyl alcohol	38 (3.3) to 14 (-10)
70 to 80	Between ethyl alcohol and gasoline	51 (10.6) to 39 (3.9)
60 to 70	With ethyl alcohol	67 (19.4) to 52 (11.1)
50 to 60	Between ethyl alcohol and kerosene	83 (28.3) to 68 (20.0)
40 to 50	Between kerosene and ethyl alcohol	99 (37.2) to 84 (28.9)
30 to 40	With kerosene	129 (53.9) to 100 (37.8)

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20 to 30	Between kerosene and paraffin oil	256 (124.4) to 130 (54.4)		
10 to 20	With paraffin oil	440 (226.7) to 257 (125)		
0 to 10	Less hazardous than paraffin oil	441 (227) or greater		
0 or nonflammable	With water or nonflammable	Noncombustible ^a		
NOTE - Dielectric Media/Transformer Fluids including mineral oil, natural and synthetic esters, silicone oil and refined petroleum oil exhibiting flammability temperature limits > 464°F (240°C) may be assigned a Numerical Fire Hazard Rating of "4-5 Less Hazardous than paraffin oil".				
^a In this classification scale, materials which do not burn under any conditions are rated nonflammable.				

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BSR/UL 875, Standard for Safety for Electric Dry Bath-Heaters

<text><text><text><text> 1.1 These requirements cover electric dry-bath heating equipment and other equipment rated 600 volts or less that is intended to produce a dry-heat environment to be installed in accordance with the National Electrical Code, ANSI/NFPA 70. The relative humidity in the heated environment is in the region of 10 -25 percent and the purpose of the heated environment (for air temperatures, see Sections 25 and 26) is to promote perspiration in a short time by means of a relatively warm and dry atmosphere. The completed equipment is to be provided with an automatic temperature-regulating control that may be integral with the heater or wall-mounted, with an integral manual-reset limit control, a timer, and any other necessary associated equipment. Electric dry-bath heating equipment and other equipment intended to produce

a) A heater unit intended for fixed installation in a special room that is built or assembled in the field to comply to the manufacturer's size specifications;

BSR/UL 2108, Standard for Low Voltage Lighting Systems

1. Address Equipment for Use in Environmental Air Spaces

3.18 RECESSED UNIT EQUIPMENT - A luminaire or power unit that is designed to be either wholly or partially recessed in a Equipment intended to be installed through (penetrating) the mounting surface, and identified as one of the following:-

Inherently Protected - Suitable for installation where in direct contact with thermal insulation or combustible materials, without reliance on a thermal protector to limit operating temperatures.

<u>Type IC</u>, Thermally Protected Type IC - A recessed luminaire or power unit that is designed and identified Suitable for installation where in a cavity filled with thermal insulation. The unit may be in direct contact with thermal insulation or combustible materials and the insulation.

Type Non-IC, Thermally Protected - A recessed luminaire or power unit that is designed <u>Suitable</u> for installation in a cavity with minimum dimensions and spacings to thermal insulation and <u>or</u> combustible materials that comply in accordance with the installation code. It is not intended to be in contact with or covered with combustible materials and insulation.

Type Non-IC, Concrete Only - A luminaire or power unit that is not provided with thermal protection because it is investigated and identified <u>Suitable</u> for installation only in poured concrete.

Inherently Protected - A luminaire or power unit that is investigated and identified for installation in a cavity where the unit is in direct contact with thermal insulation or combustible materials and the construction is such that, even without a thermal protector, a luminaire is unable to be overlamped or mislamped, or a power unit overloaded to the extent that operating temperatures are exceeded in accordance with the prescribed limits in Table 34.1.

11.4 A recessed product with polymeric enclosure parts intended to be installed in airhandling spaces^a and marked in accordance with 48.1.9 shall additionally comply with the requirements in the Standard for Fire Test for Heat and Visible Smoke Release for Discrete Products and Their Accessories Installed in Air-Handling Spaces, UL 2043.

Products evaluated in accordance with these requirements are considered to comply with the fire retardant and low smoke producing requirements of Section 300 of National Electrical Code, NFPA 70; Chapter 4 of Standard for the Installation of Air-Conditioning and Ventilating Systems, NFPA 90A; Section 602 of the International Mechanical Code; and Section 602 of the Uniform Mechanical Code. <u>11A Equipment for Use in Environmental Air-Handling Spaces (Plenums)</u>

<u>11A.1 Equipment with polymeric enclosure parts intended to be installed in air-handling</u> <u>spaces^a shall comply with the requirements in the Standard for Fire Test for Heat and</u> <u>Visible Smoke Release for Discrete Products and Their Accessories Installed in Air-Handling Spaces, UL 2043.</u>

^aEquipment evaluated in accordance with these requirements is considered to comply with the fire retardant and low smoke producing requirements of Section 300.22(C) of the National Electrical Code, NFPA 70; Chapter 4 of Standard for the Installation of Air-Conditioning and Ventilating Systems, NFPA 90A; Section 602 of the International Mechanical Code; and Section 602 of the Uniform Mechanical Code.

<u>11A.2 Equipment that complies with 11A.1, and equipment with a metal enclosure (even</u> if that enclosure is ventilated), is permitted to be marked in accordance with 48.1.9.

48.1.9 A product intended for installation in air handling spaces (<u>plenums</u>) and complying with <u>Section 11A</u> 11.4 is permitted to be marked "Suitable for Use In Air Handling Spaces" or "Suitable for Use in Other Environmental Air Space in Accordance with Section 300.22, (C) of the National Electrical Code."

Table 51.1

Part 1 requirements applicable to Part 2 luminaires

Section	Paragraph
General Construction	8.1 and 8.2
Openings	10.4
Recessed Housing	11.1 - <u>11.3</u> 11.4
Equipment for use in Environmental Air-Handling Spaces	<u>11A.1 - 11A.2</u>
Corrosion Protection	12.1 and 12.2
Current Carrying Parts	14.1 ^a
Conductors and Cords	15.1 - 15.3
Splices and Connections	16.1 and 16.2
Protective Devices	19.6
Switches ^b	21.2
Electrical Spacings	23.1 and 23.2
Electrical Barriers	24.1
Electrical Insulation	25.2

Exposed Bare Conductors	30.1 - 30.5
^a Galvanized or stainless steel is also permitted.	
^b Exposed bare conductor luminaires only.	

SionfromUL 67.1.11 A recessed luminaire intended for environmental air-handling spaces and complying with Section 11A 11.4 is permitted to be marked per 48.1.9.

70.2 Equipment for use in Environmental Air-Handling Spaces (Plenums) shall comply KIOT POT with Section 11A.

2. Revise Requirements for Enclosure Openings

10.2 An open hole in the enclosure shall not exceed 1-1/2 in² (968 mm²) in area, and the total area of one or more open holes shall not be more than 15% of the area of the surface in which the hole or holes are located.

Exception: A higher percentage of surface area may be open where the materials and configuration of the surface retain sufficient mechanical integrity for the application.

3. Addition of Electrical Ratings for Power Units and Luminaires

48.2.2 The electrical ratings in 48.2.1 shall include the following: authorized for

- a) Input voltage;
- b) Input current;
- c) Frequency;

d) Nominal o Output voltage (for a power unit with constant voltage output) or current (for a power unit with constant current output); and

e) Nominal Output wattage.

48.2.2.1 In regards to 48.2.2 (d) and (e), for a power unit with multiple outputs, the rating refers to the output for each output terminal, port, or set of lead wires. Where all Such outputs, or groups of co-located outputs, have the same ratings, the markings can be consolidated provided that the relationship between the marking(s) and the outputs is visually clear.

48.2.2.2 For a power unit whose output can vary based on the connected load

characteristics, the ratings identified under 48.2.2 (d) and (e) shall be the maximum available voltage (or current) and power available from that output.

67.1.2 A luminaire shall be marked in Form A1 with the manufacturer's name or trademark, and a catalog or model number, and input voltage.

67.1.2.1 A luminaire shall be marked in Form A1 with its input voltage (for a luminaire that that operates on a constant voltage) or its input current (for a luminaire that a constant current).