



APPLIANCE STANDS AND DRAIN PANS

ANSI/CSA
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CSA INTERNATIONAL
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by

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PREFACE

This publication represents a basic standard for safe operation, substantial and durable construction, and acceptable performance of appliance stands and drain pans. It is the result of years of experience in the manufacture, testing, installation, maintenance, inspection and research on appliance stands and drain pans designed for the utilization of gas. There are risks of injury to persons inherent in some appliances that, if completely eliminated, would defeat the utility of the appliance. The provisions in this Standard are intended to reduce such risks while retaining the normal function of the appliance.

Nothing in this standard is to be considered in any way as indicating a measure of quality beyond compliance with the provisions it contains. It is designed to allow compliance of appliance stands and drain pans, the construction and performance of which may exceed the various provisions specified herein. In its preparation, full recognition has been given to possibilities of improvement through ingenuity of design. As progress takes place, revisions may become necessary. When they are believed desirable, recommendations should be forwarded to CSA International, 8501 East Pleasant Valley Road, Cleveland, Ohio 44131. A proposal form is provided in the back of this document.

Safe and satisfactory operation of appliance stands and drain pans depends to a great extent upon its proper installation, and it should be installed in accordance with the *National Fuel Gas Code*, *ANSI Z223.1/NFPA 54*, manufacturers' installation instructions, and local municipal building codes.

Users of this American National Standard are advised that the devices/products/activities within its scope may be subject to regulation at the Federal state or local level. Users are strongly urged to investigate this possibility through appropriate channels. In the event of a conflict with this standard, the Federal, state or local regulation should be followed.

CAUTION NOTICE: This American National Standard may be revised or withdrawn at any time. The procedures of the American National Standards Institute, Inc., require that action be taken to reaffirm, revise or withdraw this standard no later than five (5) years from the date of approval. Purchasers of American National Standards may receive current information on all standards by calling or writing the American National Standards Institute, Inc., 11 West 42nd Street, New York, N.Y. 10036, (212) 642-4900.

EFFECTIVE DATE: An organization using this standard for product evaluation as a part of its certification program will normally establish the date by which all products certified by that organization should comply with this standard.

HISTORY OF THE DEVELOPMENT OF STANDARD FOR APPLIANCE STANDS AND DRAIN PANS

(This History is informative and is not part of the standard.)

In 1997, International Approval Services, developed its IAS US Requirement No. 2-96 for Water Heater Stands and Drain Pans. This Requirement was used for design certification testing of water heater stands and drain pans by IAS U.S.

A parallel activity occurred in Canada, resulting in Canadian Lab document CR97-001 for Water Heater Stands and Drain Pans being approved in 1997. This document was used for design certification testing of water heater stands by IAS Canada.

Interest was indicated in 1997 to develop a nationally recognized standard, at which time IAS U.S. agreed to approach the joint Z21/CGA water heater subcommittee, to obtain/determine industry support for processing the Requirement as a national standard. Subcommittee members noted that the stands could be used for installation of other types of appliances, therefore, the proposed standard should not be specific to water heater stands. The water heater manufacturers indicated general support for a national standard for appliance stands. In light of this, it was agreed that a separate standards writing body should develop a generic appliance stand standard. This would eliminate individual appliance subcommittees developing separate requirements.

IAS U.S. proceeded to establish a new project activity. The American National Standards Institute (ANSI) was contacted in 1997 to inform them that IAS was undertaking

this project under its Canvass Method sponsorship. A Canvass List was formed of interested parties to exercise review and approve of the standard. The IAS U.S. Requirements Committee, an internal standards writing committee of IAS U.S., has responsibility for this activity. This standard will be processed as a harmonized standard in both Canada and the United States.

The project was assigned the designation IAS LC 3.

IAS LC 3 details test and examination criteria for appliance stands, and water heater drain pans. Appliance stands are used for supporting an at the proper height to meet applicable codes requiring flammable vapor ignition sources such as burners, burner ignition devices, electrical heating elements and switches to be a minimum distance above the floor (generally 18 inches). Water heater drain pans are used under a water heater to collect and have the ability to dispose water in the event of a leak. Appliance stands, may also incorporate a drain pan for catching and/or disposing of water in the event of a leak.

The first edition of the American National Standard/CSA Standard for Appliance Stands and Drain Pans was approved by the American National Standards Institute, Inc., on July 27, 2000.

The following identifies the designation and year of the harmonized standard:

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AMERICAN NATIONAL STANDARD FOR APPLIANCE STANDS AND DRAINS

PART I CONSTRUCTION

1.1 SCOPE

1.1.1 These requirements apply to:

- a. Appliance stands which are used for supporting an appliance at the proper height to meet applicable codes requiring flammable vapor ignition sources such as burners, burner ignition devices, electrical heating elements and switches to be a minimum distance of 18 inches above the floor; and
- b. Appliance drain pans are used under an appliance to collect, but not retain and have the ability to dispose of water in the event of condensation or a leak.

1.1.2 Appliance stands, hereinafter referred to as stands, may also incorporate a drain pan for catching and have the ability of disposing water in the event of a leak or condensation.

1.1.3 Appliance drain pans are intended to be installed either on the floor, in conjunction with listed appliance stands in accordance with the drain pan and appliance stand manufacturer's instructions, or on other types of construction specified by the drain pan manufacturer, subject to the approval of the testing agency.

Appliance stands are intended to be installed on the floor. Stands may be used in conjunction with listed drain pans in accordance with the stand and drain pan manufacturers' instructions, subject to the approval of the testing agency.

1.1.4 If a value for measurement as given in these requirements is followed by an equivalent value in other units, the first stated value is to be regarded as the specification.

1.1.5 All references to psi throughout this Standard are to be considered gauge pressures unless otherwise specified.

1.1.6 Exhibit A contains a list of standards specifically referenced in this Standard, and sources from which these referenced standards may be obtained.

1.2 EQUIPMENT AND DATA TO BE FURNISHED BY THE MANUFACTURER

The manufacturer shall furnish the following equipment and data, as applicable, for use by the testing agency:

- a. Representative stand(s), as specified by the testing agency;
- b. Drawings, blueprints, or photographs which describe each model stand specified by the testing agency;

- c. Instructions as described in 1.5;
- d. Evidence of material suitability (see 1.4); and
- e. Specifications of appliances for which the stand is intended. (See 1.5.5, Instructions.)

1.3 GENERAL CONSTRUCTION

- 1.3.1 Production samples of each stand and drain pan submitted for examination under these requirements shall be supplied by the manufacturer.
- 1.3.2 Stands and drain pans submitted for certification under these requirements shall be designed in accordance with reasonable concepts of safety, durability and maintainability.
- 1.3.3 All specifications as to construction set forth herein may be satisfied by the construction actually prescribed or such other construction as will provide at least equivalent performance.
- 1.3.4 Stands and drain pans shall not restrict the flow of combustion air when the appliance is installed in accordance with the manufacturer's instructions.
- 1.3.5 Stands and drain pans shall be designed such that the appliance, when installed, is supported by the appliance manufacturer's intended support structure (ie. legs).
- 1.3.6 Stands and drain pans shall be designed with means to prevent the appliance from sliding off the stand or drain pan such that it would become unstable or lose proper support.
- 1.3.7 Means shall be provided for securely attaching the stand or drain pan to the floor where required by building codes.

1.4 MATERIALS

- 1.4.1 The manufacturer shall supply evidence acceptable to the testing agency that all materials have been evaluated and found to be suitable for their intended usage. Test data based on ASTM or other appropriate test procedures, certifications or historical data, may be submitted for this purpose. The evidence shall show that the materials have been evaluated, as appropriate, for resistance to moisture, corrosion, ultraviolet light, temperature, the effects of gasoline and any other compounds or conditions to which the materials may be exposed.
- 1.4.2 Non-metallic materials used in the construction of a stand/drain pan shall be self-extinguishing when tested as specified in section 2.2, Non-Metallic Materials.
- 1.4.3 Ferrous materials used in the construction of a stand/drain pan shall be protected against corrosion by one of the coatings outlined below, or by other metallic or nonmetallic coatings which have been shown to give equivalent protection.
 - a. Hot-dipped mill galvanized sheet steel conforming to the coating designation G90 specified in Table I of ASTM A525, *General Requirements for Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process*, with not less than 40 percent of the zinc on either side. The weight of zinc coating may be determined by any suitable method. However, in case of question, the weight of coating shall be established in accordance with ASTM A90, *Standard Test Method for Weight (Mass) of Coating on Iron and Steel Articles with Zinc or Zinc-Alloy Coatings*.