

# TRINIDAD AND TOBAGO STANDARD

## ELECTRICAL APPLIANCES – COMPULSORY REQUIREMENTS

**PCTTCS 24:20XX**  
**(Replaces TTS 76: Part 13: 2016)**

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Public Comment

## General statement

The Trinidad and Tobago Bureau of Standards (TTBS) is a body corporate established under the authority of the Standards Act No. 18 of 1997 (herein after referred to as the Standards Act).

In accordance with the Standards Act, TTBS shall promote and encourage the development and maintenance of standards and further shall establish standards for the following: to improve goods produced or used in Trinidad and Tobago; to ensure industrial efficiency and development; to promote public and industrial welfare, health and safety; and to protect the environment.

TTBS develops standards through consultation with relevant interest groups, and public comment is invited on all draft standards before they are declared as Trinidad and Tobago Standards in accordance with the provisions of the Standards Act.

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TTBS's Standards Information Centre maintains a reference library of standards, including local, regional and international standards and is the national node of the International Organization for Standardization Information Network (ISONET). The Centre serves as the WTO/TBT Enquiry Point which disseminates information on standards and technical regulations as it relates to the World Trade Organization, Technical Barriers to Trade Agreement. The Centre also acts as the sales agent for the publications of foreign and international standards organisations.

NOTE In order to keep abreast of progress in the industries concerned, Trinidad and Tobago Standards are subject to periodic review. Suggestions for improvements are welcome.

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## Foreword

This specification was declared a Trinidad and Tobago Standard with effect from ....., after the draft, finalized by the Advisory Committee for Electrical Appliances, had been approved by TTBS.

This standard replaces Trinidad and Tobago Standard TTS 76: Part 13:2016, *Requirements for Labelling - Part 13: Labelling of Domestic Electrical Appliances*.

The Trinidad and Tobago Bureau of Standards has recommended that this standard be accorded compulsory status, in order to:

- a) protect the consumer or user against danger to health or safety;
- b) protect public or industrial health, welfare or safety;
- c) protect the environment;
- d) ensure acceptable quality in products whether produced for home use or export;
- e) ensure acceptable quality in any case where there is restriction in choice of source of supply;
- f) require adequate information to be given to the consumer or user; and
- g) prevent fraud or misrepresentation arising from misleading advertising or labelling.

This standard will be effective as a compulsory standard on a date to be notified by the Minister responsible for trade and industry in a Notice to be published in the Trinidad and Tobago Gazette, as required by the Standards Act.

The purpose of this standard is to ensure that electrical appliances are safe to use for consumers and meet the minimum requirements. The label information will allow consumers to make informed purchasing decisions, facilitate redress and assess the value or usefulness of the electrical appliance. This standard is intended to be used by manufacturers, importers, retailers and users of electrical appliances.

The major factor which prompted the development of this standard is the need to ensure that electrical appliances meet the most recent versions of internationally accepted standards, including those developed by the International Electrotechnical Commission and Underwriters Laboratories Inc. Other foreign standards and certification marks may also be accepted by the Trinidad and Tobago Bureau of Standards.

This standard covers product safety requirements for electrical appliances by reference to international product standards and contains labelling requirements for electrical appliances. Requirements for information which should be on the packaging of electrical appliances are also included. While this standard covers the general labelling requirements for electrical appliances, there may be additional labelling requirements for electrical appliances in other specific product standards; in such cases compliance with those additional requirements will be required.

In developing this standard considerable assistance was derived from the following:

- a) Government of the Republic of Trinidad and Tobago. *Electricity (Inspection) Act Chapter 54:72*.
- b) Trinidad and Tobago Electricity Commission. *Wiring for Light and Power (5<sup>th</sup> Edition)*

## **1 Scope**

This National Standard specifies safety requirements for all electrical appliances produced, imported or used in Trinidad and Tobago. It also specifies labelling information to be placed on the appliances as well as information to be placed on the packaging for such appliances.

This standard applies to appliances intended for use at either of the following nominal supply voltages:

- a) 115 volts, with a relative tolerance of  $\pm 6\%$ ; or
- b) 230 volts, with a relative tolerance of  $\pm 6\%$ .

**NOTE** These nominal supply voltages have been declared by the Trinidad and Tobago Electricity Commission (T&TEC) in their publication entitled "Wiring for Light and Power". The Electricity Supply Rules made under Section 15 of the Electricity (Inspection) Act Chapter 54:72 provides for variations of six percent above or below the declared voltages.

This standard does not apply to appliances designed exclusively for industrial purposes or appliances intended to be used in locations where special conditions prevail, e.g. the presence of a corrosive or explosive atmosphere (caused by dust, vapour or gas).

This standard does not apply to lighting products or electrical accessories or components.

## **2 Normative references**

The following referenced documents are indispensable to the application of this standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including amendments) applies.

### **American National Standards Institute (ANSI)**

ANSI/ASHRAE Standard 34-2010, *Designation and Safety Classification of Refrigerants*

### **International Electrotechnical Commission (IEC)**

IEC 60027, *Letter symbols to be used in Electrical Technology*

IEC 60335-2-3, *Household and similar electrical appliances - Safety - Part 2-3: Particular requirements for electric irons*

IEC 60335-2-6, *Household and similar electrical appliances - Safety - Part 2-6: Particular requirements for stationary cooking ranges, hobs, ovens and similar appliances*

IEC 60335-2-8, *Standard for Household and Similar Electrical Appliances - Safety - Part 2-8: Particular requirements for shavers, hair clippers, and similar appliances*

IEC 60335-2-14, *Household and similar electrical appliances - Safety - Part 2-14: Particular requirements for kitchen machines*

IEC 60335-2-15, *Household and similar electrical appliances - Safety - Part 2-15: Particular requirements for appliances for heating liquids*

IEC 60335-2-21, *Household and similar electrical appliances - Safety - Part 2-21: Particular requirements for storage water heaters*

IEC 60335-2-23:2016, *Household and similar electrical appliances - Safety - Part 2-23: Particular requirements for appliances for skin or hair care*

IEC 60335-2-24, *Standard for household and similar electrical appliances – Safety – Part 2-24: Particular requirements for refrigerating appliances, ice-cream appliances and ice-makers*

IEC 60335-2-25, *Household and similar electrical appliances - Safety - Part 2-25: Particular requirements for microwave ovens, including combination microwave ovens*

IEC 60335-2-35, *Household and similar electrical appliances - Safety - Part 2-35: Particular requirements for instantaneous water heaters*

IEC 60335-2-41, *Household and similar electrical appliances - Safety - Part 2-41: Particular requirements for pumps*

IEC 60335-2-45, *Household and similar electrical appliances – Safety – Part 2-45: Particular requirements for portable heating tools and similar appliances*

IEC 60335-2-59, *Household and similar electrical appliances - Safety - Part 2-59: Particular requirements for insect killers*

IEC 60335-2-75, *Household and similar electrical appliances – Safety – Part 2-75: Particular requirements for commercial dispensing appliances and vending machines*

IEC 60335-2-76, *Household and similar electrical appliances – Safety – Part 2-76: Particular requirements for electric fence energizers*

IEC 60335-2-80, *Household and similar electrical appliances – Safety – Part 2-80: Particular requirements for fans*

IEC 60335-2-101, *Amendment 2 – Household and similar electrical appliances – Safety – Part 2-101: Particular requirements for vaporizers*

IEC 60745-1, *Hand-held motor operated electric tools – Safety – Part 1: General requirements*

IEC 62115, *Electric toys – Safety*

IEC 62684, *Interoperability specifications of common external power supply (EPS) for use with data-enabled mobile telephones*

#### **International Organization for Standardization (ISO)**

ISO 817, *Refrigerants – Designation and safety classification*

ISO 7000/IEC 60417, *Graphical symbols for use on equipment*

#### **Trinidad and Tobago Bureau of Standards (TTBS)**

TTCS 19, *Labelling of Goods – General – Compulsory Requirements*

TTCS 20, *Labelling of Goods – Prepacked goods – Compulsory Requirements*

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### **Underwriters Laboratories (UL)**

UL 73, *Motor-operated appliances*

UL 174, *Household electric storage tank water heaters*

UL 399, *Drinking Water Coolers*

UL 507, *Standard for Electric Fans*

UL 696, *Electric toys*

UL 858, *Household electric ranges*

UL 859, *Household electric personal grooming appliances*

UL 923, *Microwave cooking appliances*

UL 961, *Electric hobby and sports equipment*

UL 982, *Standard for motor-operated household food preparing machines*

UL 1647, *Standard for motor-operated massage and exercise machines*

### **3 Terms and definitions**

For purposes of this National Standard, the following terms and definitions shall apply.

#### **3.1**

##### **country of origin**

- a) country where the goods were wholly manufactured; or
- b) in cases where the composition and or quality of the goods was changed to a significant extent elsewhere (other than by packaging), the last country where such significant change occurred

NOTE A significant change in the product refers to where there is a change in the product that has resulted in a change of the Harmonized Commodity Description and Coding System (HS Code) as per World Trade Organization's guidelines.

#### **3.2**

##### **conspicuous**

clearly visible

#### **3.3**

##### **durable**

able to withstand wear, pressure, or damage



**3.4**

**electrical appliance**

an item of electrical or electronic equipment, normally built in standardized sizes or types, which is installed as a unit to perform one or more functions but does not include electrical luminaires or electrical components

NOTE Examples of electrical appliances include fans, vacuum cleaners, washing machines, water heaters, toasters, blenders, microwave ovens, electric cookers, refrigerators, video equipment, audio equipment and computers.

**3.5**

**e-waste**

electronic or electrical appliances which are disposed of or are intended to be disposed of or are required to be disposed of by the provisions of national law

NOTE For the purposes of this document, second hand goods or products that are refurbished or reconditioned are not considered to be e-waste.

**3.6**

**indelible**

unerasable or unremovable

**3.7**

**label**

any mark, symbol, imprint, stamp or brand placed on or permanently affixed to a product

NOTE For the purpose of this standard tickets and tags are not considered to be labels, as these are not permanently placed

**3.8**

**legible**

written or printed matter that can be read without difficulty under the conditions in which the label is normally displayed to a user

**3.9**

**model**

a product that is assigned a unique name or number by the manufacturer to distinguish its design and functions from other products

**3.10**

**rated frequency**

the frequency assigned by the manufacturer expressed in hertz (Hz)

**3.11**

**rated current**

the root mean square (r.m.s) current assigned to the product by the manufacturer expressed in amperes (A)

**3.12**

**rated voltage**

the root mean square (r.m.s) voltage assigned by the manufacturer expressed in volts (V)

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### **3.13**

#### **rated voltage range**

the voltage range assigned by the manufacturer which is expressed by its lower and upper limits in root mean square (r.m.s.) values

### **3.14**

#### **rated power input**

the power input assigned by the manufacturer expressed in watts (W)

### **3.15**

#### **rebuilt**

#### **reconditioned**

#### **refurbished**

#### **remanufactured**

#### **renewed**

goods which have been overhauled, repaired, refitted, or have undergone a similar process to be made reusable to meet applicable technical standards or regulatory requirements, with the result of making it a fully functional product to be used for a purpose that is at least the one for which it was originally intended, including through such activities as cleaning and data sanitization.

NOTE 1 The product can be refurbished by the manufacturer, an authorised representative of the manufacturer or a third party authorised by the manufacturer.

NOTE 2 Common industry terms include certified refurbished (normally done by an authorised representative of the manufacturer or retailer), manufacturer or factory refurbished (normally done by the manufacturer).

### **3.16**

#### **refrigerant**

fluid in a refrigerating system used for heat transfer by absorbing heat at a low temperature and pressure and rejecting it at a higher temperature and pressure usually involving a change of the phase of the fluid

NOTE Refrigerants are usually composed of chlorofluorocarbons, hydrocarbons, hydrofluorocarbons, and hydrochlorofluorocarbons.

### **3.17**

#### **second-hand goods**

#### **used goods**

goods or components/parts that have been in service (leased, loaned or owned) and that are re-entering a market for sale, lease or use by a second user or an end user

NOTE For the purposes of this document, products that are rebuilt, refurbished or remanufactured are not considered to be second-hand goods.

## 4 General requirements

### 4.1 General labelling

**4.1.1** All labelling shall be indelible, durable, legible and conspicuous, and shall be in accordance with TTCS 19, *Labelling of Goods – General – Compulsory Requirements* and TTCS 20, *Labelling of Goods – Prepacked goods – Compulsory Requirements*.

**4.1.2** The following information shall be marked on, or permanently affixed to appliances:

- a) the name or registered trade mark of the manufacturer or responsible local distributor;
- b) the country of origin;
- c) the model number or other indication of the model of the appliance;
- d) serial number where applicable;

NOTE Serial numbers are usually found on electrical appliances with timers (not including clocks), transformers, heating elements, and electronic components such as circuit boards.

- e) indication of whether the electrical appliance was rebuilt, reconditioned, refurbished, remanufactured or renewed;
- f) indication of whether the electrical appliances is used/second hand;
- g) the nature of the voltage supply to the appliance as appropriate, unless the rated frequency is marked, as follows:
  - 1) a.c. or A.C. or the symbol  $\sim$  ;
  - 2) d.c. or D.C. or the symbol  $---$  ; or
  - 3) a.c./d.c. or A.C./D.C. or the symbol  $\sim$  .
- h) the rated voltage or rated voltage range;
- i) the rated current or the rated power input;
- j) a certification mark or safety certification mark; and
- k) a suitable hazard or caution warning.

**4.1.3** The rated voltage or voltage range specified in item h) of Clause 4.1.2 shall be either:

- a) 115 volts, with a relative tolerance of  $\pm 6\%$ ; or
- b) 230 volts, with a relative tolerance of  $\pm 6\%$ .

**4.1.4** If an outlet (supplied on or with the appliance) is provided to power other appliances, the following shall be marked on the outlet or in close proximity to that outlet:

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- a) the voltage if different from the supply voltage;
- b) the rated current or the rated power; and
- c) the safety ground terminal if applicable.

**4.1.5** The rated frequency shall be marked, if applicable. The frequency shall be 60 Hz.

### **4.2 Caution markings**

**4.2.1** Caution markings intended to inform the user of a potential risk of injury to persons shall be prefixed by the signal word "CAUTION", "WARNING" or "DANGER". The signal word shall be more prominent than any other markings used on the appliance.

**4.2.2** Where applicable, a caution marking intended to instruct a user shall be legible and visible from the position which presents maximum exposure to risk.

**4.2.3** Where applicable, if the configuration of the appliance is such that it presents danger to the user or service personnel then a label shall be placed in a suitable area on the appliance to indicate such danger.

**4.2.4** Where applicable, for servicing of the appliance, warning labels shall be located so as to be visible before or immediately upon removal of the protective shield of the area to be serviced.

### **4.3 Presentation of information**

**4.3.1** Labelling information shall be clear and legible.

**4.3.2** All statements shall be presented in the English Language using the English alphabet with or without accent signs. Where names and addresses are in a foreign language, it shall not be necessary to translate such names and addresses into the English Language but they shall be stated in a form using the English alphabet.

**4.3.3** Letter symbols, graphical symbols or numerical symbols may be used. If letter symbols are used, they shall be in accordance with IEC 60027. If graphical symbols are used, they shall be in accordance with ISO 7000/IEC 60417.

### **4.4 Packaging**

**4.4.1** The functionality of the electrical appliance, brief product description and the necessary conditions for operation shall be marked on the packaging of the electrical appliance.

**4.4.2** Any special handling instructions shall be placed on the packaging of the electrical appliance, in words or symbols.

EXAMPLE "Place upright", "Fragile", "Do not use forklift", "Use no hooks".

**4.4.3** There shall be an indication on the packaging of whether the electrical appliance was reconditioned, remanufactured or refurbished.

## 5 Refrigerants

5.1 Appliances containing refrigerants shall bear an indication of the following:

- a) common name or chemical name of the refrigerant in accordance with ISO 817 or the ANSI/ASHRAE Standard 34-2010.
- b) composition in accordance with ISO 817 or the ANSI/ASHRAE Standard 34-2010 (if applicable);
- c) mass or pressure characteristics either in words or symbols;
- d) any special hazards, warnings and precautions; and
- e) any special handling requirements.

5.2 Appliances containing flammable refrigerants shall, in addition to items in 5.1, bear a flammability warning either in words or symbols on or near to the compressor.

NOTE Where the label is not easily visible to the consumer, it is recommended that a second easily-visible flammability warning be placed on the exterior or interior of the appliance.

## 6 Specific requirements for electrical appliances

6.1 Electrical appliances shall comply with a standard that is recognised by TTBS. Annex A provides a non-exhaustive list of standards recognised by TTBS. This list is constantly updated to include new standards. Electrical appliances shall comply with the most recent list published on the TTBS website at [www.gottbs.com/ea-standardslist](http://www.gottbs.com/ea-standardslist). In the event that the electrical appliance is not covered in Annex A, these appliances shall be treated on a case by case basis. See clause 7.1.2.

6.2 Electrical appliances designated as e-waste shall not enter into the local market.

## 7 Mechanisms to demonstrate compliance

### 7.1 New electrical appliances

**7.1.1** Locally manufactured and imported electrical appliances shall comply with the requirements outlined in Clauses 4, 5 and 6 of this standard. TTBS shall verify compliance to this standard and electrical appliances under the scope of this standard shall be subject to a mandatory conformity assessment programme administered by TTBS, through inspection, testing, certification or any combination of these activities.

**7.1.2** Electrical appliances shall carry a product certification mark approved by TTBS, which demonstrates compliance to this standard. In the event that electrical appliances of similar types, are manufactured to a standard different from this Trinidad and Tobago Standard, both the standard and the certification mark shall be approved by TTBS and the product shall be functionally compatible with *TTS 171: Part 1, Trinidad and Tobago Electrical Wiring Code: Part 1: Low voltage installations*. Such electrical appliances shall be accompanied by:

- a) a certification mark (or relevant documentation), acceptable to the Trinidad and Tobago Bureau of Standards, to demonstrate compliance to the standard to which the electrical appliances have been manufactured; and
- b) documentation to demonstrate functional compatibility with TTS 171: Part 1.

NOTE It is recommended that pre-shipment approval be sought from the Trinidad and Tobago Bureau of Standards.

**7.1.3** TTBS reserves the right to take samples or request reference samples of electrical appliances for testing at the expense of the local manufacturer, importer or distributor (including wholesalers or retailers).

### 7.2 Electrical appliances categorized other than new

**7.2.1** All goods that are not categorized as new (based on Clause 4.1.2 (e)) shall be subjected to sampling and testing for compliance to this standard at the expense of the manufacturer, importer or distributor (including wholesalers or retailers where applicable).

**7.2.2** Notwithstanding Clause 7.2.1, TTBS may consider documentation provided by the manufacturer, importer or distributor of goods that demonstrate compliance to this standard.

NOTE Documentation includes test reports, inspection reports and conformity assessment reports.

### 7.3 Electrical appliances categorized as used or second-hand

All goods that are categorized as used or second-hand goods, and are imported, donated or offered for sale in Trinidad and Tobago, TTBS reserves the right to sample, inspect and test all goods on a 100% basis for compliance to this standard at the expense of the local manufacturer, importer or distributor (including wholesalers or retailers where applicable).

## **8 Measures related to non-compliance**

**8.1** Where imported or locally manufactured electrical appliances are found to be in breach of any of the requirements outlined in Clause 4, TTBS shall initiate any of the following actions:

- a) direct the manufacturer, importer or distributor to remove non-conforming electrical appliances from use throughout Trinidad and Tobago within a specified timeframe;
- b) seize and detain non-conforming electrical appliances within the legal framework specified under the Standards Act, Chapter 82:03 including any amendments and revisions;
- c) prohibit the sale and distribution of non-compliant electrical appliances in Trinidad and Tobago;
- d) permit modifications as it pertains to labelling necessary for compliance, where possible; or
- e) direct the manufacturer, importer or distributor to initiate a product recall.

**8.2** Any breaches to this standard are subject to fines and penalties as outlined in the Standards Act, Chapter 82:03.

Public Comment

## Annex A (normative)

### Electrical appliances requirements

#### A.1 Electrical appliances requirements

Electrical appliances shall comply with the requirements of Table A.1.

**Table A.1 – Electrical appliances requirements**

Type of electrical appliance	Specific standards
Air-conditioners, heat pumps	IEC 60335-2-40, Household and similar electrical appliances – Safety – Part 2-40: Particular requirements for electrical heat pumps, air-conditioners and dehumidifiers
Dehumidifiers	IEC 60335-2-40, Household and similar electrical appliances – Safety – Part 2-40: Particular requirements for electrical heat pumps, air-conditioners and dehumidifiers  UL 7008, Sustainability Standard for Household Dehumidifier Appliances
Electric fans	IEC 60335-2-80, Household and similar electrical appliances – Safety – Part 2-80: Particular requirements for fans  UL 507, Standard for Electric Fans
Electric fence energizers	IEC 60335-2-76, Household and similar electrical appliances – Safety – Part 2-76: Particular requirements for electric fence energizers
Electric hobby and sports equipment	UL 961, Electric hobby and sports equipment
Electric insect killer	IEC 60335-2-59, Household and similar electrical appliances - Safety - Part 2-59: Particular requirements for insect killers
Electric irons	IEC 60335-2-3, Household and similar electrical appliances – Safety – Part 2-3: Particular requirements for electric irons
Electric kettle	IEC 60335-2-15, Household and similar electrical appliances – Safety – Part 2-15: Particular requirements for appliances for heating liquids
Electric personal grooming appliances	UL 859, Household electric personal grooming appliances
Electric pumps	IEC 60335-2-41, Household and similar electrical appliances – Safety – Part 2-41: Particular requirements for pumps



Table A.1 – Electrical appliances requirements (continued)

Type of electrical appliance	Specific standards
Electric ranges	IEC 60335-2-6, Household and similar electrical appliances – Safety – Part 2-6: Particular requirements for stationary cooking ranges, hobs, ovens and similar appliances  UL 858, Household electric ranges
Electric toys	IEC 62115, Electric toys – Safety  UL 696, Electric toys
Hair clipping and shaving appliances	IEC 60335-2-8, Standard for Household and Similar Electrical Appliances – Safety – Part 2-8: Particular requirements for shavers, hair clippers, and similar appliances
Hair dryers	IEC 60335-2-23:2016, Household and similar electrical appliances – Safety – Part 2-23: Particular requirements for appliances for skin or hair care
Hand-held motor operated electric tools	IEC 60745-1, Hand-held motor operated electric tools – Safety – Part 1: General requirements
Instantaneous Water Heaters	IEC 60335-2-35, Household and similar electrical appliances – Safety – Part 2-35: Particular requirements for instantaneous water heaters
Microwave cooking appliances	IEC 60335-2-25, Household and similar electrical appliances – Safety – Part 2-25: Particular requirements for microwave ovens, including combination microwave ovens  UL 923, Microwave cooking appliances
Mobile phone chargers	IEC 62684, Interoperability specifications of common external power supply (EPS) for use with data-enabled mobile telephones
Motor-operated appliances	UL 73, Motor-operated appliances
Motor-operated household food preparing machines	IEC 60335-2-14, Household and similar electrical appliances – Safety – Part 2-14: Particular requirements for kitchen machines  UL 982, Standard for motor-operated household food preparing machines
Motor-operated massage and exercise machines	UL 1647 Standard for motor-operated massage and exercise machines
Refrigerators and Freezers	IEC 60335-2-24, Standard for household and similar electrical appliances – Safety – Part 2-24: Particular requirements for refrigerating appliances, ice-cream appliances and ice-makers

**Table A.1 – Electrical appliances requirements (continued)**

Type of electrical appliance	Specific standards
Soldering iron	IEC 60335-2-45, Household and similar electrical appliances – Safety – Part 2-45: Particular requirements for portable heating tools and similar appliances
Tank Water Heaters	IEC 60335-2-21, Household and similar electrical appliances - Safety - Part 2-21: Particular requirements for storage water heaters  UL 174, Household electric storage tank water heaters
Vapourizers	IEC 60335-2-101, Household and similar electrical appliances - Safety - Part 2-101: Particular requirements for vaporizers
Water dispensers	IEC 60335-2-75, Household and similar electrical appliances – Safety – Part 2-75: Particular requirements for commercial dispensing appliances and vending machines  UL 399, Drinking Water Coolers
<p>NOTE Table A.1 indicates the standards for electrical appliances as of XX-06-2022, which are recognized by TTBS. Users of this standard are required to consult the most recent list which is published on the TTBS' website at <a href="http://www.gottbs.com/ea-standardslist">www.gottbs.com/ea-standardslist</a>.</p>	