

STANDARD INFORMATION

Standard: CSA E60335-2-13

Standard ID: Household and Similar Electrical Appliances - Safety - Part 2-13: Particular Requirements for Deep Fat Fryers, Frying Pans and Similar Appliances [CSA C22.2#60335-2-13:2025 Ed.4]

Previous Standard ID: Household and Similar Electrical Appliances - Safety - Part 2-13: Particular Requirements for Deep Fat Fryers, Frying Pans and Similar Appliances [CSA E60335-2-13:2013 Ed.3+G1;A1]

EFFECTIVE DATE OF NEW/REVISED REQUIREMENTS

Effective Date: **August 1, 2028**

IMPACT, OVERVIEW, AND ACTION REQUIRED

Impact Statement: Per our accreditation, Intertek is required to review reports against the standard revisions to confirm compliance. Once compliance is confirmed, the standard reference in the report is updated to show continued compliance to the technical requirements of the standard. Reports not updated to this version by the effective date above will be withdrawn.

Note: The 4th edition of this standard has been renumbered to CSA C22.2 No. 60335-2-13 and is to be used in conjunction with CSA C22.2 No. 60335-1:2025 Ed.3.

Overview of Changes:

- Exclusion of battery-operated appliances
- An additional test has been introduced to limit the temperature rise of external accessible surface including marking of hot surfaces
- Text has been aligned with IEC 60335-1:2020

Specific details of new/revise requirements are found in table below


Current Listings Not Active? – Please immediately identify any current Listing Reports or products that are no longer active and should be removed from our records. We will do this at no charge as long as Intertek is notified in writing prior to the review of your reports.



STANDARD INFORMATION

| CLAUSE | VERDICT | COMMENT |
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| | | <i>Additions to existing requirements are <u>underlined</u> and deletions are shown lined-out below.</i> |
| | | Scope |
| 1 | | This standard does not apply to <ul style="list-style-type: none">– deep fat fryers for commercial use (IEC 60335-2-37);– commercial multi-purpose cooking pans (IEC 60335-2-39);– appliances intended to be used in locations where special conditions prevail, such as the presence of a corrosive or explosive atmosphere (dust, vapour or gas);– <u>battery-operated appliances.</u> |
| 6 | Info | Classification |
| 6.1A | | Cord-connected household appliances <u>with non-removable cooking container, appliances that are intended to be immersed partially or entirely for cleaning and appliances intended for use outdoors</u> shall be Class I or Class II or Class III appliances with respect to protection against electric shock. |
| 7 | Info | Marking and instructions |
| | | <u>If appliances have external accessible surfaces, for which temperature rise limits are specified in Table 101 and for which the provisions of footnote "b" to Table 101 apply, then the appliance shall be marked with symbol IEC 60417-5041 (2002-10), or with the substance of the following:</u> |
| | | <u>CAUTION: Hot surfaces.</u> |
| | | Deep fat fryers shall be marked with the maximum oil level. They shall also be marked with the minimum oil level, unless they can be used as frying pans. |
| 7.1 | | <u>Appliances having electrical components, insulation, or spacing that would be adversely affected by water and might be immersed, partially or completely for washing, heating or other purposes shall comply with either the test of Clause 15.101 or shall be clearly marked with the following:</u> |
| | | <u>DO NOT IMMERSE</u> |
| | | <u>and</u> |
| | | <u>NE PAS IMMERGER</u> |



| CLAUSE | VERDICT | COMMENT |
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| | | <p><u>Appliances complying with the test of Clause 15.101 and intended to be partially immersed in water for cleaning shall be marked with the maximum level of immersion and with the substance of the following:</u></p> <p><u>DO NOT IMMERSE BEYOND THIS LEVEL</u></p> <p><u>And</u></p> <p><u>NE PAS IMMERGER AU-DELÀ DE CE NIVEAU</u></p> <p><u>The maximum input rating marked on appliances intended for use on a nominal 120 V branch circuit protected by an overcurrent device rated or set at not more than 15 A shall</u></p> <p><u>a) not exceed 1500 W at 120 V; or</u> <u>b) not exceed the values listed in Table 7.1A under either of the following conditions:</u></p> <p><u>i) when it is apparent from the usage of the appliance that the load presented by the appliance is not a continuous load; or</u> <u>ii) when the duty cycle of the appliance is marked as specified in Clause 7.101D.</u></p> |
| | | <p><i>New clause added;</i></p> |
| 7.6 | | <p></p> <p>symbol IEC 60417-5041 (2002-10)] caution, hot surface</p> |
| | | <p><u>If symbol IEC 60417-5041 (2002-10) is marked on the appliance, its meaning shall be explained.</u></p> |
| 7.12 | | <p>The instructions for appliances incorporating an appliance inlet and intended to be partially or completely immersed in water for cleaning, shall state that the connector must be removed before the appliance is cleaned and that the appliance inlet must be dried before the appliance is used again.</p> <p>The instructions for portable deep fat fryers and other appliances not intended to be immersed in water for cleaning shall state that the appliance must not be immersed (<u>instruction not necessary for portable frying pans</u>). <u>The instructions shall include the substance of the following:</u></p> <p><u>WARNING: Keep the appliance out of reach from young children, particularly during use and cool down.</u></p> |



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| | | <i>New clause added;</i> |
| 7.14 | | The height of the triangle in symbol IEC 60417-5041 (2002-10) shall be at least 5 mm. |
| | | <i>New clause added;</i> |
| 7.15 | | The marking specified for external accessible surfaces shall be visible when the appliance is operated as in normal use, including when actuating any switch, adjusting any control or opening a lid or door. It shall not be placed on a functional surface. |
| | | <i>New clause added;</i> |
| 7.16 | | If fuses are provided, the maximum size, in amperes, of the fuse to be used in each circuit shall be marked on or adjacent to its respective fuseholder. Other relevant ratings, including time characteristic, breaking capacity, and voltage, shall be included with the current rating if replacement with a fuse that has other ratings could result in non-compliance with this Standard. |
| | | <i>New clause added;</i> |
| 7.101A | | If the construction of an appliance makes allowance for cleaning or similar servicing by the user that involves the exposure of any normally enclosed or protected live part to accidental contact, the appliance shall be clearly and permanently marked with a warning that such servicing should be done with the appliance disconnected from the supply circuit. |
| | | <i>New clause added;</i> |
| 7.101B | | Appliances that rely on a bracket for compliance with Clause 20.1 of the Part 1 shall be marked to indicate the purpose and location of the bracket. |
| | | <i>New clause added;</i> |
| 7.101C | | Appliances with cord sets having an integral thermostatic control or similar control shall be plainly marked in a permanent manner with the following or equivalent: FOR USE WITH CONTROL NO. _____. UTILISER AVEC LA COMMANDE N ^o _____. |
| | | <i>New clause added;</i> |
| 7.101D | | If required by Clause 7.1, the duty cycle of the appliance shall be clearly marked with the following or equivalent: ___ MINUTES "ON" IN A TWO HOUR PERIOD ___ MINUTES « EN MARCHÉ » DANS UNE PÉRIODE DE DEUX HEURES The number of minutes marked shall not exceed 60 min. |



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| 11 | Info | Heating |
| 11.3 | | <p><u>Where the external accessible surfaces are suitably flat and access permits, then the test probe of Figure 101 is used to measure the temperature rises of external accessible surfaces specified in Table 101. The probe is applied with a force of 4 N \pm 1 N to the surface in such a way that the best possible contact between the probe and the surface is ensured. The measurement is performed after a contact period of 30 s.</u></p> <p><u>The probe may be held in place using a laboratory stand clamp or similar device. Any measuring instrument giving the same results as the probe may be used.</u></p> <p>The temperature rise of the oil in deep fat fryers is determined by means of thermocouples attached to disks of copper or brass, 15 mm in diameter and 1 mm thick.</p> |
| 11.8 | | <p>The temperature of the oil in deep fat fryers and similar appliances is measured at least 10 mm from the wall of the container and 10 mm above the bottom. However, the temperature is measured 10 mm above the highest point of heating elements if they are located in the container. The temperature shall not exceed 225 °C, except that a temperature of 243 °C is allowed for the first cycle of operation of the thermostat.</p> <p>The temperature rise of parts of deep fat fryers likely to be contacted by spilt oil shall not exceed 275 K.</p> <p><u>When an appliance connector incorporates a thermostat, the temperature rise limit for the pins of the inlet does not apply.</u></p> <p><u>After the appliance has cooled down to room temperature, the test is repeated with the appliance supplied at rated power input.</u></p> <p><u>During this repeat test, the temperature rise of surfaces shall not exceed the values specified in Table 101.</u></p> |
| 15 | Info | Moisture resistance |
| 15.101 | | <p><i>New clause added;</i></p> <p>This requirement does not apply to appliances marked to indicate no immersion is allowed as detailed in Clause 7.1.</p> |
| 15.101A | | <p><i>New clause added;</i></p> <p>Appliances intended for use outdoors shall comply with the requirements of CSA C22.2 No. 94.2 for Type 3R enclosures.</p> |



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| 19 | Info | Abnormal operation <i>New clause added;</i> |
| 19.102A | | After operation with oil, deep fryers shall be operated with the oil drained from the appliance but with a residual film in the fat container. The temperature of the oil is not required to be measured but no ignition shall occur. |
| 22 | | Construction |
| | | Appliances rated less than 150 V may use a single pole switch for disconnection from the supply mains if the supply cord or cord set is polarized. This switch shall not be used to disconnect the neutral supply conductor. |
| 22.2 | | All other appliances shall provide all-pole disconnection from the supply mains. Note: Supply cords and cord sets used in class I appliances are considered to be polarized. |
| 22.8 | | Covers required to enclose wiring, bare live parts, etc., that open for cleaning and do not require the use of a tool for opening or removal shall be permanently secured to the frame or enclosure by means of hinges, chains, or other equivalent means, unless the appliance complies with Clause 8.1 of the Part 1 with the cover removed. These covers shall incorporate an interlock or shall be marked in accordance with Clause 7.101A. |
| 22.12 | | The test on handles of deep fat fryers is carried out with the appliance at the operating temperature obtained during the test of Clause 11. A vertical force is applied for 30 s to the lifting surface of each handle of the appliance. The force applied on each handle is: – 1,5 w for an appliance with one handle, – 0,75 w for an appliance with more than one handle, where w is the weight of the appliance when filled with oil to the maximum marked level. During the test, the handles shall not work loose or become detached from the appliance. |
| 22.35 | | The requirement does not apply to handles and similar parts of accessories that do not incorporate electrical components. |
| 22.101 | | Thermal controls shall not be incorporated in connectors complying with the standard sheets of IEC 60320-3. Compliance is checked by inspection. |



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| | | An appliance with a rope heater element shall not become a shock hazard when subjected to the following thermal endurance test. |
| 22.101A | | The appliance shall be subjected to three cycles at the maximum operating temperature of the rope heater element for 100 hours each. After each cycle, the appliance shall be allowed to cool to room temperature. After the third cooling to room temperature, the appliance shall be operated again to allow the rope heater element to reach its maximum operating temperature. It shall then be disconnected from the supply and immediately subjected to the leakage current and electric strength tests of Clauses 16.2 and 16.3, respectively. |
| 22.101B | | A minimum of one externally visible indicating light shall be ON while any heating element control is in any position other than the OFF position. The light shall be an LED or neon lamp or other type with an equivalently long expected lifespan. |
| 22.101C | | Immersible appliances having a thermostatically controlled cord set shall be provided with a spring- loaded ground contact to ensure that positive contact pressure is exerted on the grounding probe of the cord set at all times. The resting of one metal part on another shall not be acceptable. |
| 22.101D | | Appliances having pins and contacts used for the sole purpose of earthing shall withstand an endurance test of 5000 cycles of connection and disconnection after the test of Clause 15.101 of the Part 2. The test shall be conducted at a rate of 10 cycles/min. The test shall be conducted at room temperature and without electrical load, except that a small, low-voltage current shall be used to determine whether the circuit has opened. At the conclusion of the test, the cord set and the appliance shall function normally and meet the test requirements of Clause 16.3 and Clause 27.5 of the Part 1. |
| 22.101E | | Appliances provided with thermostatically controlled appliance plugs shall be subjected to the following test. Three samples of thermostatically controlled appliance plugs shall withstand three drops from a height of 90 cm on a hardwood test floor. Each drop of a single sample shall impact a different location of the appliance plug, and one impact shall be on the temperature-sensing element (thermostatic probe). The hardwood test floor shall be constructed of oak, birch, or maple flooring, securely attached to a fir plywood base not less than 12.7 mm thick, with a total overall thickness between 25 and 30 mm. During the test, the hardwood floor which shall have a minimum area of 930 cm ² , shall be supported on a smooth concrete floor or the equivalent. As a result of this test, the appliance shall continue to comply with Clauses 8 and 19. |



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| 22.101F | | <p>Appliances provided with a clock-operated switch incorporating a stay-on feature which is activated in the same direction as the countdown to OFF shall be as follows:</p> <p>a) The clock-operated switch shall require two operations to engage the stay-on feature.</p> <p>b) The clock-operated switch shall turn the appliance OFF with a single action or operation.</p> |
| 25 | Info | <p>Supply connection and external flexible cords</p> <p><i>New clause added;</i></p> <p>Supply cords for outdoor appliances shall be minimum Type SJOW, SJTW, or equivalent outdoor “hard usage” or outdoor “extra-hard usage” type cords.</p> <p>For all other appliances, the type of supply cord shall be Type HPN.</p> <p>Note: Table 11 of the Canadian Electrical Code, Part I specifies suitable uses for supply cords.</p> <p><i>New clause added;</i></p> |
| 25.8DV.1 | | <p>Cord sets having a thermostatic control shall be provided with a cord having an ampacity based on a rated current of 15 A.</p> <p><i>New clause added;</i></p> |
| 25.14 | | <p>A flexing test shall be conducted at the point on the cord where the cord enters the enclosure or where the cord enters the appliance plug (or thermostatic probe).</p> <p>The rate of flexings shall be 10 cycles per minute and the number of cycles shall be 5000. One cycle shall consist of the movement of the cord from one position of the most extreme flex to the opposite position of the most extreme flex and back again, but no more than a total of 180° (twice), and in the direction resulting in the most severe test.</p> <p>During the test, the cord shall be under a tension of 0.12 kg with the tension applied to the cord 20 cm from the point of the cord entry.</p> <p>The test shall not result in exposure or breakage/discontinuity of the conductors or displacement or breakage of the anti-kink device. The appliance shall still function and comply the electric strength test of Clause 16.3.</p> |



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| | | <i>New clause added;</i> |
| 25.14A | | <p>A force gauge shall be attached to the detachable power supply cord of a deep fat fryer, cooker/fryer, or oil fondue type appliance 0.3 m (1 ft) from the appliance. The appliance shall be held securely in place on a horizontal surface. A steadily increasing pullout force shall be applied to the power supply cord directly away from the power supply cord inlet (0°), at a right angle to the power supply cord inlet (90°), at a 180° angle, and at any angle between 0° and 180° that is intended to represent the worst case. Regardless of the angle of the power supply cord relative to the inlet, the pullout force shall be in the horizontal direction (parallel to the countertop surface) and perpendicular to the front edge of the countertop. The maximum force required to separate the detachable power supply cord from the appliance shall then be recorded.</p> |
| | | <i>New clause added;</i> |
| 25.14B | | <p>A deep fat fryer, cooker/fryer, or oil fondue type appliance at room temperature, with its basket (if any) removed, shall be placed on a smooth, polished, metal, flat horizontal surface. The appliance shall be filled with the manufacturer's recommended minimum level of oil. A steadily increasing force shall be applied by a force gauge in the horizontal direction at the height of the power supply cord inlet. The force required to overcome the static friction of the appliance (before the appliance starts to move) shall then be recorded.</p> |
| | | <i>New clause added;</i> |
| 25.14C | | <p>The maximum force required to separate the detachable power supply cord from the appliance as determined in Clause 25.14A shall not exceed 95% of the force required to overcome the static friction of the appliance, as measured during the test described in Clause 25.14B, or 15 N, whichever is less.</p> |
| | | <i>New section added;</i> |
| | | Clearances, creepage distances and solid insulation |
| 29 | | <p>Requirements for minimum clearances and minimum creepage distances in class 0 appliances, and minimum thickness of basic insulation in class 0 appliances have been specified.</p> <p>See standard for details.</p> |