

EN 60335-1:2012/A13:2017+A1:2019+A14:2019+A2:2019			
Clause	Requirement + Test	Result - Remark	Verdict
5	GENERAL CONDITIONS FOR THE TESTS		--
5.10	Add the following as a new second paragraph		--
	A Class III construction part of appliance is tested connected to its detachable power supply part taking into account the instructions provided with the appliance.		N/A
5.17	Replace the existing text by the following:		--
	Appliances powered by rechargeable batteries that are recharged in the appliance are tested in accordance with Annex B.		P
	Battery-operated appliances powered by batteries that are non-rechargeable or not recharged in the appliance are tested in accordance with Annex S.		N/A
6	CLASSIFICATION		--
6.1	Add the following to requirement as a new second paragraph		--
	If an appliance consists of a part of class III construction and a detachable power supply part, the complete appliance is classified as a class I appliance or class II appliance in accordance with the classification applicable to its detachable power supply part.		N/A
7	MARKING AND INSTRUCTIONS		P
7.1	Symbol IEC 60417-5018, for class II and class III appliances incorporating a functional earth		N/A
	Replace the last dashed item in the first paragraph by the following:		--
	– symbol IEC 60417-5180 (2003-02), for class III appliances. This marking is not necessary for appliances operated only by batteries (primary batteries or secondary batteries recharged outside of the appliance) or appliances powered by rechargeable batteries recharged in the appliance.		P
7.3	In Note 3, replace the text of the example by the following.		P
7.4	Replace the requirement by the following:		N/A
	If the appliance can be adjusted for different rated voltages or rated frequencies, the voltage or the frequency to which the appliance is adjusted shall be clearly discernible. If frequent changes in voltage setting or frequency setting are not required, this requirement is considered to be met if the rated voltage or rated frequency to which the appliance is to be adjusted can be determined from a wiring diagram fixed to the appliance.		N/A
7.6	Correct symbols used		P
7.8	- marking of functional earthing terminals (symbol IEC 60417-5018)		N/A

EN 60335-1:2012/A13:2017+A1:2019+A14:2019+A2:2019			
Clause	Requirement + Test	Result - Remark	Verdict
7.10	A push-push button switch used for start and stop the operation shall not be used for other functions such as changing the motor speed.		P
	For hand-held appliances with rated power input 50 W or lower it is acceptable to have a push-push button for different functions including on / off if there is an immediate feedback to the user e.g. by tactile feedback or audible and visible feedback.		N/A
	Where a push button can cycle through various modes during a prolonged push this is allowed as long as the appliance will switch off with a single short push action.		N/A
	Audible feedback is any audible response got immediately after the operation of the switch. The click of a switch can be accepted as an audible feedback provided that it is originated inside the switch that is operated and can be heard at a distance of 77 cm from the switch. The sound of the motor is regarded as an audible feedback.		P
	Constructions with switches that have two different stable positions (meaning that it can be seen or felt when they have been pressed or rotated) are considered to have a tactile feedback.		P
7.12	For appliances for altitudes exceeding 2000 m, the maximum altitude is stated.....:		N/A
	The instructions for appliances incorporating a functional earth states that the appliance incorporates an earth connection for functional purposes only		N/A
7.12.1	If different rated voltages or different rated frequencies are marked, the instructions state what action to be taken to adjust the appliance		N/A
7.12.9	For each language, the instructions specified in 7.12 and from 7.12.1 to 7.12.8 shall appear together before any other instructions supplied with the appliance.		P
	Alternatively, these instructions may be supplied with the appliance separately from any functional use booklet.		P
	They may follow the description of the appliance that identifies parts, or follow the drawings/sketches common to the languages of the instructions.		P
	In addition, instructions shall also be available in an alternative format		P
	Alternatively, these instructions may be supplied with the appliance separately from any functional use booklet.		P
7.14	Add the following as new second paragraph to the requirement:		--

EN 60335-1:2012/A13:2017+A1:2019+A14:2019+A2:2019			
Clause	Requirement + Test	Result - Remark	Verdict
	Add the following as new second paragraph to the requirement:		--
	<ul style="list-style-type: none"> – 3,5 mm for appliances normally used on the floor; – 2,0 mm for portable appliances with a printable surface of less than 10 cm²; and – 3,0 mm for other appliances. 		P
	Uppercase letter of the text explaining the signal word shall be no smaller than 1,6 mm, with other letters according to the font size of the uppercase letter.		P
	Countries that do not use the Latin alphabet need to specify the minimum size of the script to be used taking into account what is specified for the Latin alphabet.		P
	Unless contrasting colours are used, moulded in, engraved, or stamped markings shall be either raised above or have a depth below the surface of at least 0,25 mm.		P
	Replace the first paragraph of the test specification by the following:		--
	Compliance is checked by inspection, by measurement and by rubbing the marking by hand for 15 s with a piece of cloth soaked with water and again for 15 s with a piece of cloth soaked with petroleum spirit. The petroleum spirit to be used for the test is aliphatic solvent hexane.		P
7.15	The symbol IEC 60417-5018 placed next to the symbol IEC 60417-5172 or IEC 60417-5180		N/A
8	PROTECTION AGAINST ACCESS TO LIVE PARTS		N/A
8.1.1	Test probe B and probe 18 of EN 61032 are applied with a force not exceeding 1 N, the appliance being in every possible position, except that appliances normally used on the floor and having a mass exceeding 40 kg are not tilted.		N/A
	Delete the Note		N/A
8.1.3	Replace the note by the following.		--
	If a single switching action is obtained by a switching device, the switching device shall provide full disconnection and the clearances for full disconnection specified in 20.1.5.3 of IEC 61058-1:2000 shall be obtained from Table 22 of IEC 61058-1:2000 using the next higher step for rated impulse withstand voltage.		N/A
	For appliances provided with a supply cord and without a switching device in their supply circuit, a single switching action may be obtained by the withdrawal of the plug from a socketoutlet.		N/A
	Compliance is checked by inspection and by manual test.		N/A

EN 60335-1:2012/A13:2017+A1:2019+A14:2019+A2:2019			
Clause	Requirement + Test	Result - Remark	Verdict
10	POWER INPUT AND CURRENT		P
10.1	If the power input varies throughout the operating cycle and the maximum value of the power input exceeds, by a factor greater than two, the arithmetic mean value of the power input occurring during a representative period, the power input is the maximum value that is exceeded for more than 10 % of the representative period		N/A
	Otherwise the power input is the arithmetic mean value		N/A
10.2	If the current varies throughout the operating cycle and the maximum value of the current exceeds, by a factor greater than two, the arithmetic mean value of the current occurring during a representative period, the current is the maximum value that is exceeded for more than 10 % of the representative period		N/A
	Otherwise the current is the arithmetic mean value		N/A
11	HEATING		P
11.8	Delete the second sentence of the first paragraph.		P
	Updated table3		P
13	LEAKAGE CURRENT AND ELECTRIC STRENGTH AT OPERATING TEMPERATURE		P
13.2	For class 0, class II and class III appliances, and class II constructions, leakage current measured by means of the circuit described in figure 4 of IEC 60990		P
	For class 0I and class I appliances, a low impedance ammeter may be used		N/A
	Leakage current measurements	(see appended table)	P
	Replace the first paragraph by the following:		--
	The leakage current is measured by means of the circuit described in Figure 4 of IEC 60990:1999. For class 0I appliances and class I appliances, except parts of class II construction, C may be replaced by a low impedance ammeter responding to the rated frequency of the appliance.		N/A
15	MOISTURE RESISTANCE		P
15.2	Spillage of liquid does not affect the electrical insulation		N/A
	Spillage solution comprising water containing approximately 1 % NaCl and 0,6 % rinsing agent		N/A
16	LEAKAGE CURRENT AND ELECTRIC STRENGTH		P
16.2	Single-phase appliances: test voltage 1.06 times rated voltage (V)		P

EN 60335-1:2012/A13:2017+A1:2019+A14:2019+A2:2019			
Clause	Requirement + Test	Result - Remark	Verdict
	Three-phase appliances: test voltage 1.06 times rated voltage divided by $\sqrt{3}$ (V)		N/A
	Leakage current measurements	(see appended table)	P
	Limit values doubled if:		N/A
	- all controls have an off position in all poles, or		N/A
	- the appliance has no control other than a thermal cut-out, or		N/A
	- all thermostats, temperature limiters and energy regulators do not have an off position, or		N/A
	- the appliance has radio interference filters		N/A
	With the radio interference filters disconnected, the leakage current do not exceed limits specified	(see appended table)	N/A
19	ABNORMAL OPERATION		P
19.1	Add the following to the penultimate paragraph of the test specification:		--
	If the control performs more than one function, only that aspect of the control under consideration is rendered inoperative. Other functions of the control may continue to operate normally.		N/A
19.7	If the timer or programmer is an electronic type that operates to ensure compliance with the test before the maximum period under the conditions of Clause 11 is reached, it is considered to be a protective electronic circuit as well as a control that operates under the conditions of Clause 11.		N/A
	In the third paragraph of the test specification, replace "class P2" by "class S2 or S3".		N/A
19.11.3	Replace the text of the test specification but not the note, by the following.		--
	If the appliance incorporates a protective electronic circuit that operates to ensure compliance with Clause 19, the appliance is tested as follows:		N/A
	A fault as indicated in a) to g) of 19.11.2 shall be incorporated in the protective electronic circuit either before the appliance is started or at any point in time after the appliance is started so that the most unfavourable conditions of the test are applied.		N/A
	If the appliance is able to operate after the fault in the protective electronic circuit is incorporated, then the appliance is further tested as follows.		N/A
	For appliances for continuous operation the appliance is operated until steady conditions are reached. Then the relevant test of Clause 19 is repeated		N/A

EN 60335-1:2012/A13:2017+A1:2019+A14:2019+A2:2019			
Clause	Requirement + Test	Result - Remark	Verdict
	Other appliances are operated for one cycle of operation. Then the relevant test of Clause 19 is repeated.		N/A
19.11.4.2	Replace the test specification but not the note, by the following:		--
	The appliance is subjected to radiated fields in accordance with IEC 61000-4-3.		N/A
	The frequency ranges tested shall be: – 80 MHz to 1 000 MHz, test level 3; – 1,4 GHz to 2,0 GHz, test level 3; – 2,0 GHz to 2,7 GHz, test level 2.		N/A
19.11.4.4	The power supply terminals of the appliance subjected to voltage surges in accordance with IEC 61000-4-5, test level 3 or 4 as specified		N/A
	An open circuit test voltage of 2 kV is applicable for the line-to-line coupling mode		N/A
	An open circuit test voltage of 4 kV is applicable for the line-to-earth coupling		N/A
	Earthed heating elements in class I appliances disconnected		N/A
20	Stability and mechanical hazards		P
20.2	In the second paragraph replace the word “movable” by “moving” and replace “main function” by “working function”		P
22	CONSTRUCTION		P
22.5	Replace the requirement by the following:		--
	Appliances intended to be connected to the supply mains by means of a plug or pins for insertion into socket-outlets shall be constructed so that in normal use, when pins are touched, there is no risk of electric shock from charged capacitors having a rated capacitance equal to or greater than 0,1 µF.		N/A
	If compliance relies on the operation of an electronic circuit, the electromagnetic phenomena tests of 19.11.4.3 and 19.11.4.4 are applied one at a time to the appliance. The discharge test is then repeated three times and for each test, the voltage shall not exceed 34 V.		N/A
22.12	Replace the requirement by the following:		--
	Handles, knobs, grips, levers and parts providing a similar function shall be fixed in a reliable manner so that they will not work loose in normal use if loosening could result in a hazard, including a choking hazard.		P

EN 60335-1:2012/A13:2017+A1:2019+A14:2019+A2:2019			
Clause	Requirement + Test	Result - Remark	Verdict
	If these parts are used to indicate the position of switches or similar components, it shall not be possible to remove or fix them incorrectly if this could result in a hazard.		P
	The requirement concerning the choking hazard does not apply to appliances intended for commercial use.		P
	Add the following new paragraph to the test specification:		--
	If the part is removed and can be contained within the small parts cylinder in Figure 13, its loosening is considered to result in a choking hazard.		N/A
	Other parts that are intended to be detached during use, maintenance or cleaning (examples are batteries, battery covers, lids, attachments, steam nozzles) are not considered as parts providing a similar function as handles, knobs, grips, levers.		P
22.17	This is not applicable to built-in appliances.		N/A
22.32	Ceramic and similar porous material in which heating conductors are embedded is considered to be basic insulation, not reinforced insulation		N/A
22.33	Conductive liquids that are or may become accessible in normal use and conductive liquids that are in contact with unearthed accessible metal parts are not in direct contact with live parts, or		N/A
	unearthed metal parts separated from live parts by basic insulation only		N/A
22.35	This requirement does not apply to handles, levers and knobs on stationary appliances and cordless appliances, other than those of electrical components, provided they are reliably connected to an earthing terminal or earthing contact, or separated from live parts by earthed metal		N/A
22.53	Class II appliances and class III appliances that incorporate functionally earthed parts shall have at least double insulation or reinforced insulation between live parts and the functionally earthed parts.		N/A
22.54	Button cells and batteries designated R1 not accessible without the aid of a tool, unless		N/A
	the cover of their compartment can only be opened after at least two independent movements have been applied simultaneously		N/A
22.55	Devices that are operated by the user to stop the intended function of the appliance, if any, shall be distinguished from other manual devices by means of shape, or size, or surface texture, or position.		P

EN 60335-1:2012/A13:2017+A1:2019+A14:2019+A2:2019			
Clause	Requirement + Test	Result - Remark	Verdict
	This requirement concerning position does not preclude use of a push on push off switch.		P
	An indication when the device has been operated shall be given by:		--
	– tactile feedback from the actuator or tactile feedback from the appliance such as stopping of the vibration on the body of the appliance or of a part of it; or		P
	– reduction in heat output; or		N/A
	– audible and visible feedback.		P
	The sound of the motor or sound of an actuator switching from on to off is considered as an audible feedback. A switch with a stable off-position different from the on-position is considered visual and tactile feedback. The force feedback from the actuator when operating it is considered to be tactile feedback. Compliance is checked by inspection and by manual test.		P
22.56	Detachable power supply part shall be provided with the part of class III construction of the appliance. Compliance is checked by inspection.		N/A
22.57	The properties of non-metallic materials shall not degrade from exposure to UV-C radiation generated from UV sources provided for microbiological control within the appliance such that they no longer comply with this standard.		N/A
	This requirement does not apply to glass, ceramics or similar materials. Compliance is checked by the conditioning and tests of Annex T.		N/A
23	INTERNAL WIRING		N/A
23.5	For class II construction, the requirements for supplementary insulation and reinforced insulation apply,		N/A
	except that the sheath of a cord complying with IEC 60227 or IEC 60245 may provide supplementary insulation.		N/A
	A single layer of internal wiring insulation does not provide reinforced insulation		N/A
24	COMPONENTS		P
24.1	Add before the last paragraph the following: NOTE Z3 For details of plugs used in CENELEC countries listed in IEC TR 60083 see Annex ZH		P

EN 60335-1:2012/A13:2017+A1:2019+A14:2019+A2:2019			
Clause	Requirement + Test	Result - Remark	Verdict
	Components shall comply with the safety requirements specified in the relevant EN standards as far as they reasonably apply.		P
	Compliance with the EN standard for the relevant component does not necessarily ensure compliance with the requirements of this standard		P
	Motors are not required to comply with EN 60034-1. They are tested as part of the appliance according to this standard.		P
	Relays shall be tested as part of the appliance according to this standard. They may be alternatively tested to EN 60730-1, in which case they shall also meet the additional requirements in EN 60335-1.		N/A
	Unless otherwise specified, the requirements of Clause 29 of this standard apply between live parts of components and accessible parts of the appliance. Unless otherwise specified, components may comply with the requirements for clearances and creepage distances for functional insulation as specified in the relevant component standard.		P
	Unless otherwise specified, the requirements of 30.2 of this standard apply to parts of non-metallic material in components including parts of non-metallic material supporting current-carrying connections inside components.		P
	Components that have not been previously tested and shown to comply with the EN standard for the relevant component are tested according to the requirements of 30.2 of this standard.		P
	Components that have been previously tested and shown to comply with the resistance to fire requirements in the EN standard for the relevant component need not be retested provided that		P
	— the severity specified in the component standard is not less than the severity specified in 30.2 of this standard, and		P
	— unless the pre-selection alternatives in 30.2 are used, the test report for the component states the values of t_e and t_i as required by EN 60695-2-11.		P
	If the above two conditions are not satisfied, the component is tested as part of the appliance.		P
	NOTE 1 There are two levels of severity specified for appliances for which 30.2.3 is applicable.		P
	Power electronic converter circuits are not required to comply with EN 62477-1. They are tested as part of the appliance according to this standard.		N/A

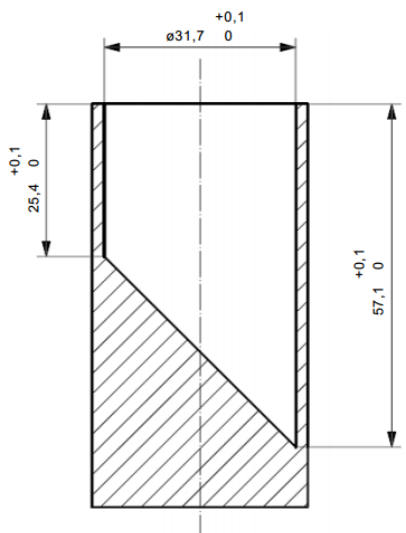
EN 60335-1:2012/A13:2017+A1:2019+A14:2019+A2:2019			
Clause	Requirement + Test	Result - Remark	Verdict
	Unless components have been previously tested and found to comply with the relevant EN standard for the number of cycles specified, they are tested in accordance with 24.1.1 to 24.1.9. For components mentioned in 24.1.1 to 24.1.9, no additional tests specified in the relevant EN standard for the component are necessary other than those specified in 24.1.1 to 24.1.9.		P
	Components that have not been separately tested and found to comply with the relevant EN standard and components that are not marked or not used in accordance with their marking, are tested in accordance with the conditions occurring in the appliance, the number of samples being that required by the relevant standard.		P
	NOTE 2 For automatic controls, marking includes documentation and declaration as specified in Clause 7 of EN 60730-1.		N/A
	Lamp-holders and starter-holders that have not been previously tested and found to comply with the relevant EN standard are tested as a part of the appliance and shall additionally comply with the gauging and interchangeability requirements of the relevant EN standard under the conditions occurring in the appliance. Where the relevant EN standard specifies these gauging and interchangeability requirements at elevated temperatures, the temperatures measured during the tests of Clause 11 are used.		N/A
	There are no additional tests specified for nationally standardized plugs such as those detailed in IEC/TR 60083 or connectors complying with the standard sheets of EN 60320-1 and EN 60309, unless they are specifically mentioned in the text of this standard.		N/A
	Plugs and socket-outlets and other connecting devices of interconnection cords shall not be interchangeable with plugs and socket-outlets listed in IEC/TR 60083 or IEC 60906-1 or with connectors and appliance inlets complying with the standard sheets of EN 60320-1, if direct supply to these parts from the supply mains could give rise to a hazard.		P
	When an EN standard does not exist for a component, there are no additional tests specified.		P
24.1.2	Transformers in associated switch mode power supplies comply with Annex BB of IEC 61558-2-16		N/A
24.1.4	Thermal cut-outs of the capillary type comply with the requirements for type 2.K controls in IEC 60730-2-9		N/A

EN 60335-1:2012/A13:2017+A1:2019+A14:2019+A2:2019			
Clause	Requirement + Test	Result - Remark	Verdict
24.1.5	Appliance couplers comply with IEC 60320-1		N/A
	However, for class II appliances classified higher than IPX0, the appliance couplers comply with IEC 60320-2-3		N/A
24.2	Replace the first dashed item of 24.2 by the following.		--
	– switches, automatic controls, power supplies and the like in flexible cords;		P
24.8	In the first dashed item of the second paragraph of the requirement replace “class of safety protection P2” by “class of safety protection S2 or S3”.		N/A
24.Z1	Type S2 and S3 capacitors according to EN 60252-1 are not required to undergo the testing as required by 30.2.2 and 30.2.3.1.		N/A
25	SUPPLY CONNECTION AND EXTERNAL FLEXIBLE CORDS		P
25.1	Appliance not intended for permanent connection to fixed wiring, means for connection to the supply:		N/A
	- supply cord fitted with a plug, the current rating and voltage rating of the plug being not less than the corresponding ratings of its associated appliance		N/A
	Plugs and pins for insertion into socket outlets shall follow the relevant standards sheets in Annex ZH.		N/A
25.7	Supply cords, other than for class III appliances, being one of the following types:		P
	- rubber sheathed (at least 60245 IEC 53)		N/A
	- polychloroprene sheathed (at least 60245 IEC 57)		N/A
	- polyvinyl chloride sheathed. Not used if they are likely to touch metal parts having a temperature rise exceeding 75 K during the test of clause 11		N/A
	<ul style="list-style-type: none"> light polyvinyl chloride sheathed cord (60227 IEC 52), for appliances not exceeding 3 kg 		N/A
	<ul style="list-style-type: none"> ordinary polyvinyl chloride sheathed cord (60227 IEC 53), for other appliances 		N/A
	- heat resistant polyvinyl chloride sheathed. Not used for type X attachment other than specially prepared cords		N/A
	<ul style="list-style-type: none"> heat-resistant light polyvinyl chloride sheathed cord (60227 IEC 56), for appliances not exceeding 3 kg 		N/A
	<ul style="list-style-type: none"> heat-resistant polyvinyl chloride sheathed cord (60227 IEC 57), for other appliances 		N/A
	Supply cords for class III appliances adequately insulated		P
	Test with 500 V for 2 min for supply cords of class III appliances that contain live parts		P


EN 60335-1:2012/A13:2017+A1:2019+A14:2019+A2:2019			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>– Halogen-free, low smoke, thermoplastic insulated and sheathed</p> <p>Their properties should at least be those of:</p> <ul style="list-style-type: none"> • Light duty halogen-free low smoke flexible cable (code designation 62821 IEC 101 for circular cable and code designation 62821 IEC 101f for flat cable); • Ordinary duty halogen-free, low smoke flexible cable (code designation 62821 IEC 102 for circular cable and code designation 62821 IEC 102f for flat cable). 		N/A
25.10	In multi-phase appliances, the colour of the neutral conductor of the supply cord is blue.		N/A
	Add the following to the requirement as a new third paragraph:		--
	<p>Where additional neutral conductors are provided in the supply cord</p> <ul style="list-style-type: none"> – other colours may be used for these additional neutral conductors; – all of the neutral conductors and line conductors shall be identified by marking using the alpha numeric notation specified in IEC 60445; – the supply cord shall be fitted to the appliance. 		N/A
25.13	If it is not evident that the supply cord can be introduced without risk of damage, a non-detachable lining or bushing complying with 29.3 for supplementary insulation provided		N/A
25.15	For appliances with supply cord and appliances to be permanently connected to fixed wiring by a flexible cord, conductors of the supply cord relieved from strain, twisting and abrasion by use of cord anchorage		N/A
	The cord cannot be pushed into the appliance to such an extent that the cord or internal parts of the appliance can be damaged		N/A
	Pull and torque test of supply cord:		N/A
	- fixed appliances: pull 100 N; torque (not on automatic cord reel) (Nm).....:		N/A
	- other appliances: values shown in table 12: mass (kg); pull (N); torque (not on automatic cord reel) (Nm).....:		N/A
	Pull and torque test of supply cord, values shown in table 12: mass (kg); pull (N); torque (not on automatic cord reel) (Nm).....:		N/A
	Cord not damaged and max. 2 mm displacement of the cord		N/A
25.20	The conductors of the supply cord for type Y and Z attachment insulated from accessible metal parts		N/A
25.23	Add the following new dashed item to the requirement:		--

EN 60335-1:2012/A13:2017+A1:2019+A14:2019+A2:2019			
Clause	Requirement + Test	Result - Remark	Verdict
	– for class III construction, interconnection cords of a class I appliance or class II appliance, the cross sectional areas of the conductors need not comply with 25.8 if the temperature of the cord insulation specified in Table 3 and Table 9 are not exceeded during the tests of Clause 11 and Clause 19, respectively.		N/A
25.25	Dimensions of the pins and engagement face of plugs of appliances that are inserted into socket-outlets are to be in accordance with the dimensions of the relevant plug standard.		N/A
27	PROVISION FOR EARTHING		P
27.1	Class 0, II and III appliances have no provision for protective earthing		P
	Class II appliances and class III appliances can incorporate an earth for functional purposes		N/A
27.2	Requirements not applicable to class II appliances and class III appliances that incorporate an earth for functional purposes		N/A
27.3	Requirements not applicable to class II appliances and class III appliances that incorporate an earth for functional purposes		N/A
27.4	Requirements not applicable to class II appliances and class III appliances that incorporate an earth for functional purposes		N/A
27.5	Requirements not applicable to class II appliances and class III appliances that incorporate an earth for functional purposes		N/A
27.6	Requirements not applicable to class II appliances and class III appliances that incorporate an earth for functional purposes		N/A
28	SCREWS AND CONNECTIONS		P
28.2	In the second paragraph of the requirement, replace bullets with dashes in the two bulleted items.		P
29	CLEARANCES, CREEPAGE DISTANCES AND SOLID INSULATION		P
29.1	Impulse voltage test is not applicable:		N/A
	- when the microenvironment is pollution degree 3, or		N/A
	- for basic insulation of class 0 and class 01 appliances, or		N/A
	- to appliances intended for use at altitudes exceeding 2 000 m		N/A

EN 60335-1:2012/A13:2017+A1:2019+A14:2019+A2:2019			
Clause	Requirement + Test	Result - Remark	Verdict
	Table 17 –Replace Note 1 by the following: Lacquered conductors of windings are considered to be bare conductors but creepage distances for basic insulation in other than a double insulation construction need not be greater than the associated clearance specified in Table 16 taking into account 29.1.1.		N/A
29.3	Supplementary and reinforced insulation have adequate thickness, or a sufficient number of layers, to withstand the electrical stresses		N/A
	Compliance checked:		N/A
	- by measurement, in accordance with 29.3.1, or		N/A
	- by an electric strength test in accordance with 29.3.2, or		N/A
	- for insulation, other than single layer internal wiring insulation, by an assessment of the thermal quality of the material combined with an electric strength test, in accordance with 29.3.3, and		N/A
	for accessible parts of reinforced insulation consisting of a single layer, by measurement in accordance with 29.3.4, or		N/A
	- by an assessment of the thermal quality of the material according to 29.3.3 combined with an electric strength test in accordance with 23.5, for each single layer internal wiring insulation touching each other, or		N/A
	- as specified in subclause 6.3 of IEC 60664-4 for insulation that is subjected to any periodic voltage having a frequency exceeding 30 kHz		N/A
32	Compliance regarding electromagnetic fields is checked according to EN 62233		P
Figures	Add the following new figure.		--

EN 60335-1:2012/A13:2017+A1:2019+A14:2019+A2:2019			
Clause	Requirement + Test	Result - Remark	Verdict
	<p style="text-align: right;"><i>Dimensions in millimetres</i></p>  <p style="text-align: center;">Figure 13 – Small parts cylinder</p>		P
B	ANNEX B (NORMATIVE) APPLIANCES POWERED BY RECHARGEABLE BATTERIES THAT ARE RECHARGED IN THE APPLIANCE		P
	The following modifications to this standard are applicable for appliances powered by batteries that are recharged in the appliance		P
	Three forms of construction covered:		N/A
	a) Appliance supplied directly from the supply mains or a renewable energy source, the battery charging circuitry and other supply unit circuitry incorporated within the appliance		N/A
	b) The part of the appliance incorporating the battery is supplied from the supply mains or a renewable energy source, via a detachable supply unit. The battery charging circuitry is incorporated within the part of the appliance containing the battery		N/A
	c) The part of the appliance incorporating the battery is supplied from the supply mains or a renewable energy source, via a detachable supply unit. The battery charging circuitry is incorporated within the detachable supply unit		N/A
7.1	Appliances intending to be supplied from a detachable supply unit marked with symbol IEC 60417-6181 and its type reference along with symbol ISO 7000-0790 (2004-01), or		N/A
	use only with <model designation> supply unit :		N/A
7.6	Additional symbols		N/A

EN 60335-1:2012/A13:2017+A1:2019+A14:2019+A2:2019			
Clause	Requirement + Test	Result - Remark	Verdict
7.12	For appliances intending to be supplied from a detachable supply unit for the purposes of recharging the battery, the type reference of the detachable supply unit is stated along with the following:		N/A
	WARNING: For the purposes of recharging the battery, only use the detachable supply unit provided with this appliance		N/A
	If the symbol for detachable supply unit is used, its meaning is explained		N/A
	Instructions for appliances containing non user-replaceable batteries shall state the substance of the following:		--
	This appliance contains batteries that are only replaceable by skilled persons.		N/A
	Instructions for appliances containing non-replaceable batteries shall state the substance of the following:		--
	This appliance contains batteries that are non-replaceable.		P
7.15	The type reference of the detachable supply unit is placed in close proximity to the symbol		N/A
11.8	The temperature rise of the battery surface shall not exceed the temperature rise limit in the battery manufacturer's specification for the type of battery supplied. If no limit is specified, the temperature rise shall not exceed 20 K :		P
19.13	The battery does not rupture or ignite		P
H	ANNEX H (NORMATIVE) SWITCHES		N/A
20	Clause 20 is applicable to clearances across full disconnection and micro-disconnection		N/A
	It is also applicable to creepage distances for functional insulation, across full disconnection and micro-disconnection, as stated in Table 24		N/A
P	GUIDANCE FOR THE APPLICATION OF THIS STANDARD TO APPLIANCES USED IN WARM DAMP EQUABLE CLIMATES		N/A
	Throughout the text of the annex including the title, replace "warm damp equable" by "tropical".		N/A
	In the first two paragraphs of the annex, replace "WDaE" by "with symbol IEC 60417-6332 (2015-06)".		N/A
7	MARKING AND INSTRUCTIONS		--
7.1	Replace "the letters WDaE" with "symbol IEC 60417-6332 (2015-06)".		--
	Add the following new subclause:		--

EN 60335-1:2012/A13:2017+A1:2019+A14:2019+A2:2019			
Clause	Requirement + Test	Result - Remark	Verdict
7.6	 [symbol IEC 60417-6332 (2015-06)] tropical climate		N/A
7.12	Add the following new paragraph:		--
	If symbol IEC 60417-6332 (2015-06) is used, its meaning shall be explained.		N/A
	Add the following new annex:		--
S	ANNEX S (NORMATIVE) BATTERY OPERATED APPLIANCES POWERED BY BATTERIES THAT ARE NON-RECHARGEABLE OR NOT RECHARGED IN THE APPLIANCE		N/A
	The following modifications to this standard are applicable for battery-operated appliances where the batteries are either non-rechargeable (primary batteries), or		N/A
	rechargeable batteries (secondary batteries) that are not recharged in the appliance		N/A
5.8.1	If the supply terminals for the connection of the battery have no indication of polarity, the more unfavourable polarity is applied		N/A
5.S.101	Appliances intended for use with a battery box are tested with the battery box supplied with the appliance or with the battery box recommended in the instructions		N/A
5.S.102	Appliances are tested as motor-operated appliances.		N/A
7.1	Appliances marked with the battery voltage (V) and the polarity of the terminals, unless.....:		N/A
	the polarity is irrelevant		N/A
	Appliances also marked with:		N/A
	– name, trade mark or identification mark of the manufacturer or responsible vendor		N/A
	– model or type reference		N/A
	– IP number according to degree of protection against ingress of water, other than IPX0 ..		N/A
	– type reference of battery or batteries		N/A
	If relevant, the positive terminal is indicated by the symbol IEC 60417-5005 and the negative terminal by the symbol IEC 60417-5006		N/A
	If appliances use more than one battery, they are marked to indicate correct polarity connection of the batteries		N/A
7.6	Additional symbols		N/A
7.12	The instructions contain the following, as applicable:		N/A

EN 60335-1:2012/A13:2017+A1:2019+A14:2019+A2:2019			
Clause	Requirement + Test	Result - Remark	Verdict
	– the types of batteries that may be used:		N/A
	– how to remove and insert the batteries		N/A
	– non-rechargeable batteries are not to be recharged		N/A
	– rechargeable batteries are to be removed from the appliance before being charged		N/A
	– different types of batteries or new and used batteries are not to be mixed		N/A
	– batteries are to be inserted with the correct polarity		N/A
	– exhausted batteries are to be removed from the appliance and safely disposed of		N/A
	– if the appliance is to be stored unused for a long period, the batteries are removed		N/A
	– the supply terminals are not to be short-circuited		N/A
11.5	Appliances are supplied with the most unfavourable supply voltage between		N/A
	– 0,55 and 1,0 times the battery voltage, if the appliance can be used with non-rechargeable batteries		N/A
	– 0,75 and 1,0 times battery voltage, if the appliance is designed for use with rechargeable batteries only		N/A
	The values specified in Table S.101 for the internal resistance per cell of the battery is taken into account		N/A
19.1	The tests are carried out with the battery fully charged unless otherwise specified		N/A
19.13	The battery does not rupture or ignite		N/A
19.S.101	Appliances are supplied with the voltage specified in 11.5. The supply terminals having an indication of polarity are connected to the opposite polarity, unless		N/A
	such a connection is unlikely to occur due to the construction of the appliance		N/A
19.S.102	For appliances with provision for multiple batteries, one or more of the batteries are reversed and the appliance is operated, if reversal of batteries is allowed by the construction		N/A
25.5	The flexible leads or flexible cord used to connect an external battery or battery box in is connected to the appliance by a type X attachment		N/A
25.13	This requirement is not applicable to the flexible leads or flexible cord connecting external batteries or a battery box with an appliance		N/A

EN 60335-1:2012/A13:2017+A1:2019+A14:2019+A2:2019			
Clause	Requirement + Test	Result - Remark	Verdict
25.S.101	Appliances have suitable means for connection of the battery. If the type of battery is marked on the appliance, the means of connection is suitable for this type of battery		N/A
26.5	Terminal devices in an appliance for the connection of the flexible leads or flexible cord connecting an external battery or battery box are so located or shielded that there is no risk of accidental connection between supply terminals		N/A
30.2.3.2	There is no battery in the area of the vertical cylinder used for the consequential needle flame test, unless		N/A
	the battery is shielded by a barrier that meets the needle flame test of Annex E, or		N/A
	that comprises material classified as V-0 or V-1 according to IEC 60695-11-10		N/A
T	UV-C RADIATION EFFECT ON NON-METALLIC MATERIALS		--
	Annex T provides requirements for non-metallic materials subject to direct or reflected UV-C radiation (100 nm to 280 nm) exposure and whose mechanical and electrical properties are relied upon for compliance with this standard.		N/A
	This annex does not apply to glass, ceramic and similar materials.		N/A
	NOTE 1 General-purpose incandescent and fluorescent lamps with ordinary glass envelopes are not considered to emit significant UV-C radiation.		N/A
	The UV-C radiation effect on non-metallic materials is determined by measuring selected nonmetallic material properties before and after UV-C radiation conditioning.		N/A
	The conditioning and tests are carried out on non-metallic material specimens prepared according to the relevant standard for the test method.		N/A
	The standards and compliance criteria for parts providing mechanical support or impact resistance are specified in Table T.1.		N/A
	The standard and compliance criteria for electrical insulation of internal wiring are specified in Table T.2.		N/A
	The conditioning apparatus and test procedure are as specified in ISO 4892-1 and ISO 4892-2, with the following modifications. Modifications to ISO 4892-1:		N/A
5.1	LIGHT SOURCE		--

EN 60335-1:2012/A13:2017+A1:2019+A14:2019+A2:2019			
Clause	Requirement + Test	Result - Remark	Verdict
5.1.6	The UV-C emitter shall be a low pressure mercury lamp with a quartz envelope having a continuous spectral irradiance of 10 W/m ² at 254 nm.		N/A
	NOTE The quartz envelope blocks the 185 nm resonant wavelength for mercury that can generate ozone.		N/A
	Subclause 5.1.6.1 and Table 1 are not applicable.		N/A
5.2	TEMPERATURE		--
5.2.4	Subclause 5.1.6.1 and Table 1 are not applicable.		N/A
5.3	HUMIDITY AND WETTING		--
5.3.1	Humidification of the chamber air is specified in part 2 when necessary.		N/A
9	TEST REPORT		--
	This clause is not applicable.		N/A
	This clause is not applicable.		N/A
7	PROCEDURE		--
	At least three test specimens of each non-metallic material providing mechanical support or impact resistance shall be exposed in each run to allow statistical evaluation of the results.		N/A
	Ten samples of the insulated internal wiring shall be exposed in each run.		N/A
	When the internal wiring is provided in more than one colour, the colour having the heaviest organic pigment loading is used.		N/A
	In determining the samples for testing, consideration should be given to samples coloured red or yellow which are known to have particular critical effects.		N/A
7.2	MOUNTING THE TEST SPECIMENS		--
	In determining the samples for testing, consideration should be given to samples coloured red or yellow which are known to have particular critical effects.		N/A
7.3	EXPOSURE		--
	Before placing the specimens in the test chamber, the apparatus shall be operating under the specified exposure conditions.		N/A
	It shall be programmed to operate continuously and the conditions shall be maintained throughout the exposure, keeping any interruptions to service the apparatus and to inspect the specimens to a minimum.		N/A

EN 60335-1:2012/A13:2017+A1:2019+A14:2019+A2:2019			
Clause	Requirement + Test	Result - Remark	Verdict
	The test specimens and, if used, the irradiance-measuring instrument are exposed for 1 000 h.		N/A
	NOTE Repositioning of the specimens during exposure is desirable and might be necessary.		N/A
	If it is necessary to remove a test specimen for periodic inspection, care should be taken to avoid touching the exposed surface or altering it in any way.		N/A
7.4	MEASUREMENT OF RADIANT EXPOSURE		--
	If used, a radiometer shall be mounted and calibrated such that it measures the irradiance at the exposed surface of the test specimen.		N/A
7.5	DETERMINATION OF CHANGES IN PROPERTIES AFTER EXPOSURE		N/A
	The non-metallic material properties and test methods for parts providing mechanical support or impact resistance are specified in Table T.1.		N/A
	The non-metallic material properties and test method for electrical insulation of internal wiring are specified in Table T.2.		N/A
8	EXPOSURE REPORT		--
	This clause is not applicable.		N/A

ZA	ANNEX ZA (NORMATIVE) SPECIAL NATIONAL CONDITIONS (EN)		--
	Denmark, Sweden, Norway and Finland		N/A
7.12.8	The maximum inlet water pressure is at least 1,0 MPa		N/A
	Norway		N/A
19.5	The test is also applicable to appliances intended to be permanently connected to fixed wiring		N/A
	Norway		N/A
22.2	The second paragraph of this subclause, dealing with single-phase, permanently connected class I appliances having heating elements, is not applicable due to the supply system		N/A
	Denmark		N/A

EN 60335-1:2012/A13:2017+A1:2019+A14:2019+A2:2019			
Clause	Requirement + Test	Result - Remark	Verdict
22.47	The maximum inlet water pressure is at least 1,0 MPa		N/A
	Ireland and United Kingdom		N/A
25.8	In the table, the line >10 A and ≤16 A is replaced with:		--
	> 10 and ≤ 13 1,25 (1,0) ^b		N/A
	> 13 and ≤ 16 1,5 (1,0) ^b		N/A
ZB	ANNEX ZB (INFORMATIVE) A-DEVIATIONS		--
	Ireland		N/A
25.1 and 25.25	These regulations apply to all plugs for domestic use at a voltage of not less than 200 V and in general allow only plugs complying with I.S. 401:1997, or equivalent, to be fitted to domestic appliances		N/A
	United Kingdom		N/A
25.1 and 25.25	These regulations apply to all plugs for domestic use at a voltage of not less than 200 V and in general allow only plugs to BS 1363 to be fitted to domestic appliances.		P
	It also allows plugs to BS 4573 and EN 50075 to be fitted to shavers and toothbrushes		N/A
ZC	ANNEX ZC (NORMATIVE) NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH THEIR CORRESPONDING EUROPEAN PUBLICATIONS		--
	A list of documents referred to in the text of this standard in such a way that some or all of their content constitutes requirements of this document		P
ZD	ANNEX ZD (INFORMATIVE) IEC and CENELEC CODE DESIGNATIONS FOR FLEXIBLE CORDS		--
	List of IEC and CENELEC code designations for flexible cords		P
ZF	ANNEX ZF (INFORMATIVE) CRITERIA APPLIED FOR THE ALLOCATION OF PRODUCTS COVERED BY STANDARDS IN THE EN 60335 SERIES UNDER LVD OR MD		--

EN 60335-1:2012/A13:2017+A1:2019+A14:2019+A2:2019			
Clause	Requirement + Test	Result - Remark	Verdict
	List of standards under CENELEC/TC61 with the allocation under the LVD (Low Voltage Directive) or the MD (Machinery Directive)..... :		P
ZH	ANNEX ZH (INFORMATIVE) Common plug and socket-outlet types in CENELEC countries		--
	In general, supply cords of single-phase appliances having a rated current not exceeding 16 A are fitted with a plug complying with the following standard sheets:		--
	- for class I appliances or class II appliances with functional earth, standard sheet EU2, EU3 or EU4..... :		N/A
	- for class II appliances, standard sheet EU5, EU6 or EU7..... :		N/A
	There are exemptions or differences in certain CENELEC countries		N/A
ZI	ANNEX ZI (INFORMATIVE) Information on the application of A11:2014 to EN 60335-1:2012 CENELEC CLC/TC 61(SEC)2096A		--
	Clarification of the application of parts 2 in conjunction with the 2002 or 2012 version of EN 60335-1		P
ZZA	ANNEX ZZA (INFORMATIVE) RELATIONSHIP BETWEEN THIS EUROPEAN STANDARD AND THE SAFETY OBJECTIVES OF DIRECTIVE 2014/35/EU [2014 OJ L96] AIMED TO BE COVERED		--
	This standard provides one means of conforming to safety objectives of Directive 2014/35/EU		N/A
	When cited in the Official Journal under that Directive, compliance with the normative clauses of this standard given in Table ZZA.1 confers a presumption of conformity with the safety objectives of that Directive and associated EFTA regulations		N/A
	Compliance with this Part 1 when used together with the relevant Part 2 provides one means of conformity with the safety objectives		N/A
ZZB	ANNEX ZZB (INFORMATIVE) RELATIONSHIP BETWEEN THIS EUROPEAN STANDARD AND THE ESSENTIAL REQUIREMENTS OF DIRECTIVE 2006/42/EC AIMED TO BE COVERED		--
	This standard provides one means of conforming to essential requirements of EU Directive 2006/42/EC		N/A

EN 60335-1:2012/A13:2017+A1:2019+A14:2019+A2:2019			
Clause	Requirement + Test	Result - Remark	Verdict
	When cited in the Official Journal under that Directive, compliance with the normative clauses of this standard given in Table ZZB.1 confers a presumption of conformity with the essential requirements of that Directive and associated EFTA regulations		N/A
	Compliance with this Part 1 when used together with the relevant Part 2 provides one means of conformity with the essential health and safety requirements		N/A

-END-