

Annex to the accreditation certificate: N° 1/048 According to standard ISO/IEC 17025:2017 For a testing laboratory

Version 05 of the technical annex from 17 January 2022
Valid until 07 December 2025

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Product Safety

Objects submitted for analysis	Characteristics or properties measured	Measurement principle and equipment	Analysis methods
(e.g. products, materials, samples, matrices, equipment)		(e.g. manual or automatic measurement)	(e.g. published, adapted, checked internally)
Domaine général : LAB13 – Properties of materials			
Domaine technique : LAB13.1 – Mechanical testing			
Household and similar appliances Luminaire	Verification of marked technical characteristics, instructions and information for the user. Legibility, durability, indelibility and dimensions of the markings and symbols	Reading the instructions for use and verification of the resistance of the markings after the rubbing test with water and solvent	<u>Product standard(s):</u> EN 60335-1:2012, cl. 7 EN 60335-2-x ¹ EN 60598-1:2015, cl. 3 EN 60598-2-x ²
Household and similar appliances Luminaire	Protection against electrical shock by verification of access or non-access to hazardous electrical parts	Verification of the inaccessibility to live parts or parts with basic insulation or parts of glowing heating elements	<u>Test standard(s):</u> EN 61032:1998 <u>Product standard(s):</u> EN 60335-1:2012, cl. 8 + 22 EN 60335-2-x ¹ EN 60598-1:2015, cl.8 EN 60598-2-x ²
Household and similar appliances Luminaire	Stability test to check the absence of overturn, or in the case of an overturn measurement of temperature rises. Protection against moving parts	Verification of non-overturn by using inclined planes. Verification of the stability or measurement of temperatures in case of an overturn. Inaccessibility to dangerous moving parts	<u>Product standard(s):</u> EN 60335-1:2012, cl. 20 EN 60335-2-x ¹ EN 60598-1:2015, cl.4.7.3 EN 60598-2-4:97+2018
Household and similar appliances Luminaire	Test of mechanical strength by verification of absence of deterioration of the enclosure with hazardous effects	Verification of the strength of the enclosure by application of shocks by means and values as specified in the standard	<u>Test standard(s):</u> EN 60068-2-75:2014 <u>Product standard(s):</u> EN 60335-1:2012, cl. 21.1 EN 60335-2-x ¹ EN 60598-1:2015, cl.4.13.1, 4.13.3 EN 60598-2-1:89, -4:97+18, -5:15, -12:06+13
Household and similar appliances Luminaire	Verification of constructional requirements	Examination of the construction of the EUT in order to check the conformity to the	<u>Product standard(s):</u> EN 60335-1:2012, cl. 22 EN 60598-1:2015, cl. 4,5

Objects submitted for analysis	Characteristics or properties measured	Measurement principle and equipment	Analysis methods
		constructional requirements of the standard	EN-60598-2-1:89, -4:97, -5:15
Household and similar appliances Luminaires	Mechanical test on plugs of plug-in devices Tensile test and torque test on pins	Measurement of the torque applied to the pins engaged in a socket-outlet according to specifications of the standard Application of a pull force and torque on the pins of the plug to verify the mechanical resistance according to the specifications of the standard	<u>Product standard(s):</u> EN 60335-1:2012, cl. 22.3 EN 60335-2-x ¹ EN 60598-1:2015, cl. 4.14.6 EN 60598-2-x ²
Household and similar appliances	Mechanical strength test to tensions and loads to check the absence of deterioration of components and cables as well as the absence of hazards after strains	Application of forces, tensions on wiring, cables, connectors and components	<u>Product standard(s):</u> EN 60335-2-x ¹
Household and similar appliances Luminaires	Verification of external wiring and supply connections	Examination and verification of the means of connection to the supply according to the requirements of the standard. Measurement of cables and/or means for the supply. Pull and torque test. Verification of terminals	<u>Product standard(s):</u> EN 60335-1:2012, cl. 25 + 26 EN 60335-2-x ¹ EN 60598-1:2015, cl. 5.2 EN 60598-2-1:89, -4:97+18, -5:15, -8:97+13
Household and similar appliances	Tensile test on plug pins (alternative automatic method)	Alternative method of application of a pull force on the pins of a plug to verify the mechanical resistance according to the specifications of the standard	<u>Product standard:</u> EN60335-1:2012, cl.22.3 EN60335-2-x ¹
Luminaires	Verification of internal wiring	Examination and verification of the internal wiring of a luminaire	<u>Product standard(s):</u> EN 60598-1:2015, cl. 5.3 EN 60598-2-1:89, -4:97+18, -5:15, -8:97+13
Household and similar appliances	Verification of screws, fixings and electrical + earthing connections	Examination of material and type of screws, nuts and material they are screwed in. Measurement of the diameter of the screws. Verification of mechanical resistance of connections by tightening and untightening the screws or nuts with a specific torque several times according to the requirements of the standard	<u>Product standard(s):</u> EN 60335-1:2012, cl. 28 EN 60335-2-x ¹ EN 60598-1:2015, cl. 4.12 EN 60598-2-x ²
Toys	Verification of information and warnings for the user. Legibility, dimensions of the markings and symbols	Reading and verification of the instructions and Warnings for use	<u>Product standard(s):</u> EN 71-1:2014 + A1:2018, cl. 7

Objects submitted for analysis	Characteristics or properties measured	Measurement principle and equipment	Analysis methods
Toys	Small parts test	Verification of dimensions of detachable parts. The parts are not allowed to completely fit into the cylinder	<u>Product standard(s):</u> EN 71-1:2014 + A1:2018, cl. 8.2
Toys	Torque test	Verification if a grippable part of a toy stays attached after rotating it in both directions	<u>Product standard(s):</u> EN 71-1:2014 + A1:2018, cl. 8.3
Toys	Tension test	Verification if a grippable part of a toy stays attached after a traction was applied to the part	<u>Product standard(s):</u> EN 71-1:2014 + A1:2018, cl. 8.4
Toys	Drop test	Verification if no parts of a toy become detached after dropping the toy 5 times	<u>Product standard(s):</u> EN 71-1:2014 + A1:2018, cl. 8.5
Toys	Tip over test	Application of defined force to large and bulky toys to test if they stay in a vertical position	<u>Product standard(s):</u> EN 71-1:2014 + A1:2018, cl. 8.6
Toys	Impact test	Verification if no parts of a toy become detached after dropping a weight on the toy once, in its most onerous position	<u>Product standard(s):</u> EN 71-1:2014 + A1:2018, cl. 8.7
Toys	Compression test	Application of a compression force to any accessible area of the toy that is inaccessible during the drop test	<u>Product standard(s):</u> EN 71-1:2014 + A1:2018, cl. 8.8
Toys	Soaking test	Verification if any parts become detached after completely submerging the toy four times	<u>Product standard(s):</u> EN 71-1:2014 + A1:2018, cl. 8.9
Toys	Accessibility test	Verification if a part of a toy is accessible with a defined probe	<u>Product standard(s):</u> EN 71-1:2014 + A1:2018, cl. 8.10
Toys	Sharpness of edges	Verification if any accessible edges on a toy are sharp	<u>Product standard(s):</u> EN 71-1:2014 + A1:2018, cl. 8.11
Toys	Sharpness of points	Verification if any accessible points of a toy are sharp	<u>Product standard(s):</u> EN 71-1:2014 + A1:2018, cl. 8.12
Toys	Flexibility of metallic wires	Verification if metallic wires of toys do not break	<u>Product standard(s):</u> EN 71-1:2014 + A1:2018, cl. 8.13
Toys	Geometric shape of certain toys	Verification if any part of a toy protrudes past the base of a Template during the test	<u>Product standard(s):</u> EN 71-1:2014 + A1:2018, cl. 8.16
Toys	Thickness of plastic sheeting	Determination of the thickness of flexible plastic sheeting	<u>Product standard(s):</u> EN 71-1:2014 + A1:2018, cl. 8.25

Objects submitted for analysis	Characteristics or properties measured	Measurement principle and equipment	Analysis methods
Toys	Test for play figures	Verification if any part of a toy protrudes past the base of a Template during the test	<u>Product standard(s):</u> EN 71-1:2014 + A1:2018, cl. 8.33
Toys	Tension test for magnets	Verification if magnets of toys can be detached	<u>Product standard(s):</u> EN 71-1:2014 + A1:2018, cl. 8.34
Toys	Magnetic flux index test	Verification if the strength of magnets is adequate	<u>Product standard(s):</u> EN 71-1:2014 + A1:2018, cl. 8.35
Toys	Breakaway feature separation test	Verification if cords or chains and straps intended to be worn around the neck, separate into parts	<u>Product standard(s):</u> EN 71-1:2014 + A1:2018, cl. 8.38
Toys	Determination of projectile range	Determination of the maximum distance a projectile can travel	<u>Product standard(s):</u> EN 71-1:2014 + A1:2018, cl. 8.42
Toys	Assessment of leading parts of projectiles and flying toys	Determination if the tip of any projectile protrudes beyond the depth of a defined gauge	<u>Product standard(s):</u> EN 71-1:2014 + A1:2018, cl. 8.43
Toys	Length of suction cup projectiles	Determination of the length of projectiles with suction cups	<u>Product standard(s):</u> EN 71-1:2014 + A1:2018, cl. 8.44
Toys	Kinetic energy of projectiles	Verification of impact energy per surface by measurement of projectile mass, speed and impact surface	<u>Product standard:</u> EN71-1:2014+A1:2018, cl.8.24
Toys	Length of cords , chains and electrical cables	Determination of lengths	<u>Product standard:</u> EN71-1:2014+A1:2018, cl.8.40
Domaine technique : LAB13.6.1 – Heating			
Household and similar appliances	Heating at normal operation	Operation of EUT according the requirements of standard. Determination of points to measure. Temperature-measurement by direct method with thermocouples	<u>Product standard(s):</u> EN 60335-1:2012, cl. 11 EN 60335-2-x ¹
Toys	Measurement of temperature rise	Verification if toys containing a heat source do not ignite or represent a risk of burning	<u>Product standard(s):</u> EN 71-1:2014 + A1:2018, cl. 8.30
Domaine technique : LAB13.6.2 – Resistance to heat and fire			
Household and similar appliances Luminaires	Ball pressure test by examination of the diameter of the impression	Analysis, determination and preparation of the parts to be tested. Verification of the resistance to heat of insulating material by applying a ball pressure apparatus in climatic	<u>Test standard(s):</u> EN 60695-10-2:2014 <u>Product standard(s):</u> EN 60335-1:2012, cl. 30.1 EN 60335-2-x ¹ EN 60598-1:2015, cl. 13.2

Objects submitted for analysis	Characteristics or properties measured	Measurement principle and equipment	Analysis methods
		conditions as specified in the standard	EN 60598-2-x ²
Household and similar appliances Luminaire	Needle-flame test by verification of the extinction time, of the non-ignition of the tissue paper from glowing drops	Analysis, determination and preparation of the parts to be tested. Verification of the resistance of flammability and propagation by application of a test flame on the identified parts	<u>Test standard(s):</u> EN 60695-11-5:2017 <u>Product standard(s):</u> EN 60335-1:2012, cl. 30.2 EN 60335-2-x ¹ EN 60598-1:2015, cl. 13.3 EN 60598-2-x ²
Household and similar appliances Luminaire	Glow Wire Test by verification of the ignition and extinction times and of non-ignition of tissue paper from burning droplets	Verification of flammability resistance by application of a glowing hot wire to different parts of product	<u>Test standards:</u> EN 60695-2-10:2013 EN 60695-2-11:2014 <u>Product standards:</u> EN 60335-1:2012, cl. 30.2 EN 60335-2-x ¹ EN 60598-1:2015, cl. 13.3.2 EN 60598-2-x ²
General domain: LAB15 – Climatic and thermostatic chambers *			
Technical domains: LAB15.1 – Characterization and verification of climatic and thermostatic chambers			
Thermostatic enclosures of volume less than or equal to 2m ³	Temperature (-80°C to 200°C) Characterisation and verification Homogeneity and stability of the environment Setpoint deviation and indication error	Temperature measurement with a measurement unit associated with temperature sensors	<u>FD X 15-140 May 2013</u>
* the laboratory is competent to carry out these tests on the customer's site			
Domaine général : LAB17 – Electrical safety			
Domaine technique : LAB17.1 – Electrical testing			
Luminaire	Insulation resistance test	Verification if the insulation resistance is high enough between live parts and the body, as well as between accessible metal parts and metal foil on the inside of insulating linings and barriers	<u>Product standard(s):</u> EN 60598-1:2015, cl. 10.2 EN 60598-2-x ²
Household and similar appliances	Power input or current at stabilized condition	Verification of the rated power or current under normal load by direct measurement (U, I, W), the EUT being placed/operated in the normal conditions as specified in the standard	<u>Product standard(s):</u> EN 60335-1:2012, cl. 10 EN 60335-2-x ¹
Household and similar appliances Luminaire	Measurement of leakage current	Operation of EUT according the requirements of standard.	<u>Test standard(s):</u> EN 60990:2016

		Verification of leakage current values at normal operating condition at working temperature and/or after the humidity test	<u>Product standard(s):</u> EN 60335-1:2012, cl. 13 EN 60335-2-x ¹ EN 60598-1:2015, cl. 10.3 EN 60598-2-x ²
Household and similar appliances Luminaires	Dielectric strength test by verification of absence of a flashover or a breakdown	Verification of dielectric strength at normal operation at working temperature and/or after the humidity test. Identification of application points and application of the high voltage according to the values and under conditions as specified by the standard	<u>Product standard(s):</u> EN 60335-1:2012, cl. 13 EN 60335-2-x ¹ EN 60598-1:2015, cl. 10.2 EN 60598-2-x ²
Household and similar appliances, luminaires	Voltage and discharge energy of conductive parts Residual voltage on the pins of plug	Direct measurement of voltage in conditions specified by the product standard. Measurement of the discharge through a non-inductive resistance. Measurement of the residual voltage between the pins of the plug after a specified time after disconnection from the supply at voltage peak	<u>Product standard(s):</u> EN 60335-1:2012, cl. 8.1.4 + 22.5 EN 60335-2-x ¹ EN 60598-1:2015, cl. 8.2.7 EN 60598-2-x ²
Household and similar appliances Luminaires	Verification of the effectiveness of the provision for earthing of class I EUTs by measurement of the resistance of the earthing circuit	Examination of the earthing circuit and measurement of its resistance	<u>Product standard(s):</u> EN 60335-1:2012, cl. 27 EN 60335-2-x ¹ EN 60598-1:2015, cl. 7 EN 60598-2-1:89, -4:97+18, -5:15, -12:06+13

x¹: EN 60335-2-x covers the following standards: EN 60335-2-3:16, -9:03, -15:02+16, -23:03, -30:03+09, -74:03, -80:03, -85:03

x²: EN 60598-2-x covers the following standards: EN 60598-2-1:89, -4:97+18, -5:15, -8:97+13, -12:06+13