

English Version

## Household and similar electrical appliances - Safety - Part 1: General requirements

Appareils électrodomestiques et analogues - Sécurité -  
Partie 1: Exigences générales

Sicherheit elektrischer Geräte für den Hausgebrauch und  
ähnliche Zwecke - Teil 1: Allgemeine Anforderungen

This amendment A13 modifies the European Standard EN 60335-1:2012; it was approved by CENELEC on 2017-09-26. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

This amendment exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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European Committee for Electrotechnical Standardization  
Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

## European foreword

This document (EN 60335-1:2012/A13:2017) has been prepared by CLC/TC 61 "Safety of household and similar electrical appliances".

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2018-05-03
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2020-05-03

This Amendment 13 to EN 60335-1:2012 cancels and replaces with immediate effect EN 60335-1:2012/A12:2017.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC shall not be held responsible for identifying any or all such patent rights.

This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For the relationship with EU Directive(s) see informative Annexes ZZA and ZZB, which are integral parts of this document.

**Replace Annex ZC of EN 60335-1:2012 with the following:**

**Annex ZC**  
(normative)

**Normative references to international publications  
with their corresponding European publications**

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: [www.cenelec.eu](http://www.cenelec.eu).

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
-	-	Particular safety requirements for equipment to be connected to telecommunication networks and/or a cable distribution system	EN 41003	2008 <sup>1)</sup>
-	-	Household and similar electrical appliances - Electromagnetic fields - Methods for evaluation and measurement	EN 50366 + A1	2003 <sup>2)</sup> 2006
-	-	Safety of household and similar electrical appliances - Interpretations related to European Standards in the EN 60335 series	CLC/TR 50417	2016
-	-	Electric cables - Low voltage energy cables of rated voltages up to and including 450/750 V ( $U_0/U$ ) - Part 1: General requirements	EN 50525-1	2011
-	-	Electric cables - Low voltage energy cables of rated voltages up to and including 450/750 V ( $U_0/U$ ) - Part 2-11: Cables for general applications - Flexible cables with thermoplastic PVC insulation	EN 50525-2-11 <a href="http://www.china-gauges.com/">http://www.china-gauges.com/</a>	2011
-	-	Electric cables - Low voltage energy cables of rated voltages up to and including 450/750 V ( $U_0/U$ ) - Part 2-12: Cables for general applications - Cables with thermoplastic PVC insulation for extensible leads	EN 50525-2-12	2011

1) EN 41003:2008 will be replaced on 2019-06-20 by EN 62949:2017, *Particular safety requirements for equipment to be connected to information and communication networks* (IEC 62949:2017).

2) EN 50366:2003 is superseded by EN 62233:2008, *Measurement methods for electromagnetic fields of household appliances and similar apparatus with regard to human exposure* (IEC 62233:2005, mod.).

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
-	-	Electric cables - Low voltage energy cables of rated voltages up to and including 450/750 V ( $U_0/U$ ) - Part 2-21: Cables for general applications - Flexible cables with crosslinked elastomeric insulation	EN 50525-2-21 + AC	2011 2013
-	-	Electric cables - Low voltage energy cables of rated voltages up to and including 450/750 V ( $U_0/U$ ) - Part 2-22: Cables for general applications - High flexibility braided cables with crosslinked elastomeric insulation	EN 50525-2-22	2011
-	-	Electric cables - Low voltage energy cables of rated voltages up to and including 450/750 V ( $U_0/U$ ) - Part 2-31: Cables for general applications - Single core non-sheathed cables with thermoplastic PVC insulation	EN 50525-2-31	2011
-	-	Electric cables - Low voltage energy cables of rated voltages up to and including 450/750 V ( $U_0/U$ ) - Part 2-41: Cables for general applications - Single core cables with crosslinked silicone rubber insulation	EN 50525-2-41	2011
-	-	Electric cables - Low voltage energy cables of rated voltages up to and including 450/750 V ( $U_0/U$ ) - Part 2-42: Cables for general applications - Single core non-sheathed cables with crosslinked EVA insulation	EN 50525-2-42	2011
-	-	Electric cables - Low voltage energy cables of rated voltages up to and including 450/750 V ( $U_0/U$ ) - Part 2-51: Cables for general applications - Oil resistant control cables with thermoplastic PVC insulation	EN 50525-2-51  <a href="http://www.china-gauges.com/">http://www.china-gauges.com/</a>	2011
-	-	Electric cables - Low voltage energy cables of rated voltages up to and including 450/750 V ( $U_0/U$ ) - Part 2-71: Cables for general applications - Flat tinsel cables (cords) with thermoplastic PVC insulation	EN 50525-2-71	2011
-	-	Electric cables - Low voltage energy cables of rated voltages up to and including 450/750 V ( $U_0/U$ ) - Part 2-72: Cables for general applications - Flat divisible cables (cords) with thermoplastic PVC insulation	EN 50525-2-72	2011



<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
-	-	Electric cables - Low voltage energy cables of rated voltages up to and including 450/750 V ( $U_0/U$ ) - Part 2-81: Cables for general applications - Cables with crosslinked elastomeric covering for arc welding	EN 50525-2-81	2011
-	-	Electric cables - Low voltage energy cables of rated voltages up to and including 450/750 V ( $U_0/U$ ) - Part 2-82: Cables for general applications - Cables with crosslinked elastomeric insulation for decorative chains	EN 50525-2-82	2011
-	-	Electric cables - Low voltage energy cables of rated voltages up to and including 450/750 V ( $U_0/U$ ) - Part 2-83: Cables for general applications - Multicore cables with crosslinked silicone rubber insulation	EN 50525-2-83	2011
-	-	Electric cables - Low voltage energy cables of rated voltages up to and including 450/750 V ( $U_0/U$ ) - Part 3-11: Cables with special fire performance - Flexible cables with halogen-free thermoplastic insulation, and low emission of smoke	EN 50525-3-11	2011
-	-	Electric cables - Low voltage energy cables of rated voltages up to and including 450/750 V ( $U_0/U$ ) - Part 3-21: Cables with special fire performance - Flexible cables with halogen-free crosslinked insulation, and low emission of smoke	EN 50525-3-21 + AC	2011 2013
-	-	Electric cables - Low voltage energy cables of rated voltages up to and including 450/750 V ( $U_0/U$ ) - Part 3-31: Cables with special fire performance - Single core non-sheathed cables with halogen-free thermoplastic insulation, and low emission of smoke	EN 50525-3-31	2011
-	-	Electric cables - Low voltage energy cables of rated voltages up to and including 450/750 V ( $U_0/U$ ) - Part 3-41: Cables with special fire performance - Single core non-sheathed cables with halogen-free crosslinked insulation, and low emission of smoke	EN 50525-3-41	2011

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<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60061-1	-	Lamp caps and holders together with gauges for the control of interchangeability and safety - Part 1: Lamp caps	EN 60061-1	1993
			+ A1	1995
			+ A2	1995
			+ A3	1995
			+ A4	1996
			+ A5	1996
			+ A6	1996
			+ A7	1997
			+ A21	1998
			+ A22	1999
			+ A23	1999
			+ A24	2000
			+ A25	2001
			+ A26	2001
			+ A27	2014
			+ A28	2002
			+ A29	2002
			+ A30	2002
			+ A31	2003
			+ A32	2003
			+ A33	2003
			+ A34	2004
			+ A35	2005
			+ A36	2005
			+ A37	2006
			+ A38	2007
			+ A39	2007
			+ A40	2008
			+ A41	2009
			+ A42	2009
			+ A43	2010
			+ A44	2010
			+ A45	2011
			+ A46	2011
+ A47	2012			
+ A48	2012			
+ A49	2013			
+ A50	2014			
+ A51	2015			
+ A52	2016			
+ A53	2015			
+ A54	2016			
+ A55	2017			
+ A56	2017			
IEC 60065 (mod)	2001	Audio, video and similar electronic apparatus - Safety requirements	EN 60065	2002 <sup>3)</sup>
-	-		+ corr. August	2007
+ A1 (mod)	2005		+ A1	2006
			+ A11	2008
			+ A2	2010
		+ A12	2011	
IEC 60068-2-2	-	Environmental testing - Part 2-2: Tests - Test B: Dry heat	EN 60068-2-2	2007

3) EN 60065:2002 will be replaced on 2017-11-17 by EN 60065:2014, *Audio, video and similar electronic apparatus - Safety requirements* (IEC 60065:2014, mod.).

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60068-2-31	-	Environmental testing - Part 2-31: Tests - Test Ec: Rough handling shocks, primarily for equipment-type specimens	EN 60068-2-31	2008
IEC 60068-2-75	-	Environmental testing - Part 2-75: Tests - Test Eh: Hammer tests	EN 60068-2-75	2014
IEC 60068-2-78	-	Environmental testing - Part 2-78: Tests - Test Cab: Damp heat, steady state	EN 60068-2-78	2013
IEC/TR 60083	- 4)	Plugs and socket-outlets for domestic and similar general use standardized in member countries of IEC	-	-
IEC 60085	2007	Electrical insulation - Thermal evaluation and designation	EN 60085	2008
IEC 60112 + A1	2003 2009	Method for the determination of the proof and the comparative tracking indices of solid insulating materials	EN 60112 + A1	2003 2009
IEC 60127	series	Miniature fuses	EN 60127-1 + A1 + A2 EN 60127-2 EN 60127-3 EN 60127-4 + A1 + A2 EN 60127-5 EN 60127-6 EN 60127-7 EN 60127-10	2006 2011 2015 2014 2015 2005 2009 2013 2017 2014 2016 2002
IEC 60227	series	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V	- 5)	-
IEC 60238	-	Edison screw lampholders	<a href="http://www.china-gauges.com/">http://www.china-gauges.com/</a> EN 60238 + corr. January + A1 + A2	2004 2005 2008 2011
IEC 60245	series	Rubber insulated cables - Rated voltages up to and including 450/750 V	- 6)	-
IEC 60252-1	-	AC motor capacitors - Part 1: General - Performance, testing and rating - Safety requirements - Guide for installation and operation	EN 60252-1 + A1	2011 2013

4) Use the valid edition at the time of issue of this document: IEC/TR 60083:2015.

5) EN 50525 series applies instead of IEC 60227 series (see details above).

6) EN 50525 series applies instead of IEC 60245 series (see details above).

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60309	series	Plugs, socket-outlets and couplers for industrial purposes	EN 60309-1 + A1 + A1/AC + A2  EN 60309-2 + A1 + A2  EN 60309-4 + A1	1999 2007 2014 2012  1999 2007 2012  2007 2012
IEC 60320-1	-	Appliance couplers for household and similar general purposes - Part 1: General requirements	EN 60320-1 + AC	2015 2016
IEC 60320-2-2	-	Appliance couplers for household and similar general purposes - Part 2-2: Interconnection couplers for household and similar equipment	EN 60320-2-2	1998
IEC 60320-2-3	-	Appliance couplers for household and similar general purposes - Part 2-3: Appliance coupler with a degree of protection higher than IPX0	EN 60320-2-3 + A1	1998 2005
IEC 60384-14	2005	Fixed capacitors for use in electronic equipment - Part 14: Sectional specification - Fixed capacitors for electromagnetic interference suppression and connection to the supply mains	EN 60384-14 + AC + A1	2013 <sup>7)</sup> 2016 2016
IEC 60417	Data-base	Graphical symbols for use on equipment	-	-
IEC 60529	1989	Degrees of protection provided by enclosures (IP Code)	EN 60529	1991
-	-		+ corr. May	1993
+ A1	1999		+ AC + A1 + A2	2016-12 2000 2013
IEC 60598-1 (mod)	2008	Luminaires - Part 1: General requirements and tests	EN 60598-1 + A11	2008 <sup>8)</sup> 2009
-	-			
IEC 60664-1	2007	Insulation coordination for equipment within low-voltage systems - Part 1: Principles, requirements and tests	<a href="http://www.china-gauges.com/">http://www.china-gauges.com/</a> EN 60664-1	2007
IEC 60664-3	2003	Insulation coordination for equipment within low-voltage systems - Part 3: Use of coating, potting or moulding for protection against pollution	EN 60664-3 + A1	2003 2010

7) EN 60384-14:2005 has been replaced on 2016-07-10 by EN 60384-14:2013, *Fixed capacitors for use in electronic equipment - Part 14: Sectional specification - Fixed capacitors for electromagnetic interference suppression and connection to the supply mains* (IEC 60384-14:2013).

8) EN 60598-1:2008 will be replaced on 2017-10-20 by EN 60598-1:2015, *Luminaires - Part 1: General requirements and tests* (IEC 60598-1:2014, mod.).



<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60664-4 -	2005 -	Insulation coordination for equipment within low-voltage systems - Part 4: Consideration of high-frequency voltage stress	EN 60664-4 + corr. October	2006 2006
IEC 60691	-	Thermal-links - Requirements and application guide	EN 60691	2016
IEC 60695-2-11	2000	Fire hazard testing - Part 2-11: Glowing/hot-wire based test methods - Glow-wire flammability test method for end-products	EN 60695-2-11	2014 <sup>9)</sup>
IEC 60695-2-12	-	Fire hazard testing - Part 2-12: Glowing/hot-wire based test methods - Glow-wire flammability test method for materials	EN 60695-2-12 + A1	2010 2014
IEC 60695-2-13	-	Fire hazard testing - Part 2-13: Glowing/hot-wire based test methods - Glow-wire ignitability test method for materials	EN 60695-2-13 + A1	2010 2014
IEC 60695-10-2	-	Fire hazard testing - Part 10-2: Abnormal heat - Ball pressure test	EN 60695-10-2	2014
IEC 60695-11-5	2004	Fire hazard testing - Part 11-5: Test flames - Needle-flame test method - Apparatus, confirmatory test arrangement and guidance	EN 60695-11-5	2005
IEC 60695-11-10	-	Fire hazard testing - Part 11-10: Test flames - 50 W horizontal and vertical flame test methods	EN 60695-11-10 + AC	2013 2014
IEC 60730-1 (mod) - - + A1 (mod) - - - - + A2 (mod)	1999 - - 2003 - - - - 2007	Automatic electrical controls for household and similar use - Part 1: General requirements	EN 60730-1 + corr. August + A12 + A1 + A13 + A14 + A16 + A16/corr. March + A2	2000 <sup>10)</sup> 2007 2003 2004 2004 2005 2007 2010 2008
IEC 60730-2-8 (mod) + A1 (mod)	2000 2002	Automatic electrical controls for household and similar use - Part 2-8: Particular requirements for electrically operated water valves, including mechanical requirements	EN 60730-2-8 + A1 + A2	2002 2003 2016
IEC 60730-2-10	2006	Automatic electrical controls for household and similar use - Part 2-10: Particular requirements for motor starting relays	EN 60730-2-10	2007

9) EN 60695-2-11:2001 has been replaced on 2017-03-13 by EN 60695-2-11:2014, *Fire hazard testing - Part 2-11: Glowing/hot-wire based test methods - Glow-wire flammability test method for end-products (GWEPT)* (IEC 60695-2-11:2014).

10) EN 60730-1:2000 is replaced by EN 60730-1:2016, *Automatic electrical controls - Part 1: General requirements* (IEC 60730-1:2013, mod. + corr. September 2014)

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60738-1	-	Thermistors - Directly heated positive temperature coefficient - Part 1: Generic specification	EN 60738-1 + A1	2006 2009
IEC 60906-1	- 11)	IEC system of plugs and socket-outlets for household and similar purposes - Part 1: Plugs and socket-outlets 16 A 250 V a.c.	-	-
IEC 60990	1999	Methods of measurement of touch current and protective conductor current	EN 60990	1999 12)
IEC 60999-1	1999	Connecting devices - Electrical copper conductors - Safety requirements for screw-type and screwless-type clamping units - Part 1: General requirements and particular requirements for clamping units for conductors from 0,2 mm <sup>2</sup> up to 35 mm <sup>2</sup> (included)	EN 60999-1	2000
IEC 61000-4-2	-	Electromagnetic compatibility (EMC) - Part 4-2: Testing and measurement techniques - Electrostatic discharge immunity test	EN 61000-4-2	2009
IEC 61000-4-3	-	Electromagnetic compatibility (EMC) - Part 4-3: Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test	EN 61000-4-3 + A1 + A2	2006 2008 2010
IEC 61000-4-4	-	Electromagnetic compatibility (EMC) - Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test	EN 61000-4-4	2012
IEC 61000-4-5	-	Electromagnetic compatibility (EMC) - Part 4-5: Testing and measurement techniques - Surge immunity test	EN 61000-4-5	2014
IEC 61000-4-6	-	Electromagnetic compatibility (EMC) - Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields	EN 61000-4-6 + AC <small><a href="http://www.china-gauges.com/">http://www.china-gauges.com/</a></small>	2014 2015
IEC 61000-4-11	2004	Electromagnetic compatibility (EMC) - Part 4-11: Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity tests	EN 61000-4-11	2004

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11) Use the valid edition at the date of issue of this document: IEC 60906-1:2009.

12) EN 60990:1999 will be replaced on 2019-07-04 by EN 60990:2016, *Methods of measurement of touch current and protective conductor current* (IEC 60990:2016)

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61000-4-13 + A1	2002 2009	Electromagnetic compatibility (EMC) - Part 4-13: Testing and measurement techniques - Harmonics and interharmonics including mains signalling at a.c. power port, low frequency immunity tests	EN 61000-4-13 + A1 + A2	2002 2009 2016
IEC 61000-4-34 + A1	2005 2009	Electromagnetic compatibility (EMC) - Part 4-34: Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity tests for equipment with input current more than 16 A per phase	EN 61000-4-34 + A1	2007 2009
IEC 61032	1997	Protection of persons and equipment by enclosures - Probes for verification	EN 61032	1998
IEC 61058-1 (mod) + A1 + A2	2000 2001 2007	Switches for appliances - Part 1: General requirements	EN 61058-1 - + A2	2002 <sup>13)</sup> - 2008
IEC 61180-1	-	High-voltage test techniques for low- voltage equipment - Part 1: Definitions, test and procedure requirements	EN 61180-1	1994 <sup>14)</sup>
IEC 61180-2	-	High-voltage test techniques for low- voltage equipment - Part 2: Test equipment	EN 61180-2	1994 <sup>12)</sup>
IEC 61558-1 - + A1	2005 - 2009	Safety of power transformers, power supplies, reactors and similar products - Part 1: General requirements and tests	EN 61558-1 + corr. August + A1	2005 2006 2009
IEC 61558-2-6	2009	Safety of transformers, reactors, power supply units and similar products for supply voltages up to 1 100 V - Part 2-6: Particular requirements and tests for safety isolating transformers and power supply units incorporating safety isolating transformers	EN 61558-2-6	2009
IEC 61770	-	Electric appliances connected to the water mains - Avoidance of backsiphonage and failure of hose- sets	EN 61770 + AC	2009 2011
IEC 62233	-	Measurement methods for electromagnetic fields of household appliances and similar apparatus with regard to human exposure	EN 62233 + corr. Aug.	2008 2008

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13) EN 61058-1:2002 includes corr. January. 2009 + A1:2001 to IEC 61058-1:2000.

14) Both EN 61180-1:1994 & EN 61180-2:1994 will be replaced on 2019-07-29 by EN 61180:2016, *High-voltage test techniques for low-voltage equipment - Definitions, test and procedure requirements, test equipment* (IEC 61180:2016).

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
ISO 2768-1	-	General tolerances - Part 1: Tolerances for linear and angular dimensions without individual tolerance indications	EN 22768-1	1993
ISO 7000	2004	Graphical symbols for use on equipment - Index and synopsis	-	-
ISO 9772 + A1	2001 2003	Cellular plastics - Determination of horizontal burning characteristics of small specimens subjected to a small flame	-	-
ISO 9773	1998	Plastics - Determination of burning behaviour of thin flexible vertical specimens in contact with a small- flame ignition source	EN ISO 9773 + A1	1998 2003



**Replace Annex ZZ of EN 60335-1:2012 with the following:**

**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 European Standard has been prepared under a Commission's standardization request relating to harmonized standards in the field of the Low Voltage Directive, M/511, to provide one voluntary means of conforming to safety objectives of Directive 2014/35/EU of the European Parliament and of the Council of 26 February 2014 on the harmonization of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits [2014 OJ L96].

Once this standard is cited in the Official Journal of the European Union under that Directive, compliance with the normative clauses of this standard given in Table ZZA.1 confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding safety objectives of that Directive, and associated EFTA regulations.

Compliance with this Part 1 when used together with the relevant Part 2 provides one means of conformity with the safety objectives.

**Table ZZA.1 – Correspondence between this European Standard and Annex I of Directive 2014/35/EU [2014 OJ L96]**

Safety objectives of Directive 2014/35/EU	Clause(s) / sub-clause(s) of this EN	Remarks/ Notes
1 a)	Clauses 4, 7	None
1 b)	Clauses 4, 7	None
1 c)	Clauses 4, 7	None
2 a)	Clauses 6, 7, 8, 9, 10, 11, 13, 14, 15, 16, 17, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31	None
2 b)	Clauses 6, 7, 8, 9, 10, 11, 13, 14, 15, 16, 17, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31	None
2 c)	Clauses 6, 7, 11, 15, 17, 18, 19, 20, 21, 22, 24, 25, 30, 32	None
2 d)	Clauses 6, 7, 8, 9, 10, 11, 13, 14, 15, 16, 17, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31	None
3 a)	Clauses 6, 7, 11, 17, 18, 19, 20, 21, 22	None
3 b)	Clauses 7, 11, 15, 19, 22, 25, 32	None
3 c)	Clauses 6, 7, 9, 10, 11, 14, 17, 18, 19, 21, 22	None

**WARNING 1** — Presumption of conformity stays valid only as long as a reference to this European Standard is maintained in the list published in the Official Journal of the European Union. Users of this standard should consult frequently the latest list published in the Official Journal of the European Union.

**WARNING 2** — Other Union legislation may be applicable to the product(s) falling within the scope of this standard.

**Annex ZZB**  
(informative)

**Relationship between this European Standard and the essential requirements of Directive 2006/42/EC aimed to be covered**

This European Standard has been prepared under a Commission’s standardization request relating to Mandate for standardization in the field of machinery “M/396” to provide one voluntary means of conforming to essential requirements of EU Directive 2006/42/EC.

Once this standard is cited in the Official Journal of the European Union under that EU Directive compliance with the normative clauses of this standard given in Table ZZB.1 confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding essential requirements of that Directive and associated EFTA regulations.

Compliance with this Part 1 when used together with the relevant Part 2 provides one means of conformity with the relevant essential health and safety requirements.

**Table ZZB.1 – Correspondence between this European Standard and Annex I of Directive 2006/42/EC [OJ No L 157]**

Essential Health and Safety Requirements of Directive 2006/42/EC.	Clause(s) / sub-clause(s) of this EN	Remarks / Notes
All	All clauses	None

**WARNING 1** — Presumption of conformity stays valid only as long as a reference to this European Standard is maintained in the list published in the Official Journal of the European Union. Users of this standard should consult frequently the latest list published in the Official Journal of the European Union.

**WARNING 2** — Other Union legislation may be applicable to the product(s) falling within the scope of this standard.