



**COMMISSION DELEGATED REGULATION (EU) No 1060/2010
of 28 September 2010**

**supplementing Directive 2010/30/EU of the European Parliament
and of the Council with regard to energy labelling of household
refrigerating appliances**

(Text with EEA relevance)

Article 1

Subject matter and scope

1. This Regulation establishes requirements for the labelling of and the provision of supplementary product information on electric mains-operated household refrigerating appliances with a storage volume between 10 and 1 500 litres.

2. This Regulation shall apply to electric mains-operated household refrigerating appliances, including those sold for non-household use or for the refrigeration of items other than foodstuffs and including built-in appliances.

It shall also apply to electric mains-operated household refrigerating appliances that can be battery-operated.

3. This Regulation shall not apply to:

- (a) refrigerating appliances that are primarily powered by energy sources other than electricity, such as liquefied petroleum gas (LPG), kerosene and bio-diesel fuels;
- (b) battery-operated refrigerating appliances that can be connected to the mains through an AC/DC converter, purchased separately;
- (c) custom-made refrigerating appliances, made on a one-off basis and not equivalent to other refrigerating appliance models;
- (d) refrigerating appliances for tertiary sector application where the removal of refrigerated foodstuffs is electronically sensed and that information can be automatically transmitted through a network connection to a remote control system for accounting;
- (e) appliances where the primary function is not the storage of foodstuffs through refrigeration, such as stand-alone ice-makers or chilled drinks dispensers.

Article 2

Definitions

In addition to the definitions laid down in Article 2 of Directive 2010/30/EU, the following definitions shall apply:

- (1) ‘foodstuffs’ means food, ingredients, beverages including wine, and other items primarily intended for consumption which require refrigeration at specified temperatures;

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- (2) ‘household refrigerating appliance’ means an insulated cabinet, with one or more compartments, intended for refrigerating or freezing foodstuffs, or for the storage of refrigerated or frozen foodstuffs for non-professional purposes, cooled by one or more energy-consuming processes, including appliances sold as building kits to be assembled by the end-user;
- (3) ‘built-in appliance’ means a fixed refrigerating appliance intended to be installed in a cabinet, in a prepared recess in a wall or similar location, and requiring furniture finishing;
- (4) ‘refrigerator’ means a refrigerating appliance intended for the preservation of foodstuffs with at least one compartment suitable for the storage of fresh food and/or beverages, including wine;
- (5) ‘compression-type refrigerating appliance’ means a refrigerating appliance in which refrigeration is effected by means of a motor-driven compressor;
- (6) ‘absorption-type refrigerating appliance’ means a refrigerating appliance in which refrigeration is effected by an absorption process using heat as the energy source;
- (7) ‘refrigerator-freezer’ means a refrigerating appliance with at least one fresh-food storage compartment and at least one compartment suitable for the freezing of fresh food and the storage of frozen foodstuffs under three-star storage conditions (the food-freezer compartment);
- (8) ‘frozen-food storage cabinet’ means a refrigerating appliance with one or more compartments suitable for the storage of frozen foodstuffs;
- (9) ‘food freezer’ means a refrigerating appliance with one or more compartments suitable for freezing foodstuffs with temperatures ranging from ambient temperature down to -18 °C , and which is also suitable for the storage of frozen foodstuffs under three-star storage conditions; a food freezer may also include two-star sections and/or compartments within the compartment or cabinet;
- (10) ‘wine storage appliance’ means a refrigerating appliance that has no compartment other than one or more wine storage compartments;
- (11) ‘multi-use appliance’ means a refrigerating appliance that has no compartment other than one or more multi-use compartments;
- (12) ‘equivalent household refrigerating appliance’ means a household refrigerating appliance model placed on the market with the same gross and storage volumes, same technical, efficiency and performance characteristics, and same compartment types as another household refrigerating appliance model placed on the market under a different commercial code number by the same manufacturer;
- (13) ‘end-user’ means a consumer buying or expected to buy a household refrigerating appliance;

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- (14) ‘point of sale’ means a location where household refrigerating appliances are displayed or offered for sale, hire or hire-purchase.

The definitions set out in Annex I shall also apply.

*Article 3***Responsibilities of suppliers**

Suppliers shall ensure that:

- (a) each household refrigerating appliance is supplied with a printed label in the format and containing information as set out in Annex II;
- (b) a product fiche, as set out in Annex III, is made available;
- (c) the technical documentation as set out in Annex IV is made available on request to the authorities of Member States and to the Commission;
- (d) any advertisement for a specific model of household refrigerating appliance contains the energy efficiency class, if the advertisement discloses energy-related or price information;
- (e) any technical promotional material concerning a specific model of household refrigerating appliance which describes its specific technical parameters includes the energy efficiency class of that model;

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- (f) an electronic label in the format and containing the information set out in Annex II is made available to dealers for each household refrigerating appliance model placed on the market from 1 January 2015 with a new model identifier. It may also be made available to dealers for other household refrigerating appliance models;
- (g) an electronic product fiche as set out in Annex III is made available to dealers for each household refrigerating appliance model placed on the market from 1 January 2015 with a new model identifier. It may also be made available to dealers for other household refrigerating appliance models.

▼B*Article 4***Responsibilities of dealers**

Dealers shall ensure that:

- (a) each household refrigerating appliance at the point of sale bears the label provided by suppliers in accordance with Article 3(a) on the outside of the front or top of the appliance, in such a way as to be clearly visible;

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- (b) household refrigerating appliances offered for sale, hire or hire purchase where the end-user cannot be expected to see the product displayed, are marketed with the information to be provided by the suppliers in accordance with Annex V. Where the offer for is made through the internet and an electronic label and an electronic product fiche have been made available in accordance with Article 3(f) and 3(g) the provisions of Annex X shall apply instead;

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- (c) any advertisement for a specific model of household refrigerating appliance contains its energy efficiency class, if the advertisement discloses energy-related or price information;
- (d) any technical promotional material concerning a specific model of household refrigerating appliance, which describes its specific technical parameters, includes the energy efficiency class of that model.

*Article 5***Measurement methods**

The information to be provided pursuant to Article 3 shall be obtained by reliable, accurate and reproducible measurement procedures, which take into account the recognised state-of-the-art measurement methods, as set out in Annex VI.

*Article 6***Verification procedure for market surveillance purposes**

Member States shall apply the procedure laid down in Annex VII when assessing the conformity of the declared energy efficiency class, the annual energy consumption, the fresh and frozen food volumes, the freezing capacity and the airborne acoustical noise emissions.

*Article 7***Revision**

The Commission shall review this Regulation in the light of technological progress no later than four years after its entry into force. The review shall in particular assess the verification tolerances set out in Annex VII and the possibilities for removing or reducing the values of the correction factors set out in Annex VIII.

*Article 8***Repeal**

Directive 94/2/EC is repealed from 30 November 2011.

*Article 9***Transitional provisions**

1. Articles 3(d), (e), 4(b), (c) and (d) shall not apply to printed advertisement and printed technical promotional material published before 30 March 2012.

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2. Household refrigerating appliances placed on the market before 30 November 2011 shall comply with the provisions set out in Directive 94/2/EC.
3. Household refrigerating appliances which comply with the provisions of this Regulation and which are placed on the market or offered for sale, hire or hire-purchase before 30 November 2011 shall be regarded as complying with the requirements of Directive 94/2/EC.

*Article 10***Entry into force and application**

1. This Regulation shall enter into force on the 20th day following its publication in the *Official Journal of the European Union*.
2. It shall apply from 30 November 2011. However, Articles 3(d), (e), 4(b), (c) and (d) shall apply from 30 March 2012.

This Regulation shall be binding in its entirety and directly applicable in all Member States.



ANNEX I

Definitions applicable for the purposes of Annexes II to IX

For the purposes of Annexes II to IX, the following definitions shall apply:

- (a) ‘frost-free system’ means a system automatically operated to prevent the permanent formation of frost, where cooling is provided by forced air circulation, the evaporator or evaporators are defrosted by an automatic defrost system, and the water from defrosting is disposed of automatically;
- (b) ‘frost-free compartment’ means any compartment defrosted by a frost-free system;
- (c) ‘refrigerator-cellar’ means a refrigerating appliance where at least one fresh-food storage compartment and one cellar compartment, but no frozen-food storage, chill or ice-making compartments, are present;
- (d) ‘cellar’ means a refrigerating appliance where only one or more cellar compartments are present;
- (e) ‘refrigerator-chiller’ means a refrigerating appliance where at least a fresh-food storage compartment and a chill compartment, but no frozen-food storage compartments, are present;
- (f) ‘compartments’ means any of the compartments listed in points (g) to (n);
- (g) ‘fresh-food storage compartment’ means a compartment designed for the storage of unfrozen foodstuffs, which may itself be divided into sub-compartments;
- (h) ‘cellar compartment’ means a compartment intended for the storage of particular foodstuffs or beverages at a temperature warmer than that of a fresh-food storage compartment;
- (i) ‘chill compartment’ means a compartment intended specifically for the storage of highly perishable foodstuffs;
- (j) ‘ice-making compartment’ means a low-temperature compartment intended specifically for the freezing and storage of ice;
- (k) ‘frozen-food storage compartment’ means a low-temperature compartment intended specifically for the storage of frozen foodstuffs and classified according to temperature as follows:
 - (i) ‘one-star compartment’: a frozen-food storage compartment in which the temperature is not warmer than -6 °C ;
 - (ii) ‘two-star compartment’: a frozen-food storage compartment in which the temperature is not warmer than -12 °C ;
 - (iii) ‘three-star compartment’: a frozen-food storage compartment in which the temperature is not warmer than -18 °C ;

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- (iv) ‘food freezer compartment’ (or ‘four-star compartment’): a compartment suitable for freezing at least 4,5 kg of foodstuffs per 100 l of storage volume, and in no case less than 2 kg, from ambient temperature down to -18 °C over a period of 24 hours, which is also suitable for the storage of frozen food under three-star storage conditions, and may include two-star sections within the compartment;
 - (v) ‘0-star compartment’: a frozen-food storage compartment in which the temperature is $< 0\text{ °C}$ and which can also be used for the freezing and storage of ice but is not intended for the storage of highly perishable foodstuffs;
- (l) ‘wine storage compartment’ means a compartment exclusively designed either for short-term wine storage to bring wines to the ideal drinking temperature or for long-term wine storage to allow wine to mature, with the following features:
- (i) continuous storage temperature, either pre-set or set manually according to the manufacturer’s instructions, in the range from $+ 5\text{ °C}$ to $+ 20\text{ °C}$;
 - (ii) storage temperature(s) within a variation over time of less than 0,5 K at each declared ambient temperature specified by the climate class for household refrigerating appliances;
 - (iii) active or passive control of the compartment humidity in the range from 50 % to 80 %;
 - (iv) constructed to reduce the transmission of vibration to the compartment, whether from the refrigerator compressor or from any external source;
- (m) ‘multi-use compartment’ means a compartment intended for use at two or more of the temperatures of the compartment types and capable of being set by the end-user to continuously maintain the operating temperature range applicable to each compartment type according to the manufacturer’s instructions; however, where a feature can shift temperatures in a compartment to a different operating temperature range for a period of limited duration only (such as a fast-freeze facility), the compartment is not a ‘multi-use compartment’ as defined by this Regulation;
- (n) ‘other compartment’ means a compartment, other than a wine storage compartment, intended for the storage of particular foodstuffs at a temperature warmer than $+ 14\text{ °C}$;
- (o) ‘two-star section’ means part of a food-freezer, a food-freezer compartment, a three-star compartment or a three-star frozen-food storage cabinet which does not have its own individual access door or lid and in which the temperature is not warmer than $- 12\text{ °C}$;
- (p) ‘chest freezer’, means a food freezer in which the compartment(s) is (are) accessible from the top of the appliance or which has both top-opening type and upright type compartments but where the gross volume of the top-opening type compartment(s) exceeds 75 % of the total gross volume of the appliance;

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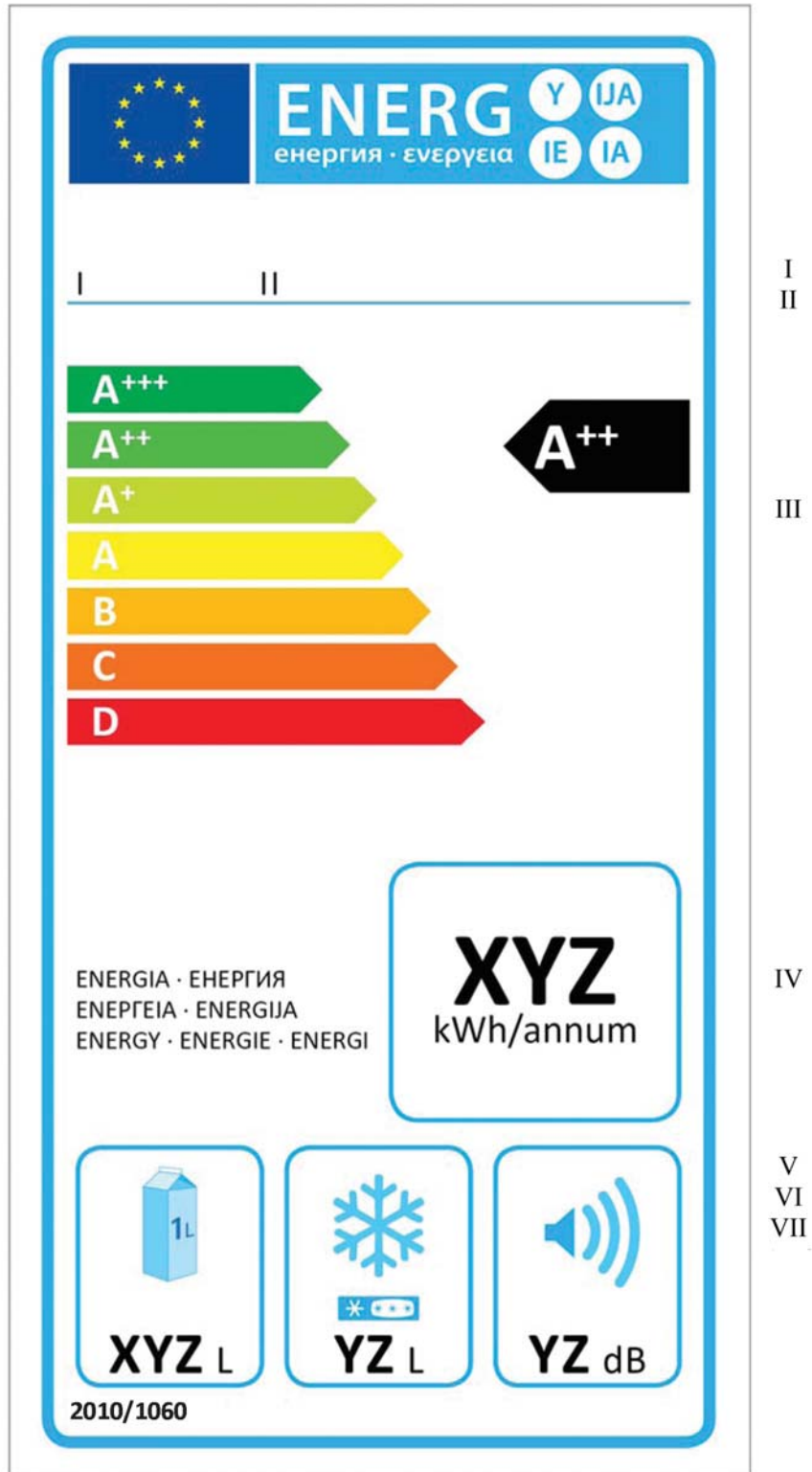
- (q) ‘top-opening type’ or ‘chest type’ means a refrigerating appliance with its compartment(s) accessible from the top of the appliance;
- (r) ‘upright type’ means a refrigerating appliance with its compartment(s) accessible from the front of the appliance;
- (s) ‘fast freeze’ means a reversible feature to be activated by the end-user according to the manufacturer’s instructions, which decreases the storage temperature of the freezer or freezer compartment to achieve faster freezing of unfrozen foodstuffs;
- (t) ‘model identifier’ means the code, usually alphanumeric, which distinguishes a specific refrigerating appliance model from other models with the same trade mark or supplier’s name.

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ANNEX II

Label

1. LABEL FOR HOUSEHOLD REFRIGERATING APPLIANCES CLASSIFIED IN ENERGY EFFICIENCY CLASSES A+++ TO C



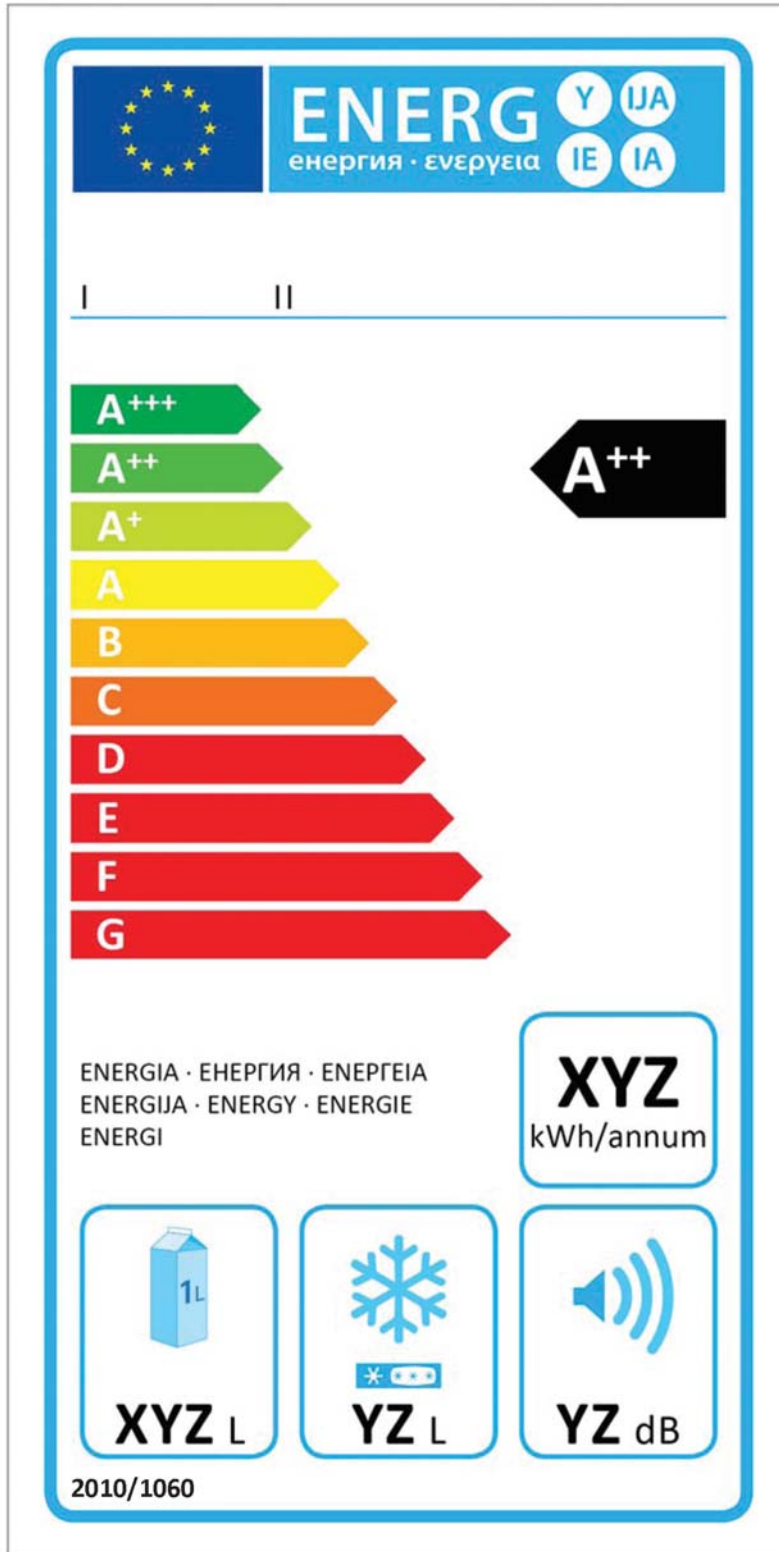
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- (1) The following information shall be included in the label:
- I. supplier's name or trade mark;
 - II. supplier's model identifier;
 - III. the energy efficiency class determined in accordance with Annex IX; the head of the arrow containing the energy efficiency class of the household refrigerating appliance shall be placed at the same height as the head of the arrow of the relevant energy efficiency class;
 - IV. annual energy consumption (AE_C) in kWh per year, rounded up to the nearest integer and calculated in accordance with point 3(2) of Annex VIII;
 - V. sum of the storage volumes of all compartments that do not merit a star rating (i.e. operating temperature > -6 °C), rounded to the nearest integer;
 - VI. sum of the storage volumes of all frozen-food storage compartments that merit a star rating (i.e. operating temperature ≤ -6 °C), rounded to the nearest integer and star rating of the compartment with the highest share of that sum; where the household refrigerating appliances has no frozen-food storage compartment(s) the supplier shall declare '- L' instead of a value and leave the position for star rating blank;
 - VII. airborne acoustical noise emissions expressed in dB(A) re1 pW, rounded to the nearest integer.
- However, for wine storage appliances, points V and VI are replaced by the rated capacity in number of standard bottles of 75 centilitres that may be fitted in the appliance in accordance with the manufacturer's instructions.
- (2) The design of the label shall be in accordance with point 3(1) of this Annex. By way of derogation, where a model has been awarded an 'EU Ecolabel' under Regulation (EC) No 66/2010 of the European Parliament and of the Council ⁽¹⁾, a copy of the EU Ecolabel may be added.

⁽¹⁾ OJ L 27, 30.1.2010, p. 1.

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2. LABEL FOR HOUSEHOLD REFRIGERATING APPLIANCES CLASSIFIED IN ENERGY EFFICIENCY CLASSES D TO G



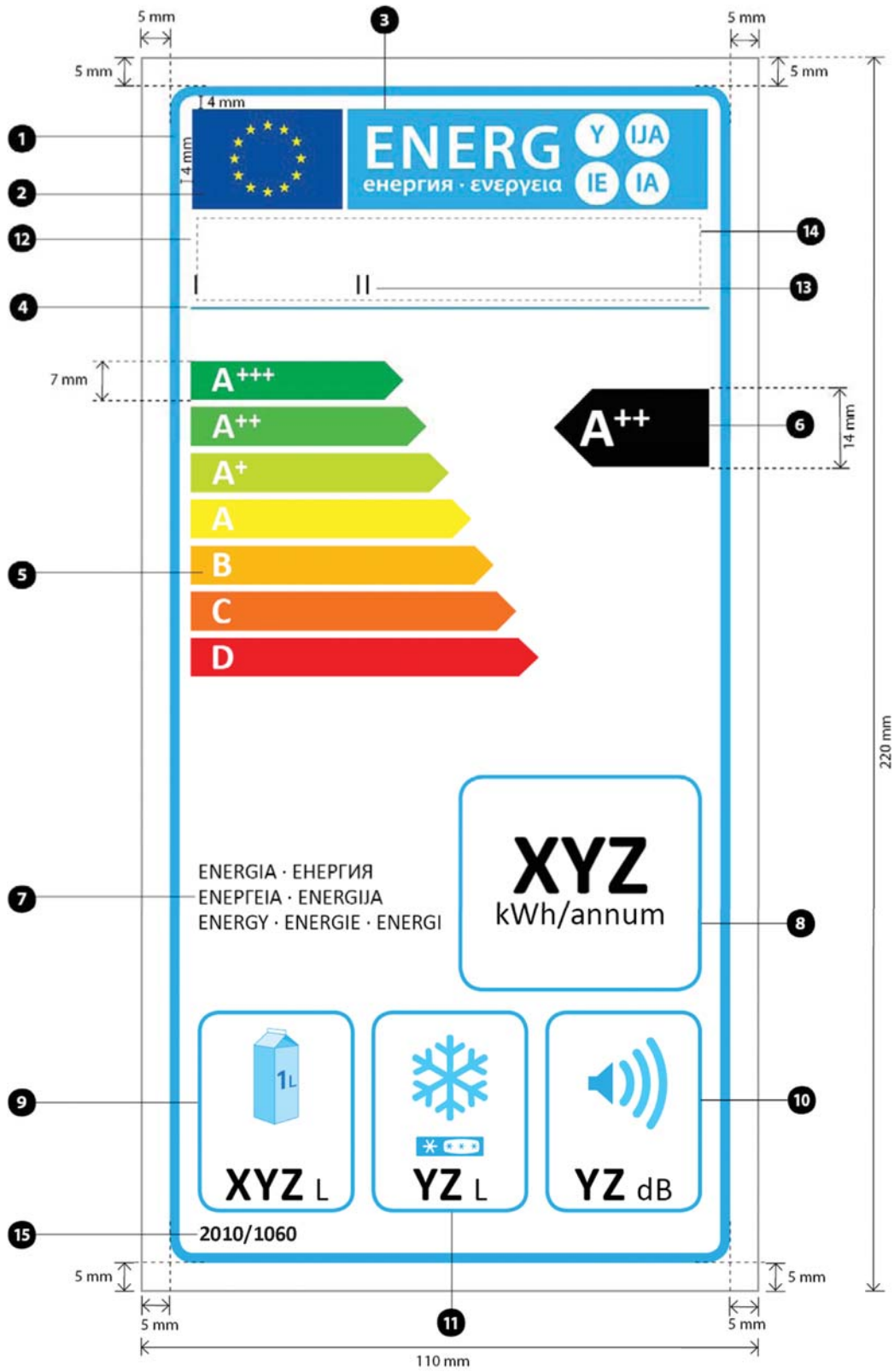
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- (1) The information listed in point 1(1) shall be included in this label.
- (2) The design of the label shall be in accordance with point 3(2) of this Annex. By way of derogation, where a model has been awarded an 'EU Ecolabel' under Regulation (EC) No 66/2010, a copy of the EU Ecolabel may be added.

3. LABEL DESIGN

- (1) For household refrigerating appliances classified in energy efficiency classes A+++ to C, except for wine storage appliances, the design of the label shall be as the following:

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Whereby:

- (a) The label shall be at least 110 mm wide and 220 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.
- (b) The background of the label shall be white.
- (c) Colours shall be CMYK — cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.
- (d) The label shall fulfil all of the following requirements (numbers refer to the figure above):

❶ **EU label border stroke:** 5 pt — colour: Cyan 100 % — round corners: 3,5 mm.

❷ **EU logo** — colours: X-80-00-00 and 00-00-X-00.

❸ **Energy label:** colour: X-00-00-00.

Pictogram as depicted: EU logo + energy label:
width: 92 mm, height: 17 mm.

❹ **Sub-logos border:** 1 pt — colour: Cyan 100 % — length: 92,5 mm.

❺ **A-G scale**

— **Arrow:** height: 7 mm, gap: 0,75 mm — colours:

Highest class: X-00-X-00,

Second class: 70-00-X-00,

Third class: 30-00-X-00,

Fourth class: 00-00-X-00,

Fifth class: 00-30-X-00,

Sixth class: 00-70-X-00,

Last class: 00-X-X-00.

— **Text:** Calibri bold 19 pt, capitals and white; '+' symbols: Calibri bold 13 pt, capitals, white, aligned on a single row.

❻ **Energy efficiency class**

— **Arrow:** width: 26 mm, height: 14 mm, 100 % black;

— **Text:** Calibri bold 29 pt, capitals and white; '+' symbols: Calibri bold 18 pt, capitals, white and aligned on a single row.

❼ **Energy**

— **Text:** Calibri regular 11 pt, capitals, black.

▼ B**8 Annual energy consumption:**

— **Border:** 3 pt — colour: Cyan 100 % — round corners: 3,5 mm.

— **Value:** Calibri bold 45 pt, 100 % black.

— **Second line:** Calibri regular 17 pt, 100 % black.

9 Storage volumes of all compartments that do not merit a star rating:

— **Border:** 3 pt — colour: Cyan 100 % — round corners: 3,5 mm.

— **Value:** Calibri bold 25 pt, 100 % black. Calibri regular 17 pt, 100 % black.

10 Airborne acoustical noise emissions:

— **Border:** 3 pt — colour: Cyan 100 % — round corners: 3,5 mm.

— **Value:** Calibri bold 25 pt, 100 % black.

Calibri regular 17 pt, 100 % black.

11 Storage volumes of all frozen-food storage compartments that merit a star rating:

— **Border:** 3 pt — colour: Cyan 100 % — round corners: 3,5 mm.

— **Value:** Calibri bold 25 pt, 100 % black.

Calibri regular 17 pt, 100 % black.

12 Supplier's name or trademark**13 Supplier's model identifier**

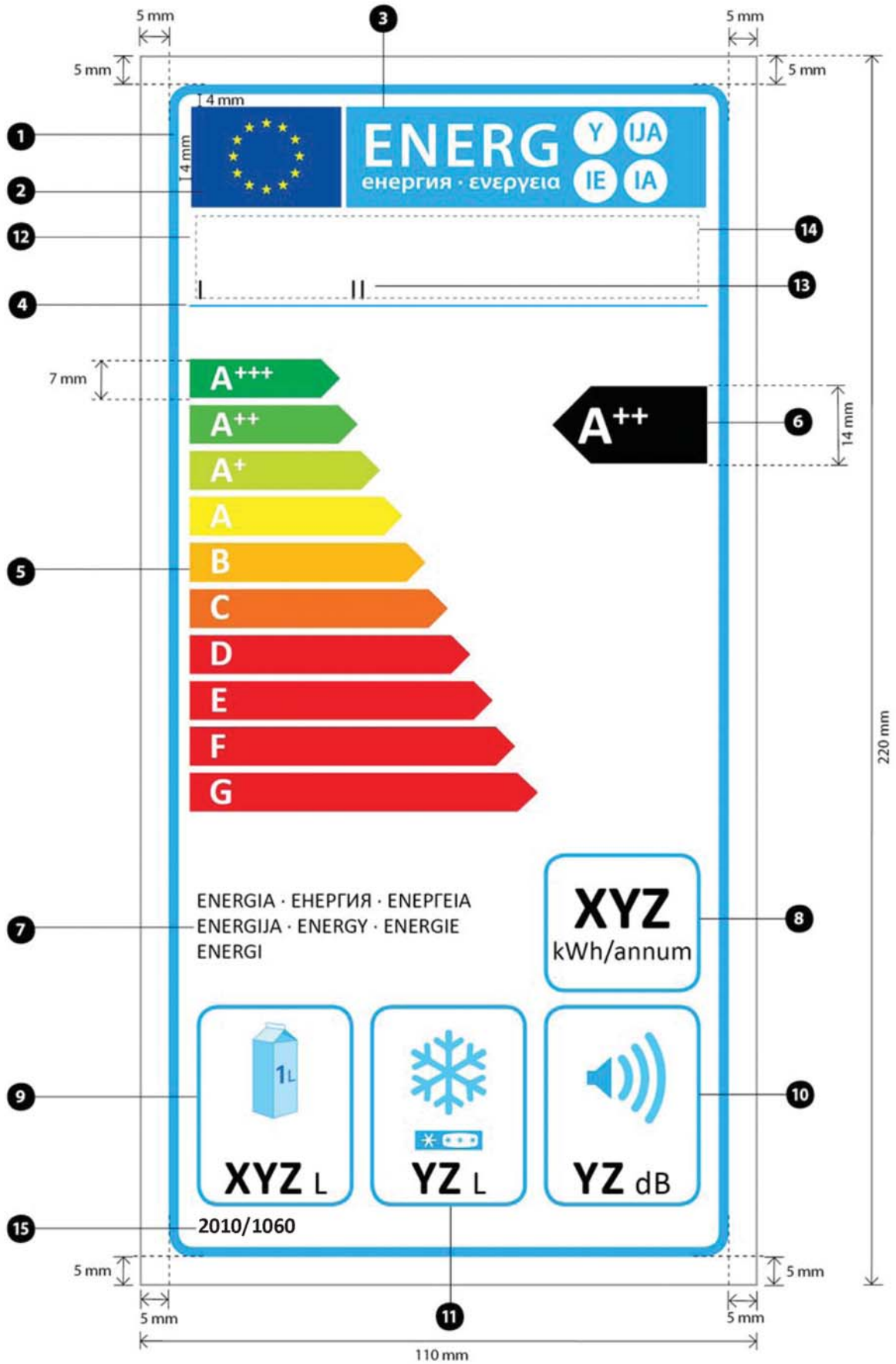
14 The supplier's name or trademark and model identifier should fit in a space of 90 x 15 mm.

15 Numbering of the Regulation:

Text: Calibri bold 11 pt.

(2) For household refrigerating appliances classified in energy efficiency classes D to G, except for wine storage appliances, the design of the label shall be the following:

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Whereby:

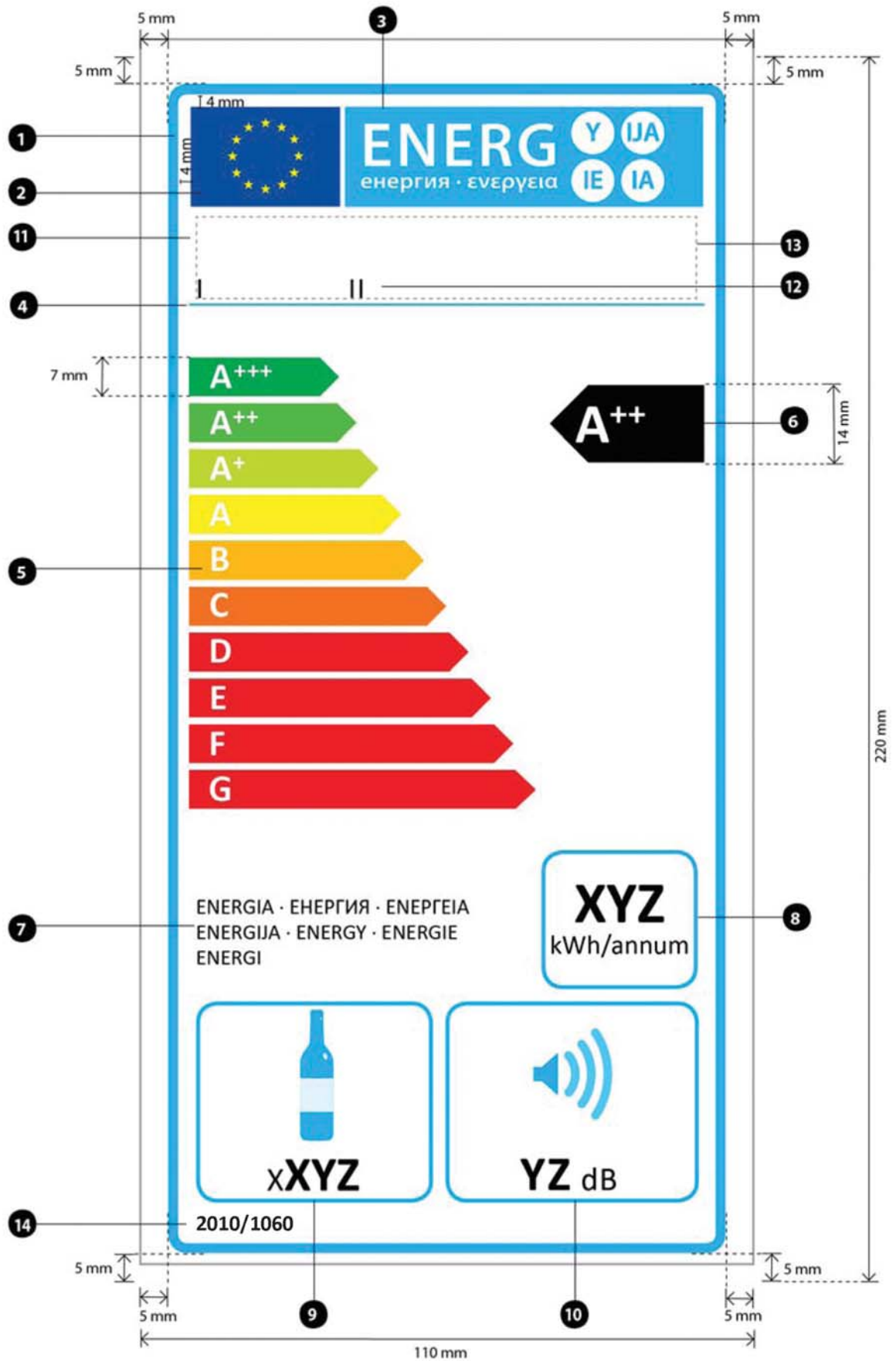
The design of the label shall be in accordance with point 3(1) of this Annex except for Number 8 where the following applies:

8 Annual energy consumption:

- **Border:** 3 pt — colour: Cyan 100 % — round corners: 3,5 mm.
- **Value:** Calibri bold 32 pt, 100 % black.
- **Second line:** Calibri regular 14 pt, 100 % black.

(3) For wine storage appliances, the design of the label shall be the following:

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Whereby:

- (a) The label shall be at least 110 mm wide and 220 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.
- (b) The background of the label shall be white.
- (c) Colours shall be CMYK — cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.
- (d) The label shall fulfil all of the following requirements (numbers refer to the figure above):

❶ **EU label border stroke:** 5 pt — colour: Cyan 100 % — round corners: 3,5 mm.

❷ **EU logo** — colours: X-80-00-00 and 00-00-X-00.

❸ **Energy label:** colour: X-00-00-00.

Pictogram as depicted: EU logo + energy label:
width: 92 mm, height: 17 mm.

❹ **Sub-logos border:** 1 pt — colour: Cyan 100 % — length: 92,5 mm.

❺ **A-G scale**

— **Arrow:** height: 7 mm, gap: 0,75 mm — colours:

Highest class: X-00-X-00,

Second class: 70-00-X-00,

Third class: 30-00-X-00,

Fourth class: 00-00-X-00,

Fifth class: 00-30-X-00,

Sixth class: 00-70-X-00,

Last class(es): 00-X-X-00.

— **Text:** Calibri bold 19 pt, capitals and white; '+' symbols: Calibri bold 13 pt, capitals, white, aligned on a single row.

❻ **Energy efficiency class**

— **Arrow:** width: 26 mm, height: 14 mm, 100 % black;

— **Text:** Calibri bold 29 pt, capitals, white; '+' symbols: Calibri bold 18 pt, capitals, white, aligned on a single row.

❼ **Energy**

— **Text:** Calibri regular 11 pt, capitals, black.

▼B**8 Annual energy consumption:**

— **Border:** 2 pt — colour: Cyan 100 % — round corners: 3,5 mm.

— **Value:** Calibri bold 30 pt, 100 % black.

— **Second line:** Calibri regular 14 pt, 100 % black.

9 Rated capacity in number of standard wine bottles:

— **Border:** 2 pt — colour: Cyan 100 % — round corners: 3,5 mm.

— **Value:** Calibri bold 28 pt, 100 % black.

Calibri regular 15 pt, 100 % black.

10 Airborne acoustical noise emissions:

— **Border:** 2 pt — colour: Cyan 100 % — round corners: 3,5 mm.

— **Value:** Calibri bold 25 pt, 100 % black.

Calibri regular 17 pt, 100 % black.

11 Supplier's name or trademark**12 Supplier's model identifier**

13 The suppliers' name or trade mark and model identifier should fit in a space of 90 × 15 mm

14 Numbering of the Regulation:

Text: Calibri bold 11 pt.

▼B*ANNEX III***Product Fiche**

1. The information in the product fiche shall be provided in the following order and shall be included in the product brochure or other literature provided with the product:
 - (a) supplier's name or trade mark;
 - (b) supplier's model identifier as defined in Annex I, point (t);
 - (c) category of the household refrigerating appliance model in accordance with point 1 of Annex VIII;
 - (d) energy efficiency class of the model in accordance with Annex IX;
 - (e) where the model has been awarded an 'EU Ecolabel award' under Regulation (EC) No 66/2010, this information may be included;
 - (f) annual energy consumption (AE_C) in kWh per year, rounded up to the nearest integer and calculated in accordance with point 3(2) of Annex VIII. It shall be described as: 'Energy consumption "XYZ" kWh per year, based on standard test results for 24 hours. Actual energy consumption will depend on how the appliance is used and where it is located';
 - (g) storage volume of each compartment and applicable star rating in accordance with point 1(1)VI of Annex II, if any;
 - (h) the design temperature of 'other compartments' within the meaning of point (n) of Annex I. For wine storage compartments, the coldest storage temperature, either pre-set in the compartment or capable of being set by an end-user and capable of being maintained continuously according to the manufacturer's instructions, shall be given;
 - (i) the mention 'frost-free' for the relevant compartment(s), as defined in point (b) of Annex I;
 - (j) 'power cut safe "X" h' defined as 'temperature rise time';
 - (k) 'freezing capacity' in kg/24 h;
 - (l) 'climate class' in accordance with point 1, Table 3 of Annex VIII, and expressed as: 'Climate class: W [*climate class*]. This appliance is intended to be used at an ambient temperature between "X" [*lowest temperature*] °C and "X" [*highest temperature*] °C';
 - (m) airborne acoustical noise emissions expressed in dB(A) re1 pW, rounded to the nearest integer;

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- (n) if the model is intended to be a built-in appliance, an indication to this effect;
 - (o) for wine storage appliances, the following information: 'This appliance is intended to be used exclusively for the storage of wine'. This point shall not apply to household refrigerating appliances that are not specifically designed for wine storage but may nevertheless be used for this purpose, nor to household refrigerating appliances that have a wine storage compartment combined with any other compartment type.
2. One fiche may cover a number of refrigerating appliances models supplied by the same supplier.
 3. The information contained in the fiche may be given in the form of a copy of the label, either in colour or in black and white. Where this is the case, the information listed in point 1 not already displayed on the label shall also be provided.

*ANNEX IV***Technical documentation**

1. The technical documentation referred to in Article 3(c) shall include:
 - (a) the name and address of the supplier;
 - (b) a general description of the refrigerating appliance model, sufficient for it to be unequivocally and easily identified;
 - (c) where appropriate, the references of the harmonised standards applied;
 - (d) where appropriate, the other technical standards and specifications used;
 - (e) identification and signature of the person empowered to bind the supplier;
 - (f) technical parameters for measurements, established in accordance with Annex VIII:
 - (i) overall dimensions;
 - (ii) overall space required in use;
 - (iii) total gross volumes(s);
 - (iv) storage volume(s) and total storage volume(s);
 - (v) star rating(s) of the frozen-food storage compartment(s);
 - (vi) defrosting type;
 - (vii) storage temperature;
 - (viii) energy consumption;
 - (ix) temperature rise time;
 - (x) freezing capacity;
 - (xi) power consumption;
 - (xii) wine storage compartment humidity;
 - (xiii) airborne acoustical noise emissions;
 - (g) the results of calculations performed in accordance with Annex VIII.
2. Where the information included in the technical documentation file for a particular household refrigerating appliance model has been obtained by calculation on the basis of design, or extrapolation from other equivalent refrigerating appliances, or both, the documentation shall include details of such calculations or extrapolations, or both, and of tests undertaken by suppliers to verify the accuracy of the calculations undertaken. The information shall also include a list of all other equivalent household refrigerating appliance models where the information was obtained on the same basis.

*ANNEX V***Information to be provided in the cases where end-users cannot be expected to see the product displayed**

1. The information referred to in Article 4(b) shall be provided in the following order:
 - (a) the energy efficiency class of the model as defined in Annex IX;
 - (b) the annual energy consumption in kWh per year, rounded up to the nearest integer and calculated in accordance with point 3(2) of Annex VIII;
 - (c) the storage volume of each compartment and applicable star rating in accordance with point 1(1)VI of Annex II, if any;
 - (d) the 'climate class' in accordance with point 1, Table 3 of Annex VIII;
 - (e) airborne acoustical noise emissions expressed in dB(A) re1 pW, rounded to the nearest integer;
 - (f) if the model is intended to be built-in, an indication to this effect;
 - (g) for wine storage appliances the following information: 'This appliance is intended to be used exclusively for the storage of wine'. This point shall not apply to household refrigerating appliances that are not specifically designed for wine storage but may nevertheless be used for this purpose, nor to household refrigerating appliances that have a wine storage compartment combined with any other compartment type.
2. Where other information contained in the product fiche is also provided, it shall be in the form and order specified in Annex III.
3. The size and font in which all the information referred in this Annex is printed or shown shall be legible.



ANNEX VI

Measurements

1. For the purposes of compliance and verification of compliance with the requirements of this Regulation, measurements shall be made using a reliable, accurate and reproducible measurement procedure that takes into account the generally recognised state-of-the-art measurement methods, including methods set out in documents the reference numbers of which have been published for that purpose in the *Official Journal of the European Union*.

2. GENERAL CONDITIONS FOR TESTING

The following general conditions for testing apply:

- (1) if anti-condensation heaters that can be switched on and off by the end-user are provided, they shall be switched on and — if adjustable — set at maximum heating;
- (2) if ‘through-the-door devices’ (such as ice or chilled water/drinks dispensers) which can be switched on and off by the end-user are provided, they shall be switched on during the energy consumption measurement but not operated;
- (3) for multi-use appliances and compartments, the storage temperature during the measurement of energy consumption shall be the nominal temperature of the coldest compartment type as claimed for continuous normal use according to the manufacturer’s instructions;
- (4) the energy consumption of a household refrigerating appliance shall be determined in the coldest configuration, according to the manufacturer’s instructions for continuous normal use for any ‘other compartment’ as defined in Annex VIII, Table 5.

3. TECHNICAL PARAMETERS

The following parameters shall be established:

- (a) ‘overall dimensions’, which are measured to the nearest millimetre;
- (b) ‘overall space required in use’, which is measured to the nearest millimetre;
- (c) ‘total gross volumes(s)’, which is measured to the nearest whole number of cubic decimetres or litres;
- (d) ‘storage volume(s) and total storage volume(s)’, which is measured to the nearest whole number of cubic decimetres or of litres;
- (e) ‘defrosting type’;
- (f) ‘storage temperature’;
- (g) ‘energy consumption’ which is expressed in kilowatt hours per 24 hours (kWh/24h), to three decimal places;
- (h) ‘temperature rise time’;
- (i) ‘freezing capacity’;
- (j) ‘wine storage compartment humidity’, which is expressed as a percentage rounded to the nearest integer; and
- (k) ‘airborne acoustical noise emissions’.

▼ M2

ANNEX VII

Product compliance verification by market surveillance authorities

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by Member State authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, for the requirements referred to in this Annex, the authorities of the Member States shall apply the following procedure:

- (1) The Member State authorities shall verify one single unit of the model.
- (2) The model shall be considered to comply with the applicable requirements if:
 - (a) the values given in the technical documentation pursuant to Article 5(b) of Directive 2010/30/EU (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports pursuant to point (iii) of the abovementioned Article; and
 - (b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and
 - (c) when the Member State authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 1.
- (3) If the results referred to in points 2(a) or (b) are not achieved, the model and all models that have been listed as equivalent household refrigerating appliance models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.
- (4) If the result referred to in point 2(c) is not achieved, the Member State authorities shall select three additional units of the same model for testing. As an alternative, the three additional units selected may be of one or more different models that have been listed as equivalent models in the supplier's technical documentation.
- (5) The model shall be considered to comply with the applicable requirements if for these three units, the arithmetical mean of the determined values complies with the respective tolerances given in Table 1.
- (6) If the result referred to in point 5 is not achieved, the model and all models that have been listed as equivalent household refrigerating appliance models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.
- (7) The Member State authorities shall provide all relevant information to the authorities of the other Member States and to the Commission without delay after a decision being taken on the non-compliance of the model according to points 3 and 6.

▼ **M2**

The Member State authorities shall use the measurement and calculation methods set out in Annexes VI and VIII.

The Member State authorities shall only apply the verification tolerances that are set out in Table 1 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 1

Verification tolerances

Parameters	Verification tolerances
Gross volume	The determined value shall not be less than the declared value by more than 3 % or 1 litre, whichever is the greater value.
Storage volume	The determined value shall not be less than the declared value by more than 3 % or 1 litre, whichever is the greater value. Where the volumes of the cellar compartment and the fresh food storage compartment can be adjusted, relative to one another, by the user, the volume shall be tested when the cellar compartment is adjusted to its minimum volume.
Freezing capacity	The determined value shall not be less than the declared value by more than 10 %.
Energy consumption	The determined value shall not exceed the declared value (E_{24h}) by more than 10 %.
Humidity of wine storage appliances	The determined value for the relative humidity observed in testing shall not exceed the declared range by more than 10 % in any direction.
Airborne acoustical noise emissions	The determined value shall meet the declared value.



ANNEX VIII

Classification of household refrigerating appliances, method for calculating the equivalent volume and the Energy Efficiency Index

1. CLASSIFICATION OF HOUSEHOLD REFRIGERATING APPLIANCES

Household refrigerating appliances are classified into categories as listed in Table 1.

Each category is defined by the specific compartment composition as specified in Table 2 and is independent of the number of doors and/or drawers.

Table 1

Household refrigerating appliances categories

Category	Designation
1	Refrigerator with one or more fresh-food storage compartments
2	Refrigerator-cellar, Cellar and Wine storage appliances
3	Refrigerator-chiller and Refrigerator with a 0-star compartment
4	Refrigerator with a one-star compartment
5	Refrigerator with a two-star compartment
6	Refrigerator with a three-star compartment
7	Refrigerator-freezer
8	Upright freezer
9	Chest freezer
10	Multi-use and other refrigerating appliances

Household refrigerating appliances that cannot be classified in categories 1 to 9 because of compartment temperature are classified in category 10.

Table 2

Household refrigerating appliance classification and relevant compartment composition

Nominal temperature (for the EEI) (°C)	Design T	+ 12	+ 12	+ 5	0	0	- 6	- 12	- 18	- 18	Category (number)
Compartment types	Other	Wine storage	Cellar	Fresh food storage	Chill	0-star/Ice making	one-star	two-star	three-star	four-star	
Appliance category	Compartments composition										
REFRIGERATOR WITH ONE OR MORE FRESH-FOOD STORAGE COMPARTMENTS	N	N	N	Y	N	N	N	N	N	N	1
REFRIGERATOR-CELLAR, CELLAR and WINE STORAGE APPLIANCE	O	O	O	Y	N	N	N	N	N	N	2
	O	O	Y	N	N	N	N	N	N	N	
	N	Y	N	N	N	N	N	N	N	N	
REFRIGERATOR-CHILLER and REFRIGERATOR WITH A 0-STAR COMPARTMENT	O	O	O	Y	Y	O	N	N	N	N	3
	O	O	O	Y	O	Y	N	N	N	N	
REFRIGERATOR WITH A ONE-STAR COMPARTMENT	O	O	O	Y	O	O	Y	N	N	N	4
REFRIGERATOR WITH A TWO-STAR COMPARTMENT	O	O	O	Y	O	O	O	Y	N	N	5
REFRIGERATOR WITH A THREE-STAR COMPARTMENT	O	O	O	Y	O	O	O	O	Y	N	6
REFRIGERATOR-FREEZER	O	O	O	Y	O	O	O	O	O	Y	7
UPRIGHT FREEZER	N	N	N	N	N	N	N	O	(Y) ^(e)	Y	8
CHEST FREEZER	N	N	N	N	N	N	N	O	N	Y	9
MULTI-USE AND OTHER APPLIANCES	O	O	O	O	O	O	O	O	O	O	10

Notes:

Y = the compartment is present; N = the compartment is not present; O = the presence of the compartment is optional;

(^e) also includes three-star frozen-food cabinets.

▼B

Household refrigerating appliances are classified in one or more climate classes as specified in Table 3.

Table 3
Climate classes

Class	Symbol	Ambient average temperature °C
Extended temperate	SN	+ 10 to + 32
Temperate	N	+ 16 to + 32
Subtropical	ST	+ 16 to + 38
Tropical	T	+ 16 to + 43

The refrigerating appliance shall be capable of maintaining the required storage temperatures in the different compartments simultaneously and within the permitted temperature deviations (during the defrost cycle) as specified in Table 4 for the different types of household refrigerating appliances and for the appropriate climate classes.

Multi-use appliances and compartments shall be capable of maintaining the required storage temperatures of the different compartment types where these temperatures can be set by the end-user according to the manufacturer's instructions.

Table 4
Storage temperatures

Storage temperatures (°C)							
Other compartment	Wine storage compartment	Cellar compartment	Fresh-food storage compartment	Chill compartment	One-star compartment	Two-star compartment/section	Food freezer and three-star compartment/cabinet
t_{om}	t_{wma}	t_{cm}	$t_{1m}, t_{2m}, t_{3m}, t_{ma}$	t_{cc}	t^*	t^{**}	t^{***}
$> + 14$	$+ 5 \leq t_{wma} \leq + 20$	$+ 8 \leq t_{cm} \leq + 14$	$0 \leq t_{1m}, t_{2m}, t_{3m} \leq + 8; t_{ma} \leq + 4$	$- 2 \leq t_{cc} \leq + 3$	$\leq - 6$	$\leq - 12^{(*)}$	$\leq - 18^{(*)}$

Notes:

- t_{om} : storage temperature of the other compartment.
 - t_{wma} : storage temperature of the wine storage compartment with a variation of 0,5 K.
 - t_{cm} : storage temperature of the cellar compartment.
 - t_{1m}, t_{2m}, t_{3m} : storage temperatures of the fresh-food compartment.
 - t_{ma} : average storage temperature of the fresh-food compartment.
 - t_{cc} : instantaneous storage temperature of the chill compartment.
 - t^*, t^{**}, t^{***} : maximum temperatures of the frozen-food storage compartments.
 - storage temperature for the ice-making compartment and for the '0-star' compartment is below 0 °C.
- (*) for frost-free household refrigerating appliances during the defrost cycle, a temperature deviation of no more than 3 K during a period of 4 hours or 20 % of the duration of the operating cycle, whichever is the shorter, is allowed.

2. CALCULATION OF THE EQUIVALENT VOLUME

The equivalent volume of a household refrigerating appliance is the sum of the equivalent volumes of all compartments. It is calculated in litres and rounded to the nearest integer as:

$$V_{eq} = \left[\sum_{c=1}^{c=n} V_c \times \frac{(25 - T_c)}{20} \times FF_c \right] \times CC \times BI$$

▼ B

where:

- n is the number of compartments,
- V_c is the storage volume of the compartment(s),
- T_c is the nominal temperature of the compartment(s) as set out in Table 2,
- $\frac{(25-T_c)}{20}$ is the thermodynamic factor as set in Table 5,
- FF_c , CC and BI are volume correction factors as set out in Table 6.

The thermodynamic correction factor $\frac{(25-T_c)}{20}$ is the temperature difference between the nominal temperature of a compartment T_c (defined in Table 2) and the ambient temperature under standard test conditions at + 25 °C, expressed as a ratio of the same difference for a fresh-food compartment at + 5 °C.

The thermodynamic factors for the compartments described in Annex I, points (g) to (n), are set out in Table 5.

Table 5

Thermodynamic factors for refrigerating appliance compartments

Compartment	Nominal temperature	$(25-T_c)/20$
Other compartment	Design temperature	$\frac{(25-T_c)}{20}$
Cellar compartment/Wine storage compartment	+ 12 °C	0,65
Fresh-food storage compartment	+ 5 °C	1,00
Chill compartment	0 °C	1,25
Ice-making compartment and 0-star compartment	0 °C	1,25
One-star compartment	– 6 °C	1,55
Two-star compartment	– 12 °C	1,85
Three-star compartment	– 18 °C	2,15
Food freezer compartment (four-star compartment)	– 18 °C	2,15

Notes:

- (i) for multi-use compartments, the thermodynamic factor is determined by the nominal temperature as given in Table 2 of the coldest compartment type capable of being set by the end-user and maintained continuously according to the manufacturer's instructions;
- (ii) for any two-star section (within a freezer) the thermodynamic factor is determined at $T_c = - 12$ °C;
- (iii) for other compartments the thermodynamic factor is determined by the coldest design temperature capable of being set by the end-user and maintained continuously according to the manufacturer's instructions.



Table 6

Value of the correction factors

Correction factor	Value	Conditions
<i>FF</i> (frost-free)	1,2	For frost-free frozen-food storage compartments
	1	Otherwise
<i>CC</i> (climate class)	1,2	For T class (tropical) appliances
	1,1	For ST class (subtropical) appliances
	1	Otherwise
<i>BI</i> (built-in)	1,2	For built-in appliances under 58 cm in width
	1	Otherwise

Notes:

- (i) *FF* is the volume correction factor for frost-free compartments;
- (ii) *CC* is the volume correction factor for a given climate class. If a refrigerating appliance is classified in more than one climate class, the climate class with the highest correction factor is used for the calculation of the equivalent volume;
- (iii) *BI* is the volume correction factor for built-in appliances.

3. CALCULATION OF THE ENERGY EFFICIENCY INDEX

For the calculation of the Energy Efficiency Index (*EET*) of a household refrigerating appliance model, the annual energy consumption of the household refrigerating appliance is compared to its standard annual energy consumption.

- (1) The Energy Efficiency Index (*EET*) is calculated and rounded to the first decimal place, as:

$$EET = \frac{AE_C}{SAE_C} \times 100$$

where:

AE_C = annual energy consumption of the household refrigerating appliance

SAE_C = standard annual energy consumption of the household refrigerating appliance.

- (2) The annual energy consumption (AE_C) is calculated in kWh/year and rounded to two decimal places, as:

$$AE_C = E_{24h} \times 365$$

where:

E_{24h} is the energy consumption of the household refrigerating appliance in kWh/24h and rounded to three decimal places.

- (3) The standard annual energy consumption (SAE_C) is calculated in kWh/year and rounded to two decimal places, as:

$$SAE_C = V_{eq} \times M + N + CH$$

where:

V_{eq} is the equivalent volume of the household refrigerating appliance

CH is equal to 50 kWh/year for household refrigerating appliances with a chill compartment with a storage volume of at least 15 litres

the M and N values are given in Table 7 for each household refrigerating appliance category.

▼B

Table 7

***M* and *N* values by household refrigerating appliance category**

Category	<i>M</i>	<i>N</i>
1	0,233	245
2	0,233	245
3	0,233	245
4	0,643	191
5	0,450	245
6	0,777	303
7	0,777	303
8	0,539	315
9	0,472	286
10	(*)	(*)

(*) *Note:* for Category 10 household refrigerating appliances the *M* and *N* values depend on the temperature and star rating of the compartment with the lowest storage temperature capable of being set by the end-user and maintained continuously according to the manufacturer's instructions. When only an 'other compartment' as defined in Table 2 and Annex I, point (n), is present, the *M* and *N* values for Category 1 are used. Appliances with three-star compartments or food-freezer compartments are considered to be refrigerator-freezers.



ANNEX IX

Energy efficiency classes

The energy efficiency class of a household refrigerating appliance shall be determined on the basis of its Energy Efficiency Index (*EEI*) as set out in Table 1 from 20 December 2011 until 30 June 2014 and Table 2 from 1 July 2014.

The Energy Efficiency Index of a household refrigerating appliance shall be determined in accordance with point 3 of Annex VIII.

Table 1

Energy efficiency classes until 30 June 2014

Energy efficiency class	Energy Efficiency Index
A+++ (most efficient)	$EEI < 22$
A++	$22 \leq EEI < 33$
A+	$33 \leq EEI < 44$
A	$44 \leq EEI < 55$
B	$55 \leq EEI < 75$
C	$75 \leq EEI < 95$
D	$95 \leq EEI < 110$
E	$110 \leq EEI < 125$
F	$125 \leq EEI < 150$
G (least efficient)	$EEI \geq 150$

Table 2

Energy efficiency classes from 1 July 2014

Energy efficiency class	Energy Efficiency Index
A+++ (most efficient)	$EEI < 22$
A++	$22 \leq EEI < 33$
A+	$33 \leq EEI < 42$
A	$42 \leq EEI < 55$
B	$55 \leq EEI < 75$
C	$75 \leq EEI < 95$
D	$95 \leq EEI < 110$
E	$110 \leq EEI < 125$
F	$125 \leq EEI < 150$
G (least efficient)	$EEI \geq 150$

▼ **M1***ANNEX X***Information to be provided in the case of sale, hire or hire-purchase through the internet**

- (1) For the purpose of points 2 to 5 of this Annex the following definitions shall apply:
- (a) ‘display mechanism’ means any screen, including tactile screen, or other visual technology used for displaying internet content to users;
 - (b) ‘nested display’ means visual interface where an image or data set is accessed by a mouse click, mouse roll-over or tactile screen expansion of another image or data set;
 - (c) ‘tactile screen’ means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;
 - (d) ‘alternative text’ means text provided as an alternative to a graphic allowing information to be presented in non-graphical form where display devices cannot render the graphic or as an aid to accessibility such as input to voice synthesis applications.
- (2) The appropriate label made available by suppliers in accordance with Article 3(f) shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified in point 3 of Annex II. The label may be displayed using a nested display, in which case the image used for accessing the label shall comply with the specifications laid down in point 3 of this Annex. If nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.
- (3) The image used for accessing the label in the case of nested display shall:
- (a) be an arrow in the colour corresponding to the energy efficiency class of the product on the label;
 - (b) indicate on the arrow the energy efficiency class of the product in white in a font size equivalent to that of the price; and
 - (c) have one of the following two formats:



- (4) In the case of nested display, the sequence of display of the label shall be as follows:
- (a) the image referred to in point 3 of this Annex shall be shown on the display mechanism in proximity to the price of the product;
 - (b) the image shall link to the label;

▼ M1

- (c) the label shall be displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;
 - (d) the label shall be displayed by pop up, new tab, new page or inset screen display;
 - (e) for magnification of the label on tactile screens, the device conventions for tactile magnification shall apply;
 - (f) the label shall cease to be displayed by means of a close option or other standard closing mechanism;
 - (g) the alternative text for the graphic, to be displayed on failure to display the label, shall be the energy efficiency class of the product in a font size equivalent to that of the price.
- (5) The appropriate product fiche made available by suppliers in accordance with Article 3(g) shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the product fiche is clearly visible and legible. The product fiche may be displayed using a nested display, in which case the link used for accessing the fiche shall clearly and legibly indicate 'Product fiche'. If nested display is used, the product fiche shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the link.