CABINET OF MINISTERS OF UKRAINE

RESOLUTION

No. 158 of 27 February 2019
Kyiv

On Approval of the Technical Regulation on Ecodesign Requirements for Household Refrigerating Appliances

In accordance with Article 5 of the Law of Ukraine 'On Technical Regulations and Conformity Assessment', the Cabinet of Ministers of Ukraine hereby **resolves:**

1. To approve the Technical Regulation on Ecodesign Requirements for Household Refrigerating Appliances, as attached.

2. The State Agency on Energy Efficiency and Energy Saving shall provide for the implementation of the Technical Regulation approved by this Resolution.

3. To introduce to the list of types of products subject to state market surveillance by state market surveillance authorities, approved by the Resolution of the Cabinet of Ministers of Ukraine No. 1069 of 28 December 2016 (Official Journal of Ukraine, 2017, No. 50, p. 1550), amendment, as attached.

4. Recognize the resolutions of the Cabinet of Ministers of Ukraine referred to in the list attached as such that ceased to be in force.

5. This Resolution shall enter into force after six months following its publication.

Prime Minister of Ukraine **VOLODYMYR GROYSMAN**

Ind. 21

APPROVED
by the Resolution of the Cabinet of Ministers of Ukraine
No. 158 of 27 February 2019

TECHNICAL REGULATION on Ecodesign Requirements for Household Refrigerating Appliances

General part

1. This Technical Regulation establishes ecodesign requirements for the placing on the market of electric mains-operated household refrigerating appliances with a storage volume up to 1500 litres.

This Technical Regulation is based on the Commission Regulation (EC) No 643/2009 of 22 July 2009 implementing Directive 2005/32/EC of the European Parliament and of the Council with regard to ecodesign requirements for household refrigerating appliances.

2. This Technical Regulation shall also apply to:

electric mains-operated household refrigerating appliances, including those sold for non-household use or for the refrigeration of items other than foodstuffs;

electric mains-operated household refrigerating appliances that can be battery-operated.

3. This Technical Regulation shall not apply to:

refrigerating appliances that are primarily powered by energy sources other than electricity, such as liquefied petroleum gas (LPG), kerosene and bio-diesel fuels;

battery-operated refrigerating appliances that can be connected to the mains through an AC/DC converter, purchased separately;

custom-made refrigerating appliances, made on a one-off basis and not equivalent to other refrigerating appliance models;

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;

appliances where the primary function is not the storage of foodstuffs through refrigeration (for example, stand-alone ice-makers or chilled drinks dispensers).

4. For the purposes of this Technical Regulation, the terms used herein shall have the following meanings:

1) ‘absorption-type refrigerating appliance’ means a refrigerating appliance in which refrigeration is effected by an absorption process using heat as the energy source;

2) ‘multi-use refrigerating appliance’ means a refrigerating appliance that has no compartment other than one or more multi-use compartments;

3) ‘equivalent refrigerating appliance’ means a model placed on the market with the same gross and storage volumes, same technical, efficiency and performance characteristics, and same compartment types as another refrigerating appliance model placed on the market under a different commercial code number by the same manufacturer;

4) ‘compression-type refrigerating appliance’ means a refrigerating appliance in which refrigeration is effected by means of a motor-driven compressor;

5) ‘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 two-star or three-star storage conditions;

6) ‘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, cooled by one or more energy-consuming processes including appliances sold as building kits to be assembled by the end-user;

7) ‘wine storage appliance’ means a refrigerating appliance that has no compartment other than one or more wine storage compartments;

8) ‘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;

9) ‘refrigerator-freezer’ means a refrigerating appliance with at least one fresh-food storage compartment and at least one other compartment suitable for the freezing of fresh food and the storage of frozen foodstuffs under three-star storage conditions (the food-freezer compartment);

10) ‘frozen-food storage cabinet’ means a refrigerating appliance with one or more compartments suitable for the storage of frozen foodstuffs;

The definitions for the purpose of Annexes 2 to 6 are set out in Annex 1.

Other terms used herein shall have meanings set out in the Laws of Ukraine ‘On Technical Regulations and Conformity Assessment’, ‘On State Market Surveillance and Control of Non-Food Products’, ‘On Standardization’, ‘On Quality and Safety of Food Products and Food Raw Materials’ and in the Technical Regulation Establishing a Framework for the Setting of Ecodesign Requirements for Energy-Related Products, approved by the Resolution of the Cabinet of Ministers of Ukraine No 804 of 3 October 2018 (Official Journal of Ukraine, 2018, No 80, p. 2678).

Ecodesign requirements

5. The generic ecodesign requirements for household refrigerating appliances are set out in points 1 to 5 of Annex 2. The specific ecodesign requirements for household refrigerating appliances are set out in points 2 to 6 of Annex 2.

6. Compliance with ecodesign requirements shall be measured in accordance with the methods set out in Annex 3.

Conformity assessment

7. Conformity of household refrigerating appliances with the requirements of this Technical Regulation shall be assessed by applying the internal design control procedure or the management system for assessing conformity set out, respectively, in Annexes 3 and 4 to the Technical Regulation Establishing a Framework for the Setting of Ecodesign Requirements for Energy-Related Products, approved by the Resolution of the Cabinet of Ministers of Ukraine No 804 of 3 October 2018 (Official Journal of Ukraine, 2018, No 80, p. 2678).

For the purposes of conformity assessment, the technical documentation shall contain a copy of the product information provided in accordance with point 6 of Annex 3 and the results of the calculations of the Energy Efficiency Index set out in Annex 4.

Where the information included in the technical documentation for a particular household refrigerating appliance model has been obtained by calculation on the basis of design, or extrapolation from other equivalent household refrigerating appliances, or both, the documentation shall include details of such calculations or extrapolations, or both, and of tests undertaken by manufacturers to verify the accuracy of the calculations undertaken. In such cases, the technical documentation shall also include a list of all other equivalent household refrigerating appliance models where the information included in the technical documentation was obtained on the same basis.

State market surveillance

8. Verification of conformity of the characteristics of household refrigerating appliances with the requirements of this Technical Regulation in the course of state market surveillance shall be made in accordance with the requirements set out in Annex 5.

Indicative Benchmarks

9. The indicative benchmarks for best-performing household refrigerating appliances available on the market are set out in Annex 6.

Correlation table

10. The correlation table of the provisions of the Commission Regulation (EC) No. 643/2009 of 22 July 2009 implementing Directive 2005/32/EC of the European Parliament and of the Council with regard to ecodesign requirements for household refrigerating appliances and of this Technical Regulation is set out in Annex 7.

Annex 1
to the Technical Regulation

DEFINITIONS
applicable for the purposes of Annexes 2 to 6

1) ‘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 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 the Technical Regulation on Ecodesign Requirements for Household Refrigerating Appliances;

2) ‘ice-making compartment’ means a low-temperature compartment intended specifically for the freezing and storage of ice;

3) ‘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;

4) ‘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:

continuous storage temperature, either pre-set or set manually according to the manufacturer’s instructions, in the range from + 5 °C to + 20 °C;

storage temperature within a variation over time of less than 0,5 K at each ambient temperature declared by the manufacturer and specified by the climate class for household refrigerating appliances;

active or passive control of the compartment humidity in the range from 50 % to 80 %;

constructed to reduce the transmission of vibration to the compartment, whether from the refrigerator compressor or from any external source;

5) ‘fresh-food storage compartment’ means a compartment designed for the storage of unfrozen foodstuffs, which may itself be divided into sub-compartments;

6) ‘frozen-food storage compartment’ means a low-temperature compartment intended specifically for the storage of frozen foodstuffs and classified according to temperature as follows:

‘one-star compartment’: a frozen-food storage compartment in which the temperature is not warmer than 6 °C;

‘two-star compartment’: a frozen-food storage compartment in which the temperature is not warmer than – 12 °C;

‘three-star compartment’: a frozen-food storage compartment in which the temperature is not warmer than – 18 °C;

‘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. Such compartment is also suitable for the storage of frozen food under three-star storage conditions, and may include two-star sections within the compartment;

‘0-star compartment’: a frozen-food storage compartment in which the temperature is less than 0 °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;

7) ‘chill compartment’ means a compartment intended specifically for the storage of highly perishable foodstuffs;

8) ‘frost-free compartment’ means any compartment defrosted by a frost-free system;

9) ‘other compartment’ means a compartment, other than a wine storage compartment, intended for the storage of particular foodstuffs at a temperature warmer than + 14 °C;

10) ‘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;

11) ‘chest freezer’, means a food freezer in which the compartments 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 compartments exceeds 75 % of the total gross volume of the appliance;

12) ‘chiller’ means a refrigerating appliance where only one or more cellar compartments are present;

13) ‘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 °C;

14) ‘frost-free system’ means a system automatically operated to prevent the permanent formation of frost, where the evaporator(s) is defrosted by an automatic defrost system, and the water from defrosting is disposed of automatically;

15) ‘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;

16) ‘refrigerator-chiller’ means a refrigerating appliance where at least a fresh-food storage compartment and a chill compartment, but no frozen-food storage compartments, no compartments for the storage of highly perishable foodstuffs or ice-making compartments are present;

17) ‘upright type refrigerating appliance’ means a refrigerating appliance with its compartments accessible from the front of the appliance;

18) ‘other-type refrigerating appliance’ means a refrigerating appliance in which refrigeration is effected by any other technology or process than compression or absorption-types;

19) ‘top-opening type refrigerating appliance’ or ‘chest type refrigerating appliance’ means a refrigerating appliance with its compartments accessible from the top of the appliance;

20) ‘fast freeze’ means a reversible feature to be activated by the user according to the manufacturer’s instructions, which decreases the storage temperature of the freezer or freezer compartment to achieve a faster freezing of unfrozen foodstuffs.

Annex 2
to the Technical Regulation

ECODESIGN REQUIREMENTS
for household refrigerating appliances

Generic ecodesign requirements

1. For wine storage appliances, the following information shall be displayed in the instruction booklet provided by manufacturers: ‘This appliance is intended to be used exclusively for the storage of wine’.

2. For household refrigerating appliances, information shall be provided in the instruction booklet provided by manufacturers concerning:

the combination of drawers, baskets and shelves that result in the most efficient use of energy for the appliance;

how to minimise the energy consumption of the household refrigerating appliance in the use-phase.

3. The fast freezing facility, or any similar function achieved through modification of the thermostat settings, in freezers and freezer compartments, shall, once activated according to the manufacturer’s instructions, automatically revert to the previous normal storage temperature conditions after no more than 72 hours. This requirement does not apply to refrigerator-freezers with one thermostat and one compressor which are equipped with an electromechanical control board.

4. Refrigerator-freezers with one thermostat and one compressor which are equipped with an electronic control board and can be used in ambient temperatures below + 16 °C according to the manufacturer’s instructions shall be such that any winter setting switch or similar function guaranteed the correct frozen-food storage temperature. In this case, the storage temperature shall be automatically operated according to the ambient temperature where the appliance is installed.

5. Household refrigerating appliances with a storage volume below 10 litres shall automatically enter in an operating condition with a power consumption of 0 W after no more than 1 hour when empty. The mere presence of a hard off switch shall not be considered sufficient to fulfil this requirement.

Specific ecodesign requirements

6. Household refrigerating appliances within the scope of the Technical Regulation on Ecodesign Requirements for Household Refrigerating Appliances with a storage volume equal to or higher than 10 litres shall comply with the Energy Efficiency Index limits in Tables 1 and 2 of this Annex.

7. The specific ecodesign requirements in Tables 1 and 2 of this Annex shall not apply to:

wine storage appliances;

absorption-type refrigerating appliances and other-type refrigerating appliances belonging to Categories 4 to 9 as set out in Table 1 of Annex 4 to the Technical Regulation on Ecodesign Requirements for Household Refrigerating Appliances.

8. The Energy Efficiency Index (EEI) of household refrigerating appliances is calculated in accordance with point 3 of Annex 4 to the Technical Regulation on Ecodesign Requirements for Household Refrigerating Appliances.

Compression-type refrigerating appliances

Table 1

Date of application	Energy Efficiency Index (ÅÅ²)

From the date of entry into force of the Technical Regulation on Ecodesign Requirements for Household Refrigerating Appliances	ÅÅ² < 42

Absorption-type and other-type refrigerating appliances

Table 2

Date of application	Energy Efficiency Index (ÅÅ²)
From the date of entry into force of the Technical Regulation on Ecodesign Requirements for Household Refrigerating Appliances	ÅÅ² < 110

Annex 3
to the Technical Regulation

MEASUREMENT METHODS

1. For the purposes of determining compliance with the requirements of the Technical Regulation on Ecodesign Requirements for Household Refrigerating Appliances, measurements shall be made using a reliable, accurate and reproducible measurement procedure that takes into account the generally recognised state of the art.

2. Where anti-condensation heaters that can be switched on and off by the user are provided, they shall be switched on. Where the anti-condensation heaters are adjustable, they shall be set at maximum heating.

3. Where ‘through-the-door devices’ (such as ice or chilled water/drinks dispensers) which can be switched on and off by the user are provided, they shall be switched on during the energy consumption measurement but not operated.

4. For multi-use refrigerating 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.

5. The energy consumption of a 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 Table 5 of Annex 4 to the Technical Regulation on Ecodesign Requirements for Household Refrigerating Appliances.

6. The following parameters of refrigerating appliances shall be established:

overall dimensions, which are measured to the nearest millimetre;

overall space required in use, which is measured to the nearest millimetre;

total gross volume, which is measured to the nearest whole number of cubic decimetres or litres;

storage volume for the preservation of foodstuffs and total storage volume, which is measured to the nearest whole number of cubic decimetres or of litres;

defrosting type;

storage temperature for the preservation of foodstuffs;

energy consumption, which is expressed in kilowatt hours per 24 hours (kWh/24h), to three decimal places;

temperature rise;

freezing capacity;

power consumption, which is measured in W rounded to two decimal places;

wine storage compartment humidity, which is expressed as a percentage rounded to the nearest integer.

Annex 4
to the Technical Regulation

METHOD
for calculating the Energy Efficiency Index

1. Household refrigerating appliances are classified in categories set out in Table 1 of this Annex. Each category is defined by the specific compartment composition as specified in Table 2 of this Annex and is independent of the number of doors and/or drawers.

Household refrigerating appliances categories

Table 1

Category	Designation of refrigerating appliance
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 1-star compartment
5	Refrigerator with a 2-star compartment
6	Refrigerator with a 3-star compartment
7	Refrigerator-freezer
8	Upright freezer
9	Chest freezer
10	Multi-use and other refrigerating appliances

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

Household refrigerating appliance classification and relevant compartment composition

Table 2

Nominal temperature (°C)	design temperature	+ 12		+ 5	0		– 6	– 12	– 18		Category of refrigerating appliance (number)
Compartment types/purpose	other	wine storage	cellar	fresh food storage	chill	0-star/ice making	1-star	2-star	3 -star	4-star/freezer	
Appliance category	Compartments composition										
Refrigerator with one or more fresh-	N	N	N	Y	N	N	N	N	N	N	1

food storage compartments											
Refrigerator-cellar, cellar and wine storage appliances	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 1-star compartment	O	O	O	Y	O	O	Y	N	N	N	4
Refrigerator with a 2-star compartment	O	O	O	Y	O	O	O	Y	N	N	5
Refrigerator with a 3-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[(a)]	Y	8
Chest freezer	N	N	N	N	N	N	N	O	N	Y	9
Multi-use and other refrigerating 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;

(a) - also includes 3-star frozen-food cabinets.

3. Household refrigerating appliances are classified in one or more climate classes as shown in Table 3 of this Annex.

Climate classes

Table 3

Class	Symbol denoting the class	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

4. The refrigerating appliance shall be capable of maintaining the required storage temperatures in the different compartments simultaneously as defined in Table 4 of this Annex for the different types of household refrigerating appliances and for the appropriate climate classes.

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

6. Storage temperature for the ice-making compartment and for the '0-star' compartment shall be below 0 °C.

Storage temperature (°C)

Table 4

Other compartments	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 ≤ t_{wma} ≤ + 20	+ 8 ≤ t_{cm} ≤ + 14	0 ≤ t_{1m}, t_{2m}, t_{3m} ≤ + 8 t_{ma} ≤ + 4	– 2 ≤ $t_{cñ}$ ≤ + 3	≤ – 6	≤ – 12 (à)	≤ – 18(à)

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;

(à) - 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.

7. The equivalent volume of a household refrigerating appliance (V_{eq}) is the sum of the equivalent volumes of all compartments (V_c) multiplied by the volume correction factors. It is calculated in litres and rounded to the nearest integer according to the following formula:

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

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 of this Annex;

$\frac{(25 - T_c)}{20}$ the thermodynamic factor is the temperature difference between the nominal temperature of a compartment T_c 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 are set out in Table 5 of this Annex;

FF_c, CC and BI are volume correction factors depending on the availability of frost-free function, climate class and whether the appliance is built-in or not. The volume correction factors are set out in Table 6 of this Annex.

Thermodynamic factors for refrigerating appliance compartments

Table 5

Compartment/other compartment	Design/nominal temperature	Thermodynamic factor
Cellar compartment or wine storage compartment	+ 12 °C	0,65
Fresh-food storage compartment	+ 5 °C	1
Chill compartment or 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 or food freezer compartment (four-star compartment)	– 18 °C	2,15

Notes:

1. For multi-use compartments, the thermodynamic factor is determined by the nominal temperature as given in Table 2 of this Annex of the coldest compartment type capable of being set by the user and maintained continuously according to the manufacturer's instructions.
2. For any two-star section (within a freezer), the thermodynamic factor is determined at T_c equal to - 12 °C.
3. For other compartments, the thermodynamic factor is determined by the coldest design temperature capable of being set by the user and maintained continuously according to the manufacturer's instructions.

Value of the correction factors

Table 6

Correction factor	Value of the correction factor	Conditions

FF (for frost-free compartments)	1,2	for frost-free frozen-food storage compartments
	1	otherwise
CC (for a given climate class)	1,2	for T class (tropical) appliances
	1,1	for ST class (subtropical) appliances
	1	otherwise
BI (for built-in refrigerating appliances)	1,2	for built-in appliances under 58 cm in width
	1	otherwise

Note. 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.

CALCULATION OF THE ENERGY EFFICIENCY INDEX

8. For the calculation of the Energy Efficiency Index (EEI), of a household refrigerating appliance model, the Annual Energy Consumption (AE_c) of the household refrigerating appliance is compared to its Standard Annual Energy Consumption (SAE_c).

9. The Energy Efficiency Index (EEI) is calculated and rounded to the first decimal place, according to the following formula:

$$EEI = \frac{AE_c}{SAE_c} \times 100,$$

where AE_c is the Annual Energy Consumption of the household refrigerating appliance;

SAE_c is the Standard Annual Energy Consumption of the household refrigerating appliance.

10. The Annual Energy Consumption is calculated in kWh/year and rounded to two decimal places, according to the following formula:

$$AE_c = E_{24h} \times 365,$$

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

11. The Standard Annual Energy Consumption is calculated in kWh/year and rounded to two decimal places, according to the following formula:

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

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 the equivalent volume of at least 15 litres;

M and N values are the correction factors which are given in Table 7 of this Annex for each household refrigerating appliance category.

M and N values by household refrigerating appliance category

Table 7

Category	M	N
1	0,233	245
2	0,233	245
3	0,233	245
4	0,643	191
5	0,45	245
6	0,777	303
7	0,777	303
8	0,539	315
9	0,472	286
10	(*)	(*)

Symbol (*) is used 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 user and maintained continuously according to the manufacturer's instructions. When only an 'other compartment' is present, the M and N values for Category 1 are used.

Annex 5
to the Technical Regulation

REQUIREMENTS
for verification during state market surveillance

1. The verification tolerances referred to in this Annex relate only to the verification of the measured parameters by state market surveillance authorities and shall not be used by the manufacturer or importer as verification tolerances to establish the values in the technical documentation or in interpreting these values with a view to achieving compliance or to communicate better performance by any means.

2. The verification of conformity of household refrigerating appliances with the requirements of the Technical Regulation on Ecodesign Requirements for Household Refrigerating Appliances (hereinafter referred to as 'Technical Regulation') shall be carried out by market surveillance authorities in the following way:

1) one household refrigerating appliance per model shall be tested;

2) a household refrigerating appliance model shall be considered to comply with the requirements of the Technical Regulation if:

the values given in the technical documentation and the values used to calculate those values, are not more favourable for the manufacturer or importer than the results of the corresponding measurements;

the declared values meet the requirements laid down in the Technical Regulation, and the necessary product information provided by the manufacturer or importer does not contain values that are more favourable for the manufacturer or importer;

the determined values (the values of the relevant parameters as measured during the verification and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 1 of this Annex;

3) if the results referred to in the second or third indent of subpoint 2 of this Annex are not achieved, the household refrigerating appliance model and all other equivalent models referred to in the technical documentation shall be considered not to comply with the requirements of the Technical Regulation;

4) if the result referred to in the fourth indent of subpoint 2 of this Annex is not achieved, the state market surveillance authorities shall select three additional household refrigerating appliances of the same model for testing. As an alternative, the three additional household refrigerating appliances selected may be of one or more different models that have been listed as equivalent household refrigerating appliances in the manufacturer's or importer's technical documentation;

5) the household refrigerating appliance model shall be considered to comply with the requirements set out in Annex 2 to the Technical Regulation if, for these three household refrigerating appliances, the arithmetical mean of the determined values complies with the respective verification tolerances given in Table 1 of this Annex;

6) if the result referred to in subpoint 5 of this Annex is not achieved, the household refrigerating appliance model and all other equivalent household refrigerating appliances referred to in the manufacturer's or importer's technical documentation shall be considered not to comply with the requirements of the Technical Regulation;

7) the state market surveillance authorities shall use the measurement and calculation methods set out in Annexes 3 and 4 to the Technical Regulation.

3. The state market surveillance authorities shall only apply the verification tolerances that are set out in Table 1 of this Annex and shall use the procedure described in subpoints 1 to 7 of this Annex.

No other tolerances, such as those set out in the harmonised standards or in any other measurement method, shall be applied.

Table 1

Measured parameter	Verification tolerances
Rated gross volume	the measured value shall not be less than the rated value by more than 3 % or 1 l, whichever is the greater value
Rated storage volume	the measured value shall not be less than the rated value by more than 3 % or 1 l, whichever is the greater value. Where the volumes of the cellar compartment and fresh food storage compartment are adjustable, relative to one another by the user, this measurement uncertainty applies when the cellar compartment is adjusted to its minimum volume
Freezing capacity	the measured value shall not be less than the rated value by more than 10 %
Energy consumption	the measured value shall not be greater than the rated value of energy consumption by more than 10 %
Power consumption of household refrigerating appliances with a storage volume below 10 litres	the measured value shall not be greater than the rated value by more than 0,1 W
Relative humidity for wine storage appliances	the measured value shall not exceed the nominal range by more than 10 %

Annex 6
to the Technical Regulation

INDICATIVE
benchmarks for household refrigerating appliances

1. At the time of entry into force of the Technical Regulation on Ecodesign Requirements for Household Refrigerating Appliances, the benchmarks for the best available technology on the market for household refrigerating appliances in terms of their Energy Efficiency Index (EEI) and noise level are identified as follows:

1) for compression-type refrigerators (ÅÅI = 29,7):

annual energy consumption of 115 kWh/year for a total storage volume of 300 litres in a fresh-food compartment plus a 25-litres chill compartment, and T (tropical) climate class;

noise: 33 dB;

2) for absorption-type refrigerators (ÅÅI = 97,2):

annual energy consumption of 245 kWh/year for a total storage volume of 28 litres in a fresh-food compartment, and N (temperate) climatic class;

noise: approximately 0 dB;

3) for compression-type refrigerator-freezers (ÅÅI = 28):

annual energy consumption of 157 kWh/year for a total storage volume of 255 litres, of which 236 litres in a fresh-food compartment and 19 litres in a four-star freezer compartment, and T (tropical) climate class;

noise: 33 dB;

4) for compression-type upright freezers (ÅÅI = 29,3):

annual energy consumption of 172 kWh/year for a total storage volume of 195 litres in a four-star freezer compartment, and T (tropical) climate class;

noise: 35 dB;

5) for compression-type chest freezers (ÅÅI = 27,4):

annual energy consumption of 153 kWh/year for a total storage volume of 223 litres in a four-star freezer compartment, and T (tropical) climate class;

noise: 37 dB.

Annex 7
to the Technical Regulation

CORRELATION TABLE
of the provisions of Commission Regulation (EC) No 643/2009 of 22 July 2009 implementing Directive 2005/32/EC of the European Parliament and of the Council with regard to ecodesign requirements for household refrigerating appliances and of the Technical Regulation on Ecodesign Requirements for Household Refrigerating Appliances

Provision of the Commission Regulation (EC)	Provisions of the Technical Regulation
Article 1(1)	point 1
Article 1(2)	point 2
Article 1(3)	point 3
First indent of Article 2	first indent of point 4
Article 2(1)	thirty-first indent of point 4
Article 2(2)	twenty ninth indent of point 4
Article 2(3)	thirty fourth indent of point 4
Article 2(4)	twenty fifth indent of point 4
Article 2(5)	second indent of point 4
Article 2(6)	thirty fifth indent of point 4
Article 2(7)	thirty eighth indent of point 4
Article 2(8)	twenty sixth indent of point 4
Article 2(9)	thirtieth indent of point 4
Article 2(10)	third indent of point 4
Article 2(11)	twenty fourth indent of point 4
Article 3	point 5
Article 4(1)	first indent of point 6
Article 4(2)	second indent of point 6
Article 4(3)	third indent of point 6

Article 5	point 7
Article 6	point 8
Annex II	Annex 1
Annex III	Annex 2
Annex IV	Annex 3
Appendix V	Annex 4
Annex VI	Annex 5

APPROVED
by the Resolution of the Cabinet of Ministers of Ukraine
No. 158 of 27 February 2019

AMENDMENT
to be introduced to the list of types of products subject to state market surveillance by state market surveillance authorities

Point 23 shall be replaced by the following:

‘23. Energy-related products, including household refrigerating appliances and household washing machines	Resolution of the Cabinet of Ministers of Ukraine No. 702 of 7 August 2013 ‘On Approval of the Technical Regulations on Energy Labelling’; Resolution of the Cabinet of Ministers of Ukraine No. 158 of 27 February 2019 ‘On Approval of the Technical Regulation on Ecodesign Requirements for Household Refrigerating Appliances’	State Service of Ukraine on Food Safety and Consumer Protection’.

APPROVED
by the Resolution of the Cabinet of Ministers of Ukraine
No. 158 of 27 February 2019

LIST
of resolutions of the Cabinet of Ministers of Ukraine that ceased to be in force

1. Resolution of the Cabinet of Ministers of Ukraine No. 787 of 3 September 2008 ‘On Approval of the Technical Regulation on Maximum Permissible Electric Power Consumption by Refrigerating Appliances’ (Official Journal of Ukraine, 2008, No. 68, p. 2276).

2. Resolution of the Cabinet of Ministers of Ukraine No 368 of 10 May 2012 ‘On Amending the Resolution of the Cabinet of Ministers of Ukraine No. 787 of 3 September 2008’ (Official Journal of Ukraine, 2012, No. 35, p. 1301).

3. Point 6 of amendments introduced to the resolutions of the Cabinet of Ministers of Ukraine approved by the Resolution of the Cabinet of Ministers of Ukraine No. 235 of 8 April 2013 (Official Journal of Ukraine, 2013, No. 28, p. 957).

4. Resolution of the Cabinet of Ministers of Ukraine No. 528 of 8 October 2014 ‘On Amending the Technical Regulation on Maximum Permissible Electric Power Consumption by Refrigerating Appliances’ (Official Journal of Ukraine, 2014, No. 82, p. 2338).

5. Point 1 of amendments introduced to the resolutions of the Cabinet of Ministers of Ukraine approved by the Resolution of the Cabinet of Ministers of Ukraine No. 1069 of 28 December 2016 ‘On Approval of the List of Types of Products Subject to State Market Surveillance by State Market Surveillance Authorities’ (Official Journal of Ukraine, 2017, No. 50, p. 1550).