

Solid Fuel Local Space Heaters

Ecodesign and Energy Labelling Guidance Note

November 2020

Introduction

This guidance note is intended to provide a general overview of the current energy labelling requirements and the forthcoming ecodesign requirements for suppliers (i.e. manufacturers, importers or authorised representatives¹) of solid fuel local space heaters.

It also provides guidance on the measurements and calculations that should be applied in determining the values displayed on the product energy label, the product information sheet, and as required in the technical documentation demonstrating the compliance of the product with the energy labelling requirements.

The relevant legislation

The requirements for energy labelling are set out in the following European regulation and discussed further in the following sections.

- Regulation (EU) 2015/1186 with regard to energy labelling of local space heaters (in force since 2018 and applicable to products of a nominal heat output of less than or equal to 50 kW) – these regulations can be found here: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02015R1186-20170307&from=EN>

Regulation (EU) 2015/1186 also applies to local space heaters other than solid fuelled heaters. It is important for suppliers to be familiar with these requirements to ensure that products you place on the market are compliant with this regulation.

Note also, that from 1st January 2022, specific ecodesign requirements will apply to solid fuel local space heaters. While these requirements are not the primary focus of this note, an overview of the ecodesign requirements are presented. The ecodesign requirements are set out in the following regulation.

- Regulation (EU) 2015/1185 with regard to ecodesign requirements for solid fuel local space heaters – these regulations can be found here: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02015R1185-20170109&from=EN>

DISCLAIMER

SEAI has developed this guidance to help relevant entities understand and fulfil their obligations under the ecodesign and energy labelling regulations. The specific requirements for ecodesign and energy labelling are contained in the above-mentioned delegated acts and this guidance document should not be used as a sole resource for demonstrating compliance. It is the individual supplier's responsibility to ensure compliance with the relevant regulatory requirements.

¹ further described in Appendix 1.

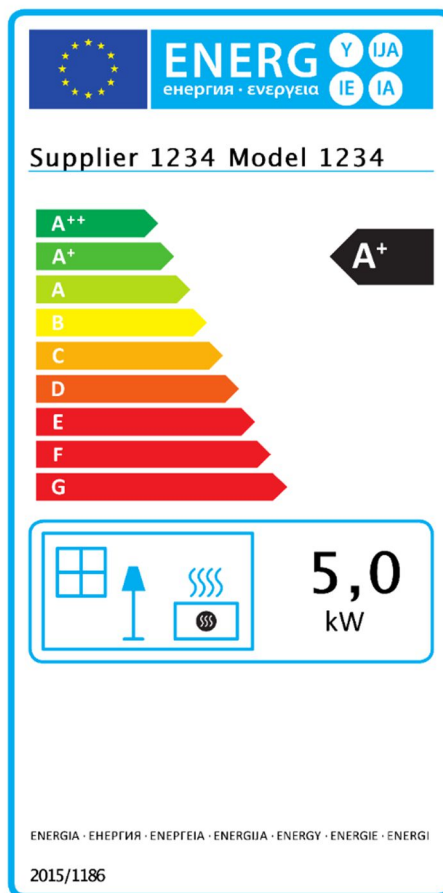
ENERGY LABELLING

Regulation (EU) 2015/1186 requires that suppliers of local space heaters with a nominal heat output of $\leq 50 \text{ kW}$ provide the following product information.

Energy Label

A copy of the energy label in accordance with Annex III of Regulation (EU) 2015/1186 must be provided. The format for solid fuel local space heaters with direct heat output is shown in the example provided below.

Solid fuel local space heater label



Note that the direct heat output, displayed in kW, must be rounded to the nearest one decimal place. The energy label must be provided with each unit that is sold. In addition, suppliers must also make an electronic version of the label available to retailers.

A copy of the energy label should also be provided to the market surveillance authority (MSA) when requested.

Product Information Sheet

Suppliers must provide a copy of the product information sheet (also referred to as the 'product fiche') with each unit sold, in accordance with Annex IV of Regulation (EU) 2015/1186, which must contain the information below, in the following order.

- a) supplier's name or trademark
- b) supplier's model identifier
- c) the energy efficiency class of the model
- d) the direct heat output (X,X kW)
- e) the indirect heat output (X,X kW)
- f) the energy efficiency index (X), calculated in accordance with Annex VIII Regulation (EU) 2015/1186
- g) the useful energy efficiency at nominal heat output, and at minimum load (if applicable) (X,X%)
- h) any specific precautions that shall be taken when the local space heater is assembled, installed or maintained

The product information sheet must be provided in the product brochure or other product literature. One product information sheet may cover a number of local space heaters supplied by the same supplier. The product information sheet must be provided with each unit that is sold. In addition, suppliers must also make an electronic version of the product information sheet available to retailers.

A copy of the product information sheet should also be provided to the market surveillance authority (MSA) when requested.

An example product information sheet is shown below.

Product Information Sheet (Fiche) – Solid fuel local space heater

Product Information Sheet

Delegated Regulation (EU) 2015/1186

Supplier name or trademark	Supplier 1234
Model identifier	Model 1234
Energy Efficiency Class	A+
Direct heat output	5.4 kW
Indirect heat output	1.2 kW
Energy Efficiency Index	110
Useful Energy Efficiency (at nominal heat output)	90 %
Useful Energy Efficiency (at minimum load)	87 %
Specific precautions	List any specific precautions to be taken when the appliance is assembled, installed or maintained.

Technical Documentation

Suppliers of solid fuel local space heaters must prepare specific technical documentation in accordance with Annex V of Regulation (EU) 2015/1186, including the Table 2 - 'Technical parameters for solid fuel local space heaters' – Table 2 is shown in Appendix 2.

Such technical documentation should be supported by evidence supporting the information presented in Table 2, such as test reports, calculations etc.

EPREL

The European Product Database for Energy Labelling (EPREL) has been set up under EU Regulation 2017/1369 to provide important energy efficiency information to consumers and to facilitate market surveillance activities and enforcement. Note that, while there is no direct reference to EPREL in Regulation (EU) 2015/1186, it is now a legal requirement for suppliers of products covered by the EU Energy Labelling Regulation and placed on the market since August 2017, to upload information about their products onto the database before placing these products on the market in the EU.

EPREL also has a useful feature allowing the supplier to generate a product energy label and product fiche once the product information has been populated in the EPREL database.

SEAI has prepared a guidance document that provides some further information in relation to EPREL which can be found at the following link: https://www.seai.ie/publications/EPREL-Supplier-Guidance_Final-5.pdf

Other Energy Labelling Requirements

There are a number of further requirements that also apply to suppliers of solid fuel local space heaters:

- any visual advertisement or technical promotional material relating to a specific model (which may be, for example, online or in hard copy) must make reference to the energy efficiency class and the range of energy efficiency classes available on the energy label
- if a supplier also offers solid fuel local space heaters for sale online (therefore also acting as a retailer), then the specific energy labelling requirements as per Annex VII of Regulation (EU) 2015/1186 must be followed.

More detailed descriptions of supplier obligations are outlined in Articles 3, 4 and 6 of the Energy Labelling Regulation (EU) 2017/1369¹.

¹ available here: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32017R1369&from=EN>

Measurements and Calculations

Annex VIII of Regulation (EU) 2015/1186 outlines how relevant parameters must be calculated.

Regulation (EU) 2015/1186 requires the determination of the energy efficiency index (EEI) in order to identify the relevant energy efficiency class, which is informed by the seasonal space heating efficiency.

Methodologies related to the calculation of the relevant parameters are outlined in the 'Measurements and Calculation' annex of the regulation, as summarised in the following:

The **energy efficiency index** (EEI) is calculated as:

$$EEI = (\eta_{s,on} \times BLF) - 10\% + F(2) - F(3) - F(4) - F(5)$$

The **seasonal space heating energy efficiency** in active mode ($\eta_{s,on}$) is calculated as:

$$\eta_{s,on} = \eta_{th,nom}$$

Where:

$\eta_{th,nom}$ is the useful efficiency at nominal heat output, based on net calorific value (NCV)

BLF is the biomass label factor (1.45 for biomass local space heaters and 1 for fossil fuel local space heaters)

F(2) is a correction factor to the EEI due to adjusted contributions of controls of indoor heating comfort, as shown in Table 4 of Annex VIII of Regulation (EU) 2015/1186

F(3) is a correction factor to the EEI due to adjusted contributions of controls for indoor heating comfort, as shown in Table 5 of Annex VIII of Regulation (EU) 2015/1186

F(4) is a correction factor accounting for a negative contribution to the energy efficiency index by auxiliary electricity consumption, expressed in %

F(5) is a correction factor accounting for a negative contribution to the energy efficiency index by energy consumption of a permanent pilot flame, expressed in %

Energy Efficiency Classes

The energy efficiency classes for a given EEI are specified in Table 1 of Annex II of Regulation (EU) 2015/1186 and shown in the following.

Energy Efficiency classes of solid fuel local space heaters

Energy efficiency class	Energy efficiency index (<i>EEI</i>)
A++	$EEI \geq 130$
A+	$107 \leq EEI < 130$
A	$88 \leq EEI < 107$
B	$82 \leq EEI < 88$
C	$77 \leq EEI < 82$
D	$72 \leq EEI < 77$
E	$62 \leq EEI < 72$
F	$42 \leq EEI < 62$
G	$EEI < 42$

Standards

The following standards/test methods are identified by the European Commission for use in determining the energy labelling parameters outlined above, as per Commission Communication 2017/C 076/02 and are available here²:

Commission Communication 2017/C 076/02

Parameter	Reference/title	Notes
Useful efficiency 'η _{th,nom} ' (%)	For all other open/closed fronted appliances and cookers: EN 16510-1:2013 § 7.3, A.6.2 For pellet fired appliances: EN 14785:2006 § 6.4.2, A.4.7 & A.4.8	Standard series EN 16510 will replace: EN 13240:2001 (EN 13240:2001/A2:2004/C2:2007) EN 13229:2001 (EN 13229:2011 § 6.8) EN 12815:2001 EN 12809:2001

² [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52017XC0310\(04\)&from=EN](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52017XC0310(04)&from=EN)

	For slow heat release appliances: EN 15250:2007-06 § 6.3, A.4.6 & A.5 & A.6.2.2	
Nominal 'P _{nom} ' and minimum 'P _{min} ' heat output (kW)	EN 16510-1:2013 A.4.7 & A.4.8 EN 14785:2006 § 6.5, A.4.7 & A.4.8 EN 15250:2007-06 § 6.3 & A.6.2.2	P _{nom} corresponds to P _N in EN 16510-1:2013 P _{min} corresponds to reduced heat output in EN 16510-1:2013 P _{min} corresponds to reduced heat output in EN 14785:2006 P _{nom} corresponds to P in EN 15250:2007. P _{min} is not described in EN 15250:2007 but shall be established (if applicable) in a similar way as the nominal heat output
Direct heat output (kW)	EN 14785:2006, A 6.2.4 EN 15250:2007, A.6.2.2 EN 16510-1:2013, A.6.2.4	
Indirect heat output (kW)	EN 14785:2006 A.6.2.3 EN 16510-1:2013 A.6.2.3	

Technical documentation (such as laboratory test reports) provided to the MSA to demonstrate the compliance of a relevant product, should referencing testing conducted in accordance with the above standards.

ECODESIGN

Regulation (EU) 2015/1185 requires suppliers of solid fuel local space heaters to ensure the products they supply meet minimum ecodesign requirements in terms of seasonal space heating efficiency (η_s) and emissions (PM, OGC, CO, NO_x), and requires suppliers to provide specific ecodesign product information.

The ecodesign requirements, while related to those of energy labelling in terms of energy efficiency performance, are separate and distinct aspects that must be addressed by manufacturers.

Specific ecodesign and product information requirements outlined in this regulation only apply **from 1st January 2022**. From this date, suppliers, in ensuring that products are compliant, must undertake a conformity assessment process to demonstrate that the specific ecodesign requirements have been fulfilled. When this process is complete, suppliers³ must prepare a Declaration of Conformity (DoC), in accordance with Article 5 and Annex VI of the Ecodesign Directive 2009/125/EC and then affix the CE mark to the product.

In order to demonstrate product compliance in future, manufacturers should provide the following documentation, related to the conformity assessment process, if requested by a market surveillance authority (MSA):

- the Declaration of Conformity
- the information required by Section 3 (a) of Annex II of Regulation (EU) 2015/1185, including the Table 1 information
- evidence supporting the information presented in Table 1 such as test reports, calculations etc.
- evidence of the information required by Section 3 (a) and (b) of Annex II of Regulation (EU) 2015/1185 being presented on free access websites and in instruction manuals

Note also that it is a requirement that manufacturers retain all documentation related to the conformity assessment process of a product so that it is available for inspection by an MSA for a period of 10 years after it was last placed on the market.

³ Note that importers do not need to undertake the conformity assessment process or prepare a Declaration of Conformity – rather they need to be able to provide a copy of the Declaration of Conformity by the manufacturing company and the relevant conformity assessment documentation.

Appendix 1:

Definition of a supplier

A 'supplier' is defined as "a manufacturer established in the Union, the authorised representative of a manufacturer who is not established in the Union, or an importer, who places a product on the Union market".

These entities are further defined as follows:

A 'manufacturer' is "a natural or legal person who manufactures a product or has a product designed or manufactured and markets that product under its name or trademark".

An 'importer' is "a natural or legal person established in the Union who places a product from a third country on the EU market".

An 'authorised representative' is "a natural or legal person established in the Union who has received a written mandate from the manufacturer to act on its behalf in relation to specified tasks".

Appendix 2:

Energy Labelling – ‘Table 2’ Technical parameters for solid fuel local space heaters

Table 2

Technical parameters for solid fuel local space heaters

Model identifier(s):							
Indirect heating functionality:[yes/no]							
Direct heat output: ...(kW)							
Indirect heat output: ...(kW)							
Fuel		Preferred fuel (only one):		Other suitable fuel(s):			
Wood logs with moisture content ≤ 25 %		[yes/no]		[yes/no]			
Compressed wood with moisture content < 12 %		[yes/no]		[yes/no]			
Other woody biomass		[yes/no]		[yes/no]			
Non-woody biomass		[yes/no]		[yes/no]			
Anthracite and dry steam coal		[yes/no]		[yes/no]			
Hard coke		[yes/no]		[yes/no]			
Low temperature coke		[yes/no]		[yes/no]			
Bituminous coal		[yes/no]		[yes/no]			
Lignite briquettes		[yes/no]		[yes/no]			
Peat briquettes		[yes/no]		[yes/no]			
Blended fossil fuel briquettes		[yes/no]		[yes/no]			
Other fossil fuel		[yes/no]		[yes/no]			
Blended biomass and fossil fuel briquettes		[yes/no]		[yes/no]			
Other blend of biomass and solid fuel		[yes/no]		[yes/no]			
Characteristics when operating with the preferred fuel							
Seasonal space heating energy efficiency η_s [%]:							
Energy Efficiency Index (EEI):							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Heat output				Useful efficiency (NCV as received)			
Nominal heat output	P_{nom}	x.x	kW	Useful efficiency at nominal heat output	$\eta_{h,nom}$	x.x	%
Minimum heat output (indicative)	P_{min}	[x,x/N.A.]	kW	Useful efficiency at minimum heat output (indicative)	$\eta_{h,min}$	[x,x/N.A.]	%
Auxiliary electricity consumption				Type of heat output/room temperature control (select one)			
At nominal heat output	$e_{t,nom}$	x.xxx	kW	single stage heat output, no room temperature control		[yes/no]	
At minimum heat output	$e_{t,min}$	x.xxx	kW	two or more manual stages, no room temperature control		[yes/no]	
In standby mode	$e_{t,sa}$	x.xxx	kW	with mechanic thermostat room temperature control		[yes/no]	

				with electronic room temperature control	[yes/no]	
				with electronic room temperature control plus day timer	[yes/no]	
				with electronic room temperature control plus week timer	[yes/no]	
				Other control options (multiple selections possible)		
				room temperature control, with presence detection	[yes/no]	
				room temperature control, with open window detection	[yes/no]	
				with distance control option	[yes/no]	
Permanent pilot flame power requirement						
Pilot flame power requirement (if applicable)	P_{pilot}	[x,xxx/N.A.]	kW			
Contact details	Name and address of the supplier					