

BLUE ANGEL

The German Ecolabel



Set-Top Boxes

DE-UZ 196

Basic Award Criteria

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The Environmental Label is supported by the following four institutions:



The Federal Ministry for the Environment, Nature Conservation and Nuclear Safety is the owner of the label. It regularly provides information on the decisions taken by the Environmental Label Jury.



The German Environmental Agency with its specialist department for "Ecodesign, Eco-Labeling and Environmentally friendly Procurement" acts as office of the Environmental Label Jury and develops the technical criteria of the Basic Criteria for Award of the Blue Angel.



The Environmental Label Jury is the independent, decision-making body for the Blue Angel and includes representatives from environmental and consumer associations, trade unions, industry, the trade, crafts, local authorities, academia, the media, churches, young people and the German federal states.



The RAL gGmbH is the awarding body for the Environmental Label. It organises the process for developing the relevant award criteria in independent expert hearings – which involve all relevant interest groups.

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This document is a translation of a German original. In case of dispute, the original document should be taken as authoritative.

1 Introduction

1.1 Preface

In cooperation with the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, the German Environmental Agency and considering the results of the expert hearings conducted by RAL gGmbH, the Environmental Label Jury has set up these Basic Criteria for the Award of the Environmental Label. RAL gGmbH has been tasked with awarding the Environmental Label.

Upon application to RAL gGmbH and on the basis of a Contract on the Use of the Environmental Label to be concluded with RAL gGmbH, the permission to use the Environmental Label may be granted to all products, provided that they comply with the requirements as specified hereinafter.

The product must comply with all the legal requirements in the country in which it is to be marketed. The applicant shall declare that the product meets this requirement.

1.2 Background

Set-top boxes expand the functionality of televisions by making additional multimedia content available. For example, a set-top box can enable users to access online and offline video libraries, receive television programmes via video streaming or surf the Internet. The premature replacement of a television set that does not possess these additional functionalities can thus be prevented through the additional use of a set-top box.

Set-top boxes awarded with the environmental label consume significantly less energy in comparison to other standard devices available on the market. In view of the large number of these devices and their frequent use, there is a correspondingly great potential for making energy savings and reducing CO₂ emissions. Plastic parts in those devices awarded with the environmental label use materials low in pollutants and thus reduce the risks posed to the environment and human health.

In addition, those set-top boxes awarded with the environmental label fulfil strict requirements when it comes to their selection of materials, their adaptability to technological changes, the applicant's provision of appropriate infrastructure for taking back used equipment and their recycling-friendly design. These requirements create a sound basis for the longer use of these devices and the efficient recycling of the materials used and thus contribute to the conservation of natural resources.

1.3 Objective of the environmental label

Climate protection, a reduction in power consumption, increased resource efficiency and the avoidance of pollutants and waste are key objectives of environmental protection.

The Blue Angel ecolabel for Set-Top Boxes may be awarded to devices featuring the following environmental properties:

- low energy consumption
- durability and recycling-friendly design
- avoidance of environmentally damaging materials and substances

Therefore, following benefits for the environment and health are stated in the explanatory box:



1.4 Compliance with legal requirements

The observance of relevant existing laws and legal requirements is a prerequisite for those products awarded with the environmental label. In particular, the following legal requirements are observed:

- The EU Regulation No. 107/2009¹ that regulates the electricity consumption of simple set-top boxes.
- The EU Regulations No. 1275/2008² and No. 801/2013³ with regard to ecodesign requirements for standby, off mode electric power consumption of electrical and electronic household and office equipment, as well as in network standby mode.
- Commission Regulation (EC) No. 278/2009⁴ (external power supplies regulation) that regulates the ecodesign requirements for external power supplies.
- The substance requirements defined by the EU Chemicals Regulation REACH (1907/2006/EC)⁵ and Regulation EC No. 1272/2008⁶.
- The EU directives 2012/19/EU⁷ and 2011/65/EC⁸ implemented in German law in the Electrical and Electronic Equipment Act (ElektroG)⁹ and the Material Ordinance for

¹ Commission Regulation (EC) No. 107/2009 of 4 February 2009 implementing directive 2009/125/EC (previously: 2005/32/EC) of the European Parliament and of the Council with regard to ecodesign requirements for simple set-top boxes.

² Commission Regulation (EC) No. 1275/2008 of 17 December 2008 implementing Directive 2005/32/EC of the European Parliament and of the Council with regard to ecodesign requirements for standby and off mode electric power consumption of electrical and electronic household and office equipment

³ Commission Regulation (EU) No. 801/2013 of 22 August 2013 amending Regulation (EC) No. 1275/2008 with regard to ecodesign requirements for standby, off mode electric power consumption of electrical and electronic household and office equipment, and amending Regulation (EC) No. 642/2009 with regard to ecodesign requirements for televisions

⁴ Commission Regulation (EC) No. 278/2009 of 6 April 2009 implementing directive 2009/125/EC (previously: 2005/32/EC) of the European Parliament and of the Council with regard to ecodesign requirements for no-load condition electric power consumption and average active efficiency of external power supplies

⁵ Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC

⁶ Regulation (EC) No. 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, as well as amending Regulation (EC) No. 1907/2006

⁷ Directive 2012/19/EU of the European Parliament and of the Council of 4 July 2012 on waste electrical and electronic equipment (WEEE)

⁸ Directive 2011/65/EC of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (revised version).

⁹ Law for the sale, return and environmental disposal of electrical and electronic equipment from 16 March 2005 (BGBl. I P. 762), which was last amended by Paragraph 14 of the law from 20 September 2013 (BGBl. I P. 3642).

Electrical and Electronic Equipment (ElektroStoffV)¹⁰ that regulate the disposal and content of hazardous substances in products.

1.5 Definitions

The following definitions are based on those definitions found in EU Regulation No. 107/2009 and the "Voluntary Industry Agreement to improve the energy consumption of Complex Set Top Boxes within the EU"¹¹ (Annexes B and F).

1.5.1 Simple set-top boxes (SSTB)

A simple set-top box means a stand-alone device which, irrespective of the interfaces used, has the primary function of converting standard-definition (SD) or high-definition (HD), free-to-air digital broadcast signals to analogue broadcast signals suitable for analogue television or radio; has no 'conditional access' (CA) function; offers no recording function based on removable media in a standard library format.

An SSTB can be equipped with the following additional functions and/or components which do not belong to the minimum specifications of an SSTB:

- time-shift and recording functions using an integrated hard disk
- conversion of HD broadcast signal reception to SD or HD video output
- a second tuner

1.5.2 Complex set-top boxes (CSTB)

Complex set-top box (CSTB): a device equipped with a conditional access¹² technology that uses a dynamically allocated key for decoding signals; its main functions are to receive, decode and process data from digital broadcasting streams and related services. The device can have the capability to decode and output audio and video signals and/or the capability to supply content via a home network to one or more thin-client/remote CSTBs. The term "complex set-top box" covers the base functionality of receiving cable, satellite, IP, terrestrial or thin-client/remote signals.

¹⁰ Ordinance to limit the use of hazardous substances in electrical and electronic equipment (Material Ordinance for Electrical and Electronic Equipment - ElektroStoffV) from 19 April 2013 (BGBl. I S. 1111)

¹¹ Voluntary Industry Agreement to improve the energy consumption of Complex Set Top Boxes within the EU; Version 3.0 of 2nd September 2011;
http://ec.europa.eu/energy/efficiency/ecodesign/doc/20121217_voluntary_industry_agreement_cstb.pdf

¹² Conditional access technology: this is the technology used by pay-TV companies for the encryption and decryption of the programme content.

1.5.3 Base functionalities

Cable STB: a set-top box that receives digital television signals via a coaxial or hybrid optical fibre/coaxial distribution system and can transmit them to the end customer's screen and/or external playback/recording device.

Satellite STB: a set-top box that receives digital television signals via a satellite distribution system and can transmit them to the end customer's screen and/or external playback/recording device.

Internet Protocol (IP) STB: a set-top box that receives digital/video television signals encapsulated in IP packets and can transmit them to the end customer's screen and/or external playback/recording device.

Over-the-top (OTT) Internet Protocol (IP) STB: An IP STB that receives digital/video television signals encapsulated in IP packets and can transmit them to the end customer's screen and/or external playback/recording device, without an Internet service provider (ISP) being involved in the control or distribution of the content.

Terrestrial STB: a set-top box that receives digital television signals via a terrestrial distribution system and can transmit them to the end customer's screen and/or external playback/recording device.

Thin-client/remote: a set-top box that is designed to function as an interface between an STB and a television (or another output device), which cannot connect directly to the service provider and depends on another STB (cable, satellite, IP or terrestrial) for content.

1.5.4 Operating modes

Active mode (On mode): Operating mode in which the STB performs at least its base functionality. It is important to note that the power consumption in active mode may vary over time and may also be dependent on the actual functionality required by the STB.

Standby mode: Operating mode in which the STB has less energy consumption, as well as a lower level of performance and responsiveness than in "On mode". The power consumption in standby mode may vary based on the actual functionality required by the STB.

The STB may enter a standby mode from active mode after:

- a) the STB receives a notification from the user to enter a standby mode through pressing of the on/off button on the remote control or front panel of the device, or through an electronic signal or data packet received via a digital interface on the STB;
- or
- b) if the device has an automatic switch-off function ("auto-power down" APD) that automatically switches the STB to standby mode. The energy consumption after being automatically switched to standby mode and following a user initiated switch to standby mode may or may not be equivalent.

Total energy consumption (TEC): Energy consumption (kWh/year) of a device that is measured using a prescribed duty cycle based on the performance values measured for the device.

2 Scope

These Basic Award Criteria apply to set-top boxes (STB) as they are defined in Chapters 1.5.1 and 1.5.2:

- Cable STB
- Satellite STB
- Internet Protocol (IP) STB
- Terrestrial STB
- Thin-client/remote

The following devices do not fall under the scope of these Basic Award Criteria:

- Computers equipped with a digital television tuner or a television expansion card
- Games consoles with a digital television tuner
- Digital receivers with a recording function to VHS cassettes, DVDs, Blu-ray discs or memory cards
- Digital televisions with an integrated receiver decoder
- External plug-in digital TV receivers for computers (e.g. USB)
- Receivers exclusively designed for web-TV (OTT-Over the Top)

3 Requirements

3.1 General requirements

- a) Set-top boxes must feature at least one standby mode and be capable of being switched to a standby mode upon user command.
- b) The STBs must feature an automatic switch-off function ("auto-power down", APD) that has been activated as default in the factory; this means that the device is capable of automatically switching from active mode to the standby mode with the lowest power consumption that the service provider considers appropriate after a certain period of time without any user input.
 - ♦ **User APD:** The device switches into a standby mode after a certain period of time without user interaction; the APD time must be set as default by the manufacturer to a maximum of 4 hours¹³. Before the device switches into the APD standby mode, a graphical user interface can request that the user confirms whether the device is still being used; in this case, the device shall only switch over to standby mode when the user has not responded within an (additional) specified period of time.

¹³ This is valid for complex set-top boxes. In the case of simple set-top boxes, the obligatory requirements according to EU Regulation 107/2009 are valid (APD after 3 hrs.).

- ♦ **System APD:** Devices with network standby functionality must be capable of switching to standby mode after a certain period of time with no request for service. The APD time must be set as default to 20 minutes.
- c) The device must be capable of exiting the standby mode with the aid of an integrated timer in order to download content, search for programme, system or scheduling information or to perform other maintenance tasks. Following the completion of these tasks, the device must switch back to the original standby mode within a maximum of 15 minutes.
- d) The devices must be designed in such a way that they can be disconnected from the mains power supply from time to time by the user. The device should function without any problems after it is reconnected to the mains power supply.
- e) In the case of those devices supplied by service providers that feature a "speculative recording" function (automatic recording based on user preferences), they must have a user-accessible menu option enabling the user to deactivate this function where desired.

Compliance verification

The applicant shall declare compliance with the requirements in Annex 1. In addition, the operating instructions shall be submitted as Annex 2 (in a digital format) to verify compliance with Points 1-3.

3.2 Annual energy consumption

The total annual energy consumption for the relevant base and additional functionalities on complex set-top boxes¹⁴ must fall below the allowances defined in the "Voluntary Industry Agreement to improve the energy consumption of Complex Set Top Boxes within the EU" that have been valid since 1 July 2013 (Tier 2) when the application is made:

- by at least 25 percent before 30 June 2016
- by at least 50 percent after 1 July 2016

In the case of product families, the model with the configuration displaying the highest energy consumption for the relevant product category should be evaluated. The permissible allowances for Tier 2 can be found in Annex 1 of these Basic Award Criteria.

Compliance verification

The applicant shall declare in Annex 1 that the total energy consumption of the STB falls below the allowances defined in the "Voluntary Industry Agreement to improve the energy consumption of Complex Set Top Boxes within the EU" for the maximum energy consumption that have been valid since 1 July 2013 (Tier 2) by at least 25 percent up to the 30 June 2016 and by 50 percent from the 1 July 2016. In addition, the applicant shall state which of the base and additional functionalities defined in the Voluntary Industry Agreement are offered by the device and indicate the resulting maximum permissible allowance (Annual Energy Allowance AEA in kWh/year). Furthermore, the applicant shall state the energy consumption in watts in the different operating modes, as well as the annual total energy consumption (TEC) for the device in accordance with the procedure specified in the Voluntary Industry Agreement. The measurements shall be carried out in accordance with the test procedure described in the

¹⁴ Simple set-top boxes must comply with the obligatory requirements for energy consumption in EU Regulation 107/2009. These are already significantly higher than the highest allowances in Tier 2 from the voluntary industry agreement.

"Voluntary Industry Agreement to improve the energy consumption of Complex Set Top Boxes within the European Community. Version 3.0". The applicant shall submit a test report from an independent testing laboratory, which is accredited for these types of measurements in accordance with DIN EN ISO/EC 17025, as Annex 3. Test reports completed by the applicant are recognised as being of an equivalent standard when the testing laboratory used for the measurements is accredited by an independent body as an SMT laboratory (supervised manufacturer testing laboratory).

3.3 Durability

3.3.1 Adaptability to technological changes

It must be possible to update the software on the set-top boxes via the device menu.

Compliance verification

The applicant shall declare compliance with the requirement in Annex 1.

3.3.2 Repairability

The applicant undertakes to make sure that the provision of spare parts for the repair of the devices and the repair of the required infrastructure is guaranteed for at least 3 years following the termination of production and that the customer is informed about this guaranteed availability of spare parts.

Spare parts are those parts which, typically, may break down within the scope of the ordinary use of a product. Whereas those parts which normally exceed the life of the product are not to be considered as spare parts.

Compliance verification

The applicant shall declare compliance with the requirements in Annex 1 and submit the corresponding pages of the product documentation in Annex 4.

3.3.3 Return of used equipment

If the applicant markets the product directly to the end customer, he/she must actively provide customers with a suitable infrastructure for the return of used devices for the purposes of repair, recycling or professional disposal. The customer shall be informed about this possibility.

Compliance verification

The applicant shall declare compliance with the requirements in Annex 1 and submit the corresponding pages of the product documentation in Annex 4.

3.4 Recyclable design

3.4.1 Structure and connection technology

Devices that are to be labelled with the environmental label must be designed so that they are easy to dismantle for recycling purposes in order to ensure that housings, hard drives and printed circuit boards can be separated as fractions from materials of other functional units and, if possible, recycled by material type. It must be possible for the device to be dismantled

manually by a specialist company with the aid of universal tools¹⁵ and for this process to be carried out by a single person.

Electrical/electronic components must be easy to remove from the housing.

Compliance verification

The applicant shall declare compliance with the requirements and submit instructions for the professional disassembly of the set-top box (Annex 5). In particular, these instructions shall focus on the professional separation of housing parts, chassis and printed circuit boards. These free-of-charge instructions shall be presented either in writing using photo documentation and drawings or in video format. In addition, the applicant shall undertake in Annex 1 to provide those recycling companies commissioned by the applicant, where necessary, with information on efficient disassembly of the components and those substances and assemblies that need to be selectively handled.

3.4.2 Selection of materials

- The following is valid for plastic parts with a mass greater than 25 grams: A maximum of 4 types of plastic may be used for these parts. The plastic housings may only consist of a maximum of two separable polymers or polymer blends.
- Plastic parts with a mass greater than 25 grams and an even surface area of more than 200 square millimetres shall be permanently marked in accordance with ISO 11469, while taking ISO 1043, Parts 1 to 4, into consideration. Transparent plastic parts whose function requires transparency (e.g. visible displays) shall be exempt from labelling according to ISO 11469.
- It is not permitted to apply metallic coatings to plastic housing parts.
- The use of (post-consumer) recycled materials is permitted in the housing parts and chassis. They may be used on a percentage basis.
- 90% of the mass of the plastics and of the metals used for the housing parts and chassis must be recyclable by type of material (this does not include the recovery of thermal energy by incineration).

Compliance verification

The applicant shall declare compliance with the requirement in Annex 1 and state which plastics are used for plastic parts with a mass > 25 grams and the relevant proportion of recycled plastics used based on the mass of the plastic parts in Annex P-L 25.

3.5 Material requirements

3.5.1 Material requirements for plastics used in the housing and housing parts (including the supplied remote control):

The plastics may not contain as constituent parts any substances classified as:

¹⁵ The term "universal tools" is understood to mean those tools that are usually generally available in the retail trade such as pliers, screwdrivers, knives or hammers etc.

- carcinogenic in categories 1A or 1B according to Table 3.1 of Annex VI to EC Regulation 1272/2008¹⁶
- mutagenic in categories 1A or 1B according to Table 3.1 of Annex VI to EC Regulation 1272/2008
- reprotoxic in categories 1A and 1B according to Table 3.1 of Annex VI to EC Regulation 1272/2008
- particularly alarming for other reasons according to the criteria of Annex XIII to the REACH Regulation, insofar as they are included in the List (so-called "list of candidates"¹⁷) set up in accordance with REACH, Article 59, Paragraph 1.

Halogenated polymers shall not be permitted. Neither may halogenated organic compounds be added as flame retardants. In addition, the use of flame-retardant materials that are rated as acutely toxic to aquatic organisms with long-term effects according to Tables 3.1 or 3.2 of Annex VI of EC regulation 1272/2008 and classified with the hazard statement code H410 or with the risk phrase R50/53 is prohibited.

The following shall be exempt from this rule:

- process-related, technically unavoidable impurities;
- fluoroorganic additives (e.g. anti-dripping agents) used to improve the physical properties of plastics, provided that they do not exceed a proportion of 0.5 percent by mass.
- plastic parts with a mass of less than or equal to 25 grams.

Compliance verification

The applicant shall declare compliance with the requirements and submit a written declaration from the plastics manufacturer or guarantee the provision of these documents to RAL gGmbH. The declaration shall confirm that the excluded substances have not been added to the plastics and provide a chemical description of the flame-retardant materials used including the CAS number and its rating (H Phrases)(Annex P-M). When first applying for the Blue Angel ecolabel, the submitted declaration must not be older than 6 months. If one applicant submits additional applications for the labelling of products that contain the same plastics, the submitted declarations may be presented unchanged during the term of the Basic Award Criteria.

¹⁶ Regulation (EC) No. 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, as well as amending Regulation (EC) No 1907/2006, Annex VI on harmonized classification and labelling of hazardous substances, Part 3: Harmonized classification and labelling, Tables, Table 3.2, – List of harmonized classification and labelling of dangerous substances from Annex I to Directive 67/548/EEC, short: GHS Regulation http://www.reach-info.de/ghs_verordnung.htm, each as amended.

The GHS Regulation (Global Harmonization System) that came into force on 20 January 2009, replaces the old Directives 67/548/EEC and 1999/45/EC. According to the said regulation, substances are classified, labelled and packed until 1 December 2010 according to Directive 67/548/EEC (Dangerous Substances Directive) while mixtures are classified, labelled and packed until 1 June 2015 according to Directive 1999/45/EC (Dangerous Preparations Directive). Notwithstanding this, the classification, labelling and packaging of substances and preparations may be performed according to the provisions of the GHS Regulation already before 1 December 2010 or 1 June 2015, respectively. In such cases, the provisions of the Dangerous Substances Directive or Dangerous Preparations Directive shall not be applicable.

¹⁷ The version of the list of candidates at the time of application is valid (new applications). Link to the list of candidates of Regulation (EC) No. 1907/2006 concerning the Registration, Evaluation, Authorization, and Restriction of Chemicals (REACH): <http://echa.europa.eu/web/guest/candidate-list-table>

Notwithstanding this, RAL shall be entitled to ask for an updated version of the declarations if the Federal Environmental Agency (Umweltbundesamt) finds that product-relevant substances have been added to the list of candidates.

3.5.2 Requirements for plastics used in printed circuit boards

The base material for the printed circuit boards must not contain PBBs (polybrominated biphenyls), PBDEs (polybrominated diphenyl ethers) or chlorinated paraffins.

Compliance verification

The manufacturer shall declare compliance with the requirement in Annex 1 or submit declarations from the suppliers of the printed circuit boards as Annex 6 stating that the banned substances are not contained in the boards.

3.6 Consumer information

The documentation included with the devices shall include both the technical specifications and also environmentally-relevant consumer information.

The documentation shall thus include at least the following user information:

- a) Total annual energy consumption (TEC) in kilowatt hours (kWh/year) in accordance with Paragraph 3.2, as well as the power consumption in the different operating modes. In addition, information must be provided to explain how to switch the device to the energy-saving modes.
- b) Information that the device also consumes electricity in standby mode, even if in some cases the display has been deactivated.
- c) Information that lengthening the preset time for the automatic switch-off function (APD) or deactivating the APD function altogether can lead to an increase in energy consumption.
- d) Information that reducing energy consumption is directly linked to lower operating costs and that energy consumption can be reduced to zero if the device is completely disconnected from the mains socket outlet; additional information to confirm that completely disconnecting the device from the mains socket outlet will not lead to any deterioration in the performance of the device for the user.
- e) Instructions that enable the user to deactivate the "speculative recording function" – if available.
- f) Information on the possibilities for adapting the device to technical changes in accordance with Paragraph 3.3.1.
- g) Information on repairability in accordance with Paragraph 3.3.2.
- h) Information on the possibility of returning used devices to the applicant for the purposes of repair or recycling in accordance with Paragraph 3.3.3.
- i) Information on environmentally-friendly disposal at the end of the device's service life in accordance with the German Electrical and Electronic Equipment Act (Elektrogesetz) (does not apply to rental devices).

Compliance verification

The applicant shall declare compliance with the requirement in Annex 1 and submit the relevant product documentation in Annex 4.

4 Overview of possible future requirements

The following points will be taken into account, where possible, in future revisions of these Basic Award Criteria:

- More detailed requirements for the use of recycled plastics in the manufacture of set-top boxes.
- An examination into the inclusion of requirements for conflict materials.
- An examination into the inclusion of radiation-related requirements.

5 Applicants and Parties Involved

Manufacturers or distributors of final products according to Paragraph 2 shall be eligible for application.

Parties involved in the award process are:

- RAL gGmbH to award the Blue Angel Environmental Label,
- the federal state being home to the applicant's production site,
- Umweltbundesamt (German Environmental Agency) which after the signing of the contract receives all data and documents submitted in applications for the Blue Angel in order to be able to further develop the Basic Award Criteria.

6 Use of the Environmental Label

The use of the Environmental Label by the applicant is governed by a contract on the use of the Environmental Label concluded with RAL gGmbH.

Within the scope of such contract, the applicant undertakes to comply with the requirements under Paragraph 3 while using the Environmental Label.

Contracts on the Use of the Environmental Label are concluded to fix the terms for the certification of products under Paragraph 2. Such contracts shall run until December 31, 2021. They shall be extended by periods of one year each, unless terminated in writing by March 31, 2021 or March 31 of the respective year of extension.

After the expiry of the contract, the Environmental Label may neither be used for labelling nor for advertising purposes. This regulation shall not affect products being still in the market.

The applicant (manufacturer) shall be entitled to apply to RAL gGmbH for an extension of the right to use the ecolabel on the product entitled to the label if it is to be marketed under another brand/trade name and/or other marketing organisations.

The Contract on the Use of the Environmental Label shall specify:

- Applicant (manufacturer/distributor)
- Brand/trade name, product description
- Distributor (label user), i.e. the above-mentioned marketing organisations.

Appendix A List of energy consumption allowances for the relevant base and additional functionalities

Base functionality	Annual energy consumption allowance (kWh/year)¹⁸
Cable STB	40
Satellite STB	40
Internet Protocol (IP) STB	35
Terrestrial STB	35
Thin-Client / Remote	35

Additional functionalities	Annual energy consumption allowance (kWh/year)¹⁹
Advanced Video Processing	0
High Efficiency Video Processing	20
High Definition	0
Full High Definition	20
Ultra High Definition	30
3DTV	20
Advanced Graphics Processing	5
Access to Additional RF Channels ²⁰	15
Digital Video Recorder (DVR)	20
Return Path Functionality	25
Return Path Technical Interfaces: ADSL or DOCSIS 2.0	30
VDSL or DOCSIS 3.0 ²¹	50
Multi-decode	25
Multi-display	6
In-Home Network ²²	12

¹⁸ According to the "Voluntary Industry Agreement to improve the energy consumption of Complex Set Top Boxes within the European Community", version 3.0 from 2 September 2011

¹⁹ According to the "Voluntary Industry Agreement to improve the energy consumption of Complex Set Top Boxes within the European Community", version 3.0 from 2 September 2011

²⁰ Annual energy consumption allowance per RF channel

²¹ Annual energy consumption allowance per 4 bonded RF channels

²² Annual energy consumption allowance per network interface type that has been implemented for the home network