EU ECOLABEL FOR IMAGING EQUIPMENT

EEB, INFORSE and BEUC position on criteria proposal to be voted on 20th of June 2013

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Summary

The Joint Research Centre (JRC) of the EU Commission has developed a proposal of criteria for the EU Ecolabel for imaging equipment devices such as printers, copiers or scanners. The background information on this process including the proposal to be voted by Member States on 20th of June and the technical report can be found in the Website of the Joint Research Centre of the European Commission[1].

This paper provides an overview with the main positions of the European Environmental Bureau (EEB), the European Consumer Organisation (BEUC) and the International Network for Sustainable Energy (INFORSE) towards the proposed Ecolabel criteria for imaging equipment devices. We provide concrete recommendations on the scope of the product group and on several ecological requirements. Among other things, we are particularly concerned about the requirement on energy efficiency, as EU Ecolabel should be more ambitious than Energy Star 2.0. In addition, we call for improvement of the chemicals criteria by ensuring exclusion of halogenated polymers and halogenated organic compounds in plastic parts. We strongly oppose the derogation granted to Bisphenol A, which is not justified according to the technical report. Last but not least, we strongly disagree with the fact that no criteria are being set on design for recycling as this does not ensure consistency between the EU Ecolabel and Ecodesign.

[1] http://susproc.jrc.ec.europa.eu/imaging-equipment/index.html

1. Scope of product group

EEB, BEUC and INFORSE can support the proposed scope of the product group. However, we strongly recommend to leave the scope open when it comes to the image speed. The current proposal of Ecodesign working document recommends limiting the scope as mentioned in the following:

- Standard BW format products with maximum speed < 66 A4 images per minute
- Standard Colour format products with maximum speed <51 A4 images per minute

Considering that the environmental impact (power consumption) of printing/ copying is also directly proportional to the speed[2] (images per minute) and the trend of product marketing focussing on the speed issue, especially in EP printers and copiers, the scope should be extended to high speed equipment. ENERGY STAR Version 2 for imaging equipment sets a limit of scope to 100 prints/minute. The German Blue Angel label does not foresee the limitation of the scope based on images per minute. The data bank of the EU Energy Star (www.eu-energystar.org) lists (accessed 01.03.2011) under the product category MFD with marking technologies monochrome EP and IJ, standard format size and duplex capable as standard feature included 525 qualified products. Out of 525, 163 products possessed a speed of higher than 64 images per minute, which means almost 31% of qualified products under the above mentioned category. Leaving out this 31% will be limiting the scope unnecessarily, and will weaken the Ecolabel as well as GPP for the product group.

2. Ecological criteria

2.1 Use of Recycling Paper

We welcome the criteria that have been set up for paper management. Regarding the criterion on use of recycling paper we are pleased that it is requested that imaging equipment shall be able to print on 100% post-consumer recycled paper[3]. However, it is essential that manufacturers recommend at least one type of such paper for each model. In our opinion the current criterion does not clearly oblige the manufacturer to recommend a type of recycled paper, as it

[2] For instance, the EP technology is based on the principle that the toner is melted and fused, or bonded to the paper. Thus, a fast image creation or paper throughput (speed) demands a very even distribution of heat (high volume of thermal energy) from the roller onto the paper. Paper – although it has not a particularly good thermal conductivity – draws also thermal energy from the fusing unit. This results in power consumption up to a couple of hundred watts in on-mode.

[3] Scientific research has shown that recycling paper is equally good for office and home requirements in terms of print quality (http://www.initiative-papier.de/index.php?page_id=3). Apart from that, use of recycling paper helps in reducing the environmental impact of paper use. For instance, production of only one packet of recycling paper with 500 pieces (compared to conventional paper production) saves fossil resources, which are equivalent to the energy consumption 4.4 kWh (one 10 Watt lamp turned on for 440 hours).

says: *The applicant shall be free to recommend certain types of paper if those are either EU Ecolabelled or recycled paper […].* So that the requirement is really effective the producer *should* recommend a specific type of recycled paper (not all EU Ecolabelled paper are recycled).

EEB, BEUC and INFORSE call on the Commission and Member States to:

Clarify the current wording so that the manufacturer gives specific information on the type of recycled paper that can be used.

2.2 Energy Efficiency

We welcome that the requirement refers to Energy Star 2.0, but we strongly disagree that EU Ecolabel is being aligned with the ambition level of Energy Star2.0. We would like to emphasise that while it is beneficial to align measurement methods and conditions with Energy Star, it is necessary to redefine the threshold values for energy consumption as the EU Ecolabel addresses 10-20% of the best performing products. It is necessary that energy consumption requirements for the EU Ecolabel are more demanding than the energy consumption threshold of Energy Star by a certain percentage. We should consider that the threshold values proposed by Energy Star are not very ambitious. Within the framework of the Ecodesign voluntary agreement (VA) for imaging equipment[4], industry has made an evaluation of the printers of all companies participating in the VA on the market in 2012. The research has concluded that already 59% of TEC products and 83% of OM products comply with the new Energy Star 2.0 requirements, potentially aiming at a penetration rate of 80% and 90% respectively in 2016.

We suggest following the approach taken in the EU-Ecolabel criteria for Personal Computers and Notebooks, where energy consumption values exceeded the energy efficiency requirements set in Energy Star by a certain percentage. Below is an excerpt from the document of the EU-Ecolabel criteria on personal computers.

The energy efficiency performance of desktop and integrated desktop computers shall exceed the appropriate category energy efficiency requirements set out in the Agreement as amended by Decision 2010/C 186/1 (hereinafter: ENERGY STAR v5.0) by at least the following:

category A : 40%,
category B : 25%,
category C : 25%,
category D : 30%

[4] www.eurovaprint.eu

The above-mentioned approach requires a thorough analysis of the current Energy Star database on imaging equipment devices in terms of share of highly efficient products (within various categories of images per minute, marking technologies, product type and colour capability) and prediction on their compliance rate and market coverage over the course of next years.

In addition, as the next revision of Energy Star may take place before that for the EU Ecolabel, we are concerned that the EU Ecolabel will lack behind in future. EEB, BEUC and INFORSE propose that the Ecolabel is updated whenever Energy Star specifications for imaging equipment are revised. In this regard, we support the approach suggested by the background technical report (version May 2013) of having a dynamic link with the Energy Star label by proposing compliance with the latest Energy Star criteria version. However, this proposal has not been reflected into the wording of the draft criteria proposed for vote by the Regulatory Committee on 20th of June.

EEB, BEUC and INFORSE call on the European Commission and Member States to:

Support alignment of EU Ecolabel requirements to the latest version available of Energy Start.

We call for applying the values of Energy Star 2.0 during 2 years maximum and initiate preparation of a shortened procedure updating the energy requirement which would integrate the benchmark threshold values.

EEB, BEUC and INFORSE would like to introduce the following additional requirements:

- For networked equipment that is not in a HiNA mode, stand-by should be limited to 1 Watt instead of the proposed 1.5 Watt[5].
- We propose that office equipment is shipped with a non-HiNA stand-by outside office hours (monday-friday 8-17) and that equipment that is for home use is shipped with a non-HiNA stand-by every day 23 – 07 and monday - friday 8-16.
- We propose that Ecolabelled equipment shall have a hard switch off on the front of the cabinet (a switch that sets the equipment in a mode without energy consumption).

[5] In the Ecodesign preparatory study networked standby the Frauenhofer Institute shows that the networked standby today for home inkjet printers and multifunctional devices is 1.5 Watt. However, the study also concludes that it is possible to have network access open for less than 1 watt, also with wireless network (WLAN). [EuP Preparatory Studies, Lot 26: Networked Standby Losses, Final Report Task 6 Technical Analysis BAT, Contractor: Fraunhofer Institute for Reliability and Microintegration, IZM, Department Environmental and Reliability Engineering, Dr.-Ing. Nils F. Nissen, Gustav-Meyer-Allee 25, 13355 Berlin, Germany.

2.3 Excluded and Limited Substances and Mixtures

EEB, BEUC and INFORSE call on the European Commission and Member States:

To reject the derogation granted to Bisphenol A, as based on the background document from May 2013, the assessment of this derogation request concluded that there are alternatives available for substitution, and based on environmental and health concerns and application of the precautionary principle this derogation should not be granted.

To exclude halogenated polymers and halogenated compounds in plastics or support reintroduction of the criterion for the restriction of hazardous substances in plastic parts, as presented in the draft criteria version of May 2011. Alternatively reference can be made to the material requirements for plastics parts (casings, printed circuit boards and marking of plastics) of the Blue Angel (RAL-UZ 171).

To not exempt consumables (inks and toners) from compliance with the horizontal criteria on chemicals. Alternatively reference could be made to the requirements of the Blue Angel (RAL-UZ 171) which exclude CMRs, PBTs and substances of very high concern.

General exemption granted to substances and mixtures

EEB, BEUC and INFORSE do not support the addition of the following formulation exempting ingredients from the request to comply with the exclusion of hazardous and dangerous substances (H phrases and SVHC):

"Substances or mixtures which change their properties through processing and thus become no longer bioavailable, or undergo chemical modification in a way that removes the previously identified hazard are exempted from criterion 7 (b)"

This requirement is not acceptable based on the life cycle approach of the EU Ecolabel. The use of ingredients that are dangerous for the health or the environment should be avoided as a starting point.

Exclusion of halogenated polymers and halogenated compounds in plastics

In addition to the proposed exclusion of substances classified with one or more of the listed hazard statements, the Blue Angel also bans the use of halogenated polymers (which includes PVC) and additions of organic halogenated compounds as flame retardants. EEB, BEUC and INFORSE strongly recommend following this approach. The reason for this additional proposal is that focusing on the inherent properties of single substances (as in the risk statements) does not allow identification of all areas of concern which could occur during the whole lifecycle of a substance or a product such as formation of hazardous degradation products in the environment, release of hazardous substances in incineration or inappropriate waste management, formation of hazardous substances during metabolism in the human body, etc.

The negative environmental and health related problems of PVC and halogenated flame retardants are well known and their complete phase out has been recommended by many researchers. For instance, in a report commissioned by the European Commission, the Ökoinstitut made the following recommendations[6].

On halogenated flame retardants:

> "*the group of organobromine and organochlorine substances have been considered in the present study and their phase out from EEE is highly recommended by the authors*".

On PVC:

> "*The phase out of PVC should…have priority over selective risk management measures to guarantee a reduced release of PVC, of its additives and of hazardous combustion products*".

Most of the scientific concerns towards brominated and chlorinated flame retardants are summarised in a consensus statement – the so called San Antonio Statement – signed by more than 210 scientists[7]. From our point of view, the concerns formulated in this statement justify the exclusion of all halogenated flame retardants.

Our concerns towards PVC include structural weaknesses of this material such as the unsolved waste problem, problems related to the leaching of hazardous additives, dioxin formation or the lack of appropriate collection and recycling schemes.

Many producers have already on a voluntary basis phased out PVC and halogenated flame retardants (HFRs) or are in the process of doing so. A market overview by environmental organisation ChemSec clearly documents the availability of electrical and electronic equipment that is already PVC and HFR free[8]. Market leaders like HP, Acer, Dell or Sony Ericsson are actively promoting the phase out of these substances (see joint statement of NGOs and four market leading companies supporting a phase out of PVC and HFRs by the end of 2015[9]).

Finally, also toners and inks can contain carcinogenic and health-damaging substances, such as heavy metals, biocides, azo dye and halogenated organic compounds[10]. We therefore propose to include them in the scope of the

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[6] http://ec.europa.eu/environment/waste/weee/pdf/hazardous_substances_report.pdf

[7] http://www.greensciencepolicy.org/node/269

[8] http://www.chemsec.org/images/stories/publications/ChemSec_publications/Electronics_Without_Brominated_Flame_Retardants_and_PVC_-_a_Market_Overview_100518.pdf

[9] http://www.eeb.org/EEB/index.cfm/news-events/news/electronic-giants-and-green-groups-push-eu-for-flame-retardants-and-pvc-ban/

[10] See study on evaluting possible relationships between emissions from office equipment and negative health impact: Evaluierung möglicher Beziehungen zwischen Emissionen aus Büromaschinen, insbesondere aus Fotokopierern und Laserdruckern, und Gesundheitsbeeinträchtigungen bzw. Gesundheitsschäden bei exponierten Büroangestellten „TONERSTUDIE" (Pilotstudie): Institut für Innenraum- und Umwelttoxikologie, Medizinische Fakultät der Justus-Liebig-Universität, Universitätsklinikum Gießen, 2008 (http://www.bfr.bund.de/cm/252/pilotstudie_evaluierung_moeglicher_beziehungen_zwischen_e

criteria for excluded substances. The German Blue Angel has such "*Material-Related Requirements for Toners for Use in Electrophotographic Devices and Inks for Use in Ink jet Devices*". It excludes CMR-Substances[11], heavy metals[12], azo-dyes and biocides (in inks). The background report justify not setting more ambitious requirements on the consumables based on the fact that *ink and toner cartridges are purchased by the user (with the exemption of the first cartridge supplied to together with the product when it is sold)*. However, it is a common practice in offices that the seller of the imaging equipment offers the service to ensure maintenance and refilling consumables.

2.4 Toner and/or ink cartridge take-back requirement

We agree with the criteria for a mandatory take-back requirement for toner/ink cartridges and we welcome that the take-back mechanism should be free of charge for the end-consumers. We would like to propose that the criterion additionally clarifies that the take-back mechanism should be available in reasonable proximity to the end-user, either via a mail or collection system or via collection points.

2.5 Substances in ink and toners

We agree with the requirements for substances in ink and toners, but stress that the exclusion of hazardous substances specified in criteria 7 must also apply to ink, toners and their cartridges.

2.6 User Information

In addition to the proposed information, we propose that the consumer information should address at least the following points:

- Battery types and battery take-back system (if any batteries are used)
- Usability of recycled paper, including eventual specifications
- Take-back of spent photoconductor drums (if applicable)
- Guarantee of repairs
- Information on the maintenance of equipment
- Information on product take-back
- Dangers of getting in contact with toner dust, and information on steps to be taken to minimise the damage once the contact with toner dust has been made. Inaccessibility of children to toner cartridges.
- Information on the yield of the toner
- Instructions for proper handling of toner modules
- Substance emissions data

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missionen_aus_bueromaschinen_abschlussbericht.pdf); (2) Laserdrucker – sicher betreiben, VBG, März 2009 (http://www.vbg.de/apl/zh/bgi820/titel.htm); www.ecotopten.de;

[11] Include following H-Phrases: H351, H350, H340, H350i, H360F, H360D, H361f, H361d, H341 or CMR-substances according to TRGS 905 (www.baua.de)

[12] Include mercury, cadmium, lead, nickel or chromium-VI-compounds

- Instructions for proper product installation with regard to substance emissions
- Information on energy-related product data, such as power consumption in the individual operating modes, activation times of sleep modes and return times of the energy-saving modes as well as energy consumption data according to Energy Star
- Noise emission data given as declared sound power level in the individual operating modes

2.7 Proposals for Other Criteria

EEB, BEUC and INFORSE would like to propose some additional criteria, either as new criteria or included in the existing criteria.

2.7.1 Design for recycling and longevity

EEB, BEUC and INFORSE welcome the inclusion of a criterion on design for disassembly. However, this is not enough to ensure resource efficiency and consistency between Ecolabel and Ecodesign. We therefore strongly disagree with the lack of criteria in this important area. Design for recyclability is addressed by the Ecodesign Voluntary Agreement of Imaging Equipment, as they are also considered important by industry. Furthermore other Ecolabels, such as the Blue Angel, integrate very detailed requirements on recyclability (e.g. "*structure and connection technology*", "*material selection and marking*" and "*longevity*". The EU Ecolabel should not lack behind other Ecolabels and be more ambitious than the Ecodesign Voluntary Agreement of Imaging Equipment[13]. In order for the EU Ecolabel to show more ambition performance on design for recycling than the VA criteria (which is addressing only minimum requirements), NGOs propose to refer to the most ambitious levels of the EPEAT standard (silver/gold levels). This would ensure a certain continuity between Ecodesign (VA) and EU Ecolabel, creating consistency and enabling a more dynamic framework for market transformation.

2.7.2 Minimum pages of cartridge fill and use-up of cartridges

We propose to set a requirement on the minimum number of pages per cartridge fill.

[13] While industry is currently considering what type of non-related energy requirements should be set in the ongoing revision of the Ecodesign Voluntary Agreement for Imaging Equipment, the current version already includes aspects on design for recycling:

- Plastic parts >100 g manually separable with commonly available tools.
- Commonly used fasteners for joining components, subassemblies, chassis and enclosures.
- Non-separable connections (e.g. glued, welded) between different materials avoided
- Product plastics marked by material type

According to a recent study from TÜV Rheinland, 20-40% of ink stays unutilized in the imaging equipment devices[14]. This happens because the device gives a warning "module empty, please change" even though there is still sufficient ink available to print quite a number of pages. Consequently, consumers pay higher price per printed page as the full potential of a cartridge remains unutilized.
We propose to reduce this problem by setting the requirement that only when cartridges are 95% empty or more, the equipment can show an "empty" message. It can, however, give an earlier warning message to allow the user to order new ink/toner well in time.

The benefits of such requirements will be the prevention of waste resulting of discarded cartridges with short lifetimes.

2.7.3 Reinserting the former criterion on recycled and reused content

EEB, BEUC and INFORSE would like to support the reinsertion of the former criterion on recycled and reused content, which set a minimum of 10% recycled and/or reused content for plastics. The German Blue Angel label also has a mandatory criterion on the use of post-consumer recyclate, however, it only states that "*use of post-consumer recyclate is permitted*". In the optional criterion, at least 5% post-consumer recycled plastic is desired. We recommend setting stricter values (between 10-25%) for the use of post-consumer recycled plastics in imaging equipment devices for the EU Ecolabel.

END

[14] Quelle: http://pressetext.de/news/070621003/leer-anzeige-bei-druckerpatronen-kommt-oft-viel-zu-frueh/