

Questionnaire for Substance Prioritisation

Compilation and review of quantitative information concerning the various substances on the prioritized shortlist

Directive 2002/95/EC¹ (RoHS 1) on the restriction of the use of certain hazardous substances in electrical and electronic equipment (EEE) regulates the use of a number of hazardous substances in electrical and electronic equipment. The Commission launched the recast of RoHS in 2008. RoHS 2 (Directive 2011/65/EC²) was adopted in June 2011 and had to be transposed by the Member States by 2 January 2013 at the latest. Annex II of the Directive lists the substances which are restricted for use in EEE, as well as the maximum concentration value tolerated by weight in homogeneous materials. At present (February 2014) the list specifies six substances: lead, mercury, cadmium, hexavalent Chromium polybrominated biphenyls (PBB) and polybrominated diphenyl ethers (PBDE).

RoHS 2 sets the rules for amending the list of restricted substances in Article 6(1). A review and amendment of Annex II is to be considered by the Commission before 22 July 2014, and periodically thereafter.

In preparation of the 2014 review, a first study was launched by the Austrian Umweltbundesamt GmbH³ in 2012 and is expected to be concluded shortly. Among the preliminary outcomes of this study are a draft methodology for the identification, prioritisation (pre-assessment) and assessment of potentially relevant chemical substances in EEE. The consultants also applied this methodology and produced an inventory of substances, from which a 21 entry priority substance list was derived.

The objective of this consultation and the review process is to collect and to evaluate information and evidence to establish the application in which these substances are in use in general and in EEE, as well as the range of quantities in which they are applied.

The following questions have been formulated to gather more information in this regard. Input provided shall be used to further substantiate the priorities for preparing a RoHS substance assessment for the substances in question.

If you would like to contribute to the stakeholder consultation, please answer the following questions. You may also use the excel document provided on the consultation page for this purpose. Please be aware that the questions are relevant for all substances listed above, and provide information for substances of relevance to your area of work.

In case parts of your contribution are confidential, please clearly mark relevant text excerpts or better yet, provide your contribution in two versions (public /confidential).

¹ OJ L 37, 13.2.2003.

² <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32011L0065:EN:NOT>.

³ For more information please use this [link](#).

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RE: Study for the Review of the List of Restricted Substances under RoHS2 Reference:
 ENV.C.2/ETU/2012/0021

Questions:

1. Contact Information

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2. Area of activity (more than one is possible):

- Industry;
- Retail/distribution;
- Rent/repair business;
- Industry/business association;
- RoHS enforcement;
- RoHS analysis;
- Environmental NGO;
- Consumer NGO;
- Institute/consultancy;
- EU Member State Representative;
- International agency / organisation;
- Other - Please specify: _____

3. Please indicate which substance the information provided in this document concerns:

- Di-(2-ethylhexyl)phthalate (DEHP) *
- Di-n-butyl phthalate (DBP) *
- Butyl benzyl phthalate (BBP) *
- Diisobutyl phthalate (DiBP) **
- Tris(2-chloroethyl)phosphate
- Hexabromocyclododecane (HBCDD) *
- 2,3-dibromo-1-propanol
- Dibromoneopentyl-glycol5
- Antimony trioxide
- Diethyl phthalate (DEP)
- Tetrabromobisphenol A (TBBPA) and
- Medium-chain chlorinated paraffins (MCCP)
- Poly Vinyl chloride (PVC)
- Beryllium metal

- Beryllium oxide (BeO)
- Nickel sulphate
- Nickel sulfamate (=Nickel bis sulfamidate)
- Indium phosphide
- Di-arsenic pentoxide; (i.e. Arsenic pentoxide; Arsenic oxide)
- Di-arsenic trioxide (i.e. Arsenic trioxide)
- Cobalt dichloride
- Cobalt sulfate
- Cobalt metal
- Nonylphenol.

* These substances have been reviewed by the Austrian Umweltbundesamt. If you would like to submit further information concerning the quantity usage aspects of these substances, please see the information compiled by the Austrian Umweltbundesamt referred to on the consultation page ([link](#)).

** A substance review is being prepared for this substance; please use this questionnaire for DIBP, only if you do not intend to submit further input concerning the draft substance assessment dossier. For this purpose, please refer to this [link](#).

4. Applications in which substance is in use

- a. Please provide information concerning products and applications in which the substance indicated in Question 3 is in use.
Electrical installation equipment, conduit, trunking, trays and ladders for the accommodation and protection of cables.
- b. In your answer please specify if application is relevant to EEE products and applications or not.
- c. Please elaborate if substitution of the substance indicated in Question 3 is already underway in some of these applications, and where relevant elaborate which chemical or technological alternatives may be relevant for this purpose.
No substitute

5. Quantities ranges in which the substance is in use

- a. Please provide information as to the ranges of quantities in which the substance indicated in Question 3 is applied in general and in the EEE sector.
The consumption of the German cable management industry is approx.. 50.000 tons/year of rigid PVC
- b. If substitution has begun or is expected to begin shortly, please estimate how the trend of use is expected to change over the coming years.
No substitution planned or expected

6. Further information and comments

- a. The substance profiles made available on the consultation page have been prepared as a summary of the publicly available information reviewed so far. If relevant, please provide further information in this regard.
- b. Please provide further information and documents that you believe to have additional relevance for this review, as well as references where relevant to support your statements.

Further information and comments:

Rigid-PVC is used by cable management systems industry since more than 60 years. More than 95 % of these plastic products are manufactured of rigid-PVC.

In the current proposal for the priority list PVC is listed as category 3.

In the final report of the "Study for the Review of the List of Restricted Substances under RoHS2" Reference: ENV.C.2/ETU/2012/0021 the reason to list PVC as category 3 is that in the 3 defined waste categories plasticizers out of soft- or plasticized-PVC were found if cables are shredded.

Here we want to point out that PVC as named in the priority list has not a homogenous composite.

PVC compounds have to be clustered in:

- Rigid PVC (without any plasticizers)
- Plasticized PVC containing the 3 mentioned plasticizers
- Plasticized PVC containing other than the 3 mentioned plasticizers

Conclusion:

To evaluate PVC it is absolutely necessary to differentiate between several PVC compounds.

No justified reason is seen for considering to add

- either rigid PVC
- nor soft PVC not containing the plasticizers named in category 1 of the list of restricted substances of the European RoHS 2 Directive.

Therefore only PVC containing 1 or more of the 3 banned plasticizers should be at the priority list.

For cable management systems no plasticized PVC containing the 3 mentioned plasticizers is used.

Nevertheless the requirements of WEEE and REACH are fulfilled by the respective products.

Taking a look to the characteristics of PVC it is classified:

- Not to be hazardous according to the EU Regulation on the Classification and Labeling of substances and mixtures
- Not to be a Persistent Bio-accumulative and Toxic (PBT) substance or to be a Substance of Very High Concern (SVHC).
- Not to be hazardous as waste either. Indeed, although Commission Decision 2001/118/EC2 on the list of wastes mentions plastics waste under several entries which could be relevant for EEE waste (160119, 191204, 200139), none of these has been qualified as hazardous, and there is no specific reference to PVC.

The Green Paper on "the environmental issues of PVC" adopted in July 2000 concluded most of the waste management problems are not PVC specific

The economical and technical performances, including safety and environmental characteristics of rigid-PVC are outstanding.

Some of the characteristics of PVC that make it appropriate for electrical installation equipment are the following:

- Electrical insulation
- Excellent resistance to many chemical substances
- Excellent fire behavior: no flame propagation and limited heat release in case of fire
- Excellent carbon footprint compared to other plastic materials
- Very easy recycling inside the producing companies of production waste coming up from starting up the extrusion process as well coming up from different punching processes

Furthermore we want to draw your attention to other sectors of industry where PVC compounds are used:

- Rigid-PVC is used since many years to produce window frames.
- Soft-PVC is used for many years to produce as well medical products as floor covering.

We hope we could clarify the differences in PVC.

If you need additional information do not hesitate to contact us.

In case parts of your contribution are confidential, please clearly mark relevant text excerpts or provide your contribution in two versions (public /confidential).

Finally, please do not forget to provide **your contact details** (Name, Organization, e-mail and phone number) so that Oeko-Institut can contact you in case there are questions concerning your contribution.