

**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.

Rigid PVC is currently used for cable management systems such as cable trays, cable trunkings and conduits since more than 60 years. More than 95% of these plastics products are manufactured of rigid PVC

- b. In your answer please specify if application is relevant to EEE products and applications or not.

Most cable management products are used for electrical installation and are outside of the scope of the RoHS Directive. However, some products are used in Electrical and Electronic Equipment.

- 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.

For some special applications, other substances such as PP (polypropylene), PPO (polypheylene oxide) and PC+ABS (blends of polycarbonate and ABS) are used. However, these substances are not a real alternative to PVC because their fire behaviour is not the same as PVC and the cost is much more expensive.

#### **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.

It is difficult to us to provide information on this subject.

**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.

We think no substitution for PVC is feasible today for most of the applications.

## 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.

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 plasticisers)
- Plasticised PVC containing the 3 mentioned plasticisers
- Plasticised PVC containing other than the 3 mentioned plasticisers

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

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 plasticisers out of soft- or plasticized-PVC were found if cables are shredded.

No justified reason is seen for considering to adding

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

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

For cable management system no plasticised PVC containing the 3 mentioned plasticisers is used.

Nevertheless the requirements of RoHS 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 Labelling 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 behaviour: 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 compound are used:

- Rigid-PVC is used since many years to produce of window frames.

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