

ZVO e.V. · Postfach 10 10 63 · 40710 Hilden

European Chemicals Agency  
Mr. Bjorn Hansen  
P.O. Box 400  
00121 Helsinki  
Finland

sent by e-mail

Ihr Zeichen

Unser Zeichen

Telefon, Name

Datum  
2020-09-03

## **ECHA Study: Impacts of REACH restriction and authorisation on substitution in the EU**

Dear Mr. Hansen,

Zentralverband Oberflächentechnik e.V. (ZVO) has taken note with interest of the study “Impacts of REACH restriction and authorization on substitution in the EU”. ZVO welcomes the fact that ECHA is trying to analyse the effects of restrictions and authorizations, notably with regards to the requirement to substitute uses of SVHCs.

The ZVO agrees with some of the results and conclusions based on practical experience of its member companies:

1. The effect of restrictions on substitution is higher than that of authorizations.
2. Like any type of regulation, sustainability guidelines naturally lead to the consideration of alternative options.
3. Customer inquiries or customer requirements initiate considerations of alternatives if the current technology does not meet new demands.
4. Safe alternatives rarely generate financial benefits and / or competitive advantages. If this was not the case, substitution efforts would already have been triggered by the need to improve these two key business goals.
5. It is considered that the intended reduction of emissions into the environment and the exposure of workers to chemical substances are the primary advantages of the SVHC substitutions.

However, the ZVO severely questions several recommendations the study makes:

1. The group approach for similar substances was not part of the investigation and no statements were made about it. Therefore, the benefit of such a grouping cannot be derived from this study. The ZVO has drafted a position paper on substance

grouping that outlines the considerable dangers this chemically and technically questionable approach<sup>1</sup> holds.

2. The study contains no data on the role of networks and technical cooperation. The ZVO has repeatedly pointed out that the complex interrelationships of supply chains and networks would lead to numerous, contradicting technical approaches. Especially for SMEs that are part of numerous independent supply chains, it is neither feasible nor possible to follow such contradicting approaches.

The ZVO would like to point out urgently that the study has various scientific weaknesses that greatly reduce the value of its conclusions and call their objectivity into question. This is proven by applying the following criteria for sound scientific work to the study:

- **The reproducibility of the results of the study has not been verified.** Since this study has not yet been confirmed by further independent research, the ZVO is of the opinion that it is not suitable as a justification for regulatory measures. Without further scrutiny, its conclusions can only be viewed as hypotheses. In line with scientific rigor, these results can only be viewed as the basis of a usable theory after having passed independent falsification tests.
- **The informative value of the study must be questioned in some aspects.** Assessment criteria are not clearly defined and appear to overlap. The evaluation suggests direct influences of certain criteria, even though they are merely a consequence and not a cause. Example: In Figure 7, “market concerns” and “sustainability concerns” are to a considerable extent a consequence of “regulation” and therefore not independent!
- **The study is not representative.** The subject sample size is neither large enough nor of representative value. It therefore does not allow for a general statement or conclusion. Example Figure 2: There is no consideration of the proportion of the sample of companies as compared to the overall size of the sector. 32 answers are available for chromium trioxide. Nonetheless, in the Annex XV document, the results are applied to 18,000 plants for surface coating (in Germany alone, there are 1,500 affected SMEs)<sup>2</sup>! The study appears to cover less than 1% of the companies and plants concerned!
- **The level of correctness of the study and its statements must be called into question:** First, the conclusion contains statements that are not covered by the analysis. Example in Figure 18. The author of the study draws the conclusion that companies

---

<sup>1</sup> [https://www.zvo.org/fileadmin/zvo/Positionspapiere/PosPapier\\_Substitutionsstrategie\\_ECHA\\_01\\_04\\_2020.pdf](https://www.zvo.org/fileadmin/zvo/Positionspapiere/PosPapier_Substitutionsstrategie_ECHA_01_04_2020.pdf)

<sup>2</sup> PROPOSAL FOR IDENTIFICATION OF A SUBSTANCE AS A CMR CAT 1 OR 2, PBT, vPvB OR A SUBSTANCE OF AN EQUIVALENT LEVEL OF CONCERN for Chromium trioxide, page 14

see substitution as a way to improve their “public image”. However, this aspect is not included in the evaluation!

1. Secondly, the study contains arbitrary assumptions. Example Figure 18: It is not understandable why an "increase in the number of employees" would represent a benefit. Experience has shown that increasing the number of employees with the same production is an economic disadvantage, especially since personnel usually represent the largest costs in a surface technology company!
2. Thirdly, significant results are not thoroughly evaluated and are not included in the conclusions or recommendations. Page 43 and 44 reports significant one-off and annual cost increases and generates a significant result from this finding. However, this is not reflected in the conclusions.
  - **The accuracy of the study is low.** Example Figure 3: A percentage representation as depicted here creates a wrong picture and suggests apparent accuracy. A total of four distributors responded to questions about seven substances or uses. Since the study was based on nine substances with 12 uses, it is not possible to make quantitative statements based on these findings.

The ZVO agrees with the overall objectives of the study, but urgently recommends to draw the following conclusions:

- a. The sample size of the study should be extended to a representative number of affected companies. The study should be conducted in an open-ended manner, be independent of regulatory authorities and receive adequate funding.
- b. In order to sufficiently test the hypotheses, the study should contain negative examples. Many substitution efforts fail. It would be important to analyse these cases as well. Companies need information regarding the procedures and substances that have not led to success or that turned out to be economically, technically or environmentally regrettable substitutions. ECHA and the European Commission should provide a database on these experiences.
- c. Improving the financing opportunities for research facilities should be limited to fundamental, basic research on alternative technologies. Industry itself should carry out targeted substitution of specific industrial processes because they know the specific requirements that have to be met by an alternative technology. It would therefore be welcomed if funding for supply chain-specific research and development was made available more easily and to a greater extent.
- d. The study or future research must be expanded to include a longer time frame (several years) to adequately reflect the experience with possible substitutions with view to market acceptance, product safety, etc.
- e. There should also be analyses of the changes in risk triggered by the substitution. Such follow-up analyses should not be limited to the emissions of the substance in

question. Rather, there are also questions about (i) other environmental influences (e.g. additional wastewater, energy requirements, recyclability, by-products, etc.), (ii) other emissions at the workplace (e.g. dust, respiratory A and E fractions, etc.) and (iii) other risks (e.g. acute toxicity, fire hazard, explosion hazard, product safety) through process changes.

- f. In order to be able to realistically assess substitution effects, economic consequences should not be excluded from these analyses. Impacts on the economy need to be considered and reported alongside with technical and environmental aspects. This is crucial as substitution efforts might trigger existential economic threats, especially for SMEs. It is also of great importance to take account of the shifts in market shares (both in Europe and globally) caused by substitutions that are forced by regulatory measures.

The ZVO is pleased to offer its active participation in the implementation of the proposed conclusions. The association remains available for questions and/or further information at any time.

Best regards

SIGNED

Walter Zeschky  
Chairman of the Board  
Zentralverband Oberflächentechnik e.V.

SIGNED

Christoph Matheis  
CEO  
Zentralverband Oberflächentechnik e.V.