

Press release

ZVO Press Release ECHA Study

**REACH
Substitution
SVHC – Substances of Very High Concern
ECHA Study**

1 September 2020

ZVO highlights the scientific shortcomings of ECHA's most recent study

In an open letter to Bjorn Hansen, Executive Director of the European Chemicals Agency ECHA, the Zentralverband Oberflächentechnik e.V. (ZVO) issues a statement on the study published by the ECHA in July 2020 titled 'Impacts of REACH restriction and authorisation on substitution in the EU'.

The ZVO welcomes the fact that the study sees the ECHA try to get to grips with the real impact of restrictions and authorisations - in this case, with reference to the requirement to deploy substitutes for the use of SVHCs (Substances of Very High Concern).

The ZVO agrees with some of the findings and conclusions on the basis of companies' practical experience:

1. Limitations have a greater impact on substitutions than authorisations do.
2. As with any kind of regulation, sustainability guidelines, by their very nature, lead to alternative options being reviewed.
3. Customer demands or customer requirements lead to alternatives being considered straight away if current technology cannot satisfy these new requirements.
4. It is exceptionally rare for safe alternatives to also confer financial benefits and/or competitive advantages. Otherwise, efforts would already have been undertaken to carry out this substitution so that both these key business objectives could be improved.
5. The reduction in environmental emissions and employees' exposure is, naturally, seen as the most important benefit of substitution, as it provides the grounds for substitutions that are stipulated in legislation.

However, the ZVO cannot support some of the recommendations that are drawn from the study:

1. The approach to substance groups did not fall within the scope of the study and no statements were made about it. This means that the benefits of substance grouping cannot be inferred from this study. The ZVO has drawn up a position paper on substance grouping that explores the not-insignificant risks of this approach, which is questionable both from a chemical and technical standpoint.¹

¹ https://www.zvo.org/fileadmin/zvo/Positionspapiere/PosPapier_Substitutionsstrategie_ECHA_01_04_2020.pdf

2. Similarly, there is no information about the background of the networks and technical collaboration within the framework of this study. The ZVO has repeatedly noted previously that the complex interactions between supply networks would lead to numerous, contradictory technical approaches. This approach is not feasible for SMEs, in particular, which are involved in an array of independent supply chains.

The ZVO wishes to highlight as a matter of urgency that the study exhibits a host of scientific shortcomings that greatly reduce the value of its conclusions and call its objectivity into question. This will be made clear with reference to the following criteria for diligent scientific work:

- **The reproducibility of the study's findings has not been verified.** As this study stands alone to date and has not been confirmed by similar independent studies, the ZVO believes that it is not suitable for justifying measures. Its conclusions should merely be seen as hypotheses. In line with the norms of diligent scientific endeavour, they should only be viewed as the basis of an applicable theory after they have passed independent falsification tests.
- **The study's informative value ought to be questioned in some respects.** The assessment criteria are not clearly defined and they overlap. As a result, the evaluation suggests that criteria have a direct impact, despite the fact that they are consequences, not causes. Figure 7 serves as an example of this: '*market concerns*' and '*sustainability concerns*' are to a large extent a consequence of '*regulation*' and are not, therefore, independent.
- **The study is not representative.** The number and selection of participants do not enable general statements or conclusions to be made. Figure 2 serves as an example of this: the proportion of the total number of companies that were recorded is not taken into consideration. There are 32 responses available for chromium trioxide, but the document in Annex XV lists 18,000 plants for surface coating (in Germany alone, this leaves 1,500 SMEs affected).² Accordingly, the study apparently covers less than 1 per cent of the affected companies/plants.
- **The study's accuracy and that of its statements should be called into question.** Statements are made that are not covered by the study. Figure 18 serves as an example of this: the study's authors use this figure to reach the significant conclusion that companies are using substitution to improve their '*public image*'. However, this aspect is not included in the evaluation. The study makes arbitrary assessments. Figure 18 serves as an example of this: no justification is given as to why an 'increase in the number of people employed' is supposed to be a benefit. From experience, increasing the size of the workforce while keeping production the same represents an economic disadvantage, particularly as staff costs generally make up the largest block of costs for a surface treatment company. Key findings are not evaluated and are not included in the conclusions/recommendations. For example, significant one-off and annual cost increases are reported on pages 43 and 44, which gives rise to a key finding – but this aspect is not considered further.

² 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

- **The study is not very precise.** Figure 3 serves as an example of this: a percentage-based depiction, as used here, paints a misleading picture and gives the appearance of precision. In total, four distributors (retailers?) gave responses on seven substances or uses. Given that the study is based on nine substances with twelve uses, it is not possible to make quantitative statements as to the question's objective.

The ZVO agrees with the study's objectives, but requests as a matter of urgency that the following conclusions be drawn from the document at hand:

- a. The study's investigations should be extended to cover a representative number of affected companies. The studies should be carried out independently of the regulatory authorities and without any expectations regarding their findings. They should also receive sufficient funding.
- b. The content explored by the study should be expanded to include negative examples. Lots of attempts at substitution end in failure. It is important to analyse these cases as well. Companies need information about the approaches and content that do not lead to success, or that have led to economically, technically or environmentally undesirable substitutions. The ECHA, or the European Commission, should provide a portal regarding these experiences.
- c. An improved funding situation for research institutions should only be created for fundamental research into alternative technologies. The targeted substitution of certain industrial processes needs to be completed by the industry itself – because it is only the industry that knows the specifications needing to be met. It would therefore be welcomed if funding on research and development focused specifically on the supply chain were made more easily and extensively available.
- d. It is imperative that the study's content be expanded to include long-term experience with substitution solutions, such as market acceptance, product safety, etc.
- e. Similarly, the changes to risk caused by substitution should also be included. This impact analysis cannot only focus on the emissions of the substance in question. Rather, there are also questions that need answering relating to other environmental influences (additional wastewater, energy demand, recyclability, by-products, etc.), other emissions in the workplace (dust, respirable A and E fractions, etc.) and other risks (acute toxicity, risk of fire, risk of explosion, product safety) caused by process changes.
- f. The economic consequences should not be neglected to ensure that the impact of substitutions can be realistically assessed. These consequences are to be considered and reported on equally. For SMEs, in particular, they can represent a threat to the business' very existence. It is also essential that a position be taken on the shifts in market share, both in Europe and globally, caused by substitutions mandated by regulations.

The ZVO stands ready to actively assist in putting the proposed elements into practice at any time.

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About the Zentralverband Oberflächentechnik e.V. (ZVO):

The Zentralverband Oberflächentechnik e.V. (ZVO) represents the interests of suppliers of raw chemicals and processes, plant manufacturers, component manufacturers, service providers, coaters and electroplating firms within Germany's electroplating and surface technology sector. Its members are active in the field of surface processing with metals or metal alloys from liquid process media. The ZVO acts as a central port of call for user

industries, politicians and authorities with questions concerning the financial, environmental, energy-related and education policy aspects of electroplating and surface technologies.

About electroplating and surface technologies:

The electroplating and surface technologies sector is an industrial sector that is shaped by small and medium-sized firms, with around 440,000 employees in Europe, 50,000 of whom are based in Germany. The sector generates turnover of around EUR 7.5 billion in Germany alone. The structure of electroplating businesses is dominated by SMEs, with just a small proportion of firms having more than 100 employees. The surface technology sector is a key industry: its services are crucial for the functionality of components, devices and machines in almost every other sector. As part of this, electroplating prevents corrosion damage of around EUR 150 billion each year. Electroplating technology enables an array of diverse components to function reliably: nowadays, no car leaves the conveyer belt without significant parts of it having been subjected to surface coating. Modern medical technology would not be possible without cutting-edge surface technology processes, and the same can be said of the construction and sanitation industries, electrical technology and the electronics industry, and the aviation industry.

Further information: www.zvo.org

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Many thanks in advance for sending an author's copy or publication links.

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