

Substitution event:

“Perspectives of Substitution of Chromium(VI) - Do the Alternatives Work and Are They Affordable?”

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1 Organisational information

The Federal Institute of Occupational Safety and Health (BAuA) hosted an event about substitution of chromium(VI) in Dortmund on the 14th January 2019. Organization was carried out by a team of the hazardous and biological substance department, involved in evaluation of occupational safety of employees under REACH (Regulation No. 1907/2006/EU). No external organizers were assigned.

This event is an example of substitution events to involve members of the supply chain in order to support the substitution of hazardous substances under REACH. Conclusions drawn from problems faced during organization are summarized here as lessons learned.

2 The substitution event

The substance(s)

Chromium(VI) plays a major role in surface technology for functional/hard and decorative chrome plating. It is used in different industry sectors, from e.g. automotive to sanitary, to obtain chromed surfaces with many features, e.g. anti-corrosiveness, robustness, aesthetic appeal or colourfastness.

The concern

Chromium(VI) poses a risk for the professional user during the manufacturing process.

Because of release of Cr(VI), chromium(VI) compounds meet at least the criteria according article 57 a) for carcinogenic of REACH to be identified as substances of very high concern (SVHC) and subsequent inclusion into Annex XIV (authorisation list).

Authorisation under REACH

Since the 21st of September 2017 manufacturers, importers and downstream users must apply for authorisation of uses of certain chromium(VI)-compounds, e.g. chromium trioxide or sodium dichromate (<https://echa.europa.eu/de/authorisation-list>). One requirement for authorisation is the analysis of alternatives to verify that there are no technologies or other substances available to replace a SVHC.

Goals of the chromium(VI) substitution event:

- Promote dialogue between all parties in the supply chain and the authorities
- Provide general information about substitution (information sources and databases)
- Provide funding opportunities available in DE
- Present and discuss alternatives of chromium(VI)
- Give impulses for the development of alternatives

More than 200 stakeholders were brought together to discuss available alternatives for functional/hard and decorative chrome plating processes. Most participants came from small to middle sized enterprises (>50%). Different industrial sectors were present or represented by German industry federations (VECCO, ZVO, FGK, VDMA).

3 Problems faced and lessons learned

1. Date of event

The event took place shortly after Christmas and New Year. It turned out to be an unfavourable time point of the year for a meeting, because of holidays of participants. Also internal planning has to be finished long before the event. This reduces flexibility for reaction to unplanned incidents.

⇒ Consider holidays for planning.

2. Organizing team

Due to internal organization the team changed in its constellation, which meant a shift of tasks and obligations. We learned that good representative rules and agreement on responsibilities are essential for a successful organization.

⇒ Clear description of obligations and duties is essential.

⇒ Appointment and permanent inclusion of representatives is necessary (access to relevant information, documentation).

3. Time line/mile stones

Our internal organisational structure requires ahead planning about one year. This time frame is long enough to design the concept, consider external support, book event location etc.

One part of the program was a poster session. However, we faced the problem that we did not receive enough feedback or interest in a poster session.

⇒ Start to plan the event early.

⇒ Include fall-back options at certain project milestones.

⇒ Start a call for posters early and give detailed information on expected content.

4. Concept of the event

Our event format served to reach many people. In the end, many participants gave feedback that they would prefer a workshop format with smaller groups for deeper discussions.

⇒ Decide early on the concept and format of the event (information event or workshop) and stick to it.

⇒ Consider the key points of the programme and expected number of interested participants.

5. Programme

We decided early that the event should be informative with two main topics: presentations from industry with practical solutions and general information on practical tools to handle and approach substitution. With the introductory talk from ECHA, the audience was reminded that substitution is considered as a strategy to handle hazardous chemicals in the EU. We then focussed on national level, by giving a survey over funding possibilities in Germany, and presented information sources worth considering before starting substitution. An important part of the programme was the time and room for open discussions among the participants.

- ⇒ Give room and time for interaction and networking.
- ⇒ Integrate many representatives from different points of the supply chain with different perspectives. However, make sure to follow a common thread.

6. Representatives/speakers

Important are reliable representatives, who can successfully address key points of the programme, and the quality of the substitution solution.

Therefore, we tried to coordinate contents of talks by providing guiding questions in writing and exchange by phone.

We experienced the following:

- a) We originally wanted to invite end customers from the automotive sector, who are involved in setting technical and aesthetic requirements for chromed products. However, we did not succeed in acquiring a speaker for the substitution event.
 - b) One representative changed his mind about participation late in the planning process.
- ⇒ Involve other authorities/organizations with a good network and connections to reach relevant representatives.
 - ⇒ Stay in contact with speakers. Be sure of their commitment.
 - ⇒ Stay in contact with the speakers to coordinate contents (ideally contents supplement each other).

7. Moderation and discussions

Depending on the sensitivity of the topic a strong and assertive moderator, who is perceived as independent, is needed to guide through the programme. We had two experts of the topic dealing with questions and moderation (welcome & introduction, conclusion).

- ⇒ External moderators (experts) can help to handle sensitive topics. Objective guidance through the programme is necessary.
- ⇒ Create an open, constructive atmosphere for discussion.
- ⇒ Try to involve the whole audience (questionnaire to give the chance for input or questions, which should be answered during the meeting; use breaks for discussions with participants).

8. Audience

To reach a broader group of stakeholders, we decided to advertise on online platforms of other involved authorities, homepages of professional journals and magazines (event calendars) and to contact interested industry federations. This strategy was successful and yielded in a broad feedback.

⇒ Identify which audience should be addressed and the information channels relevant to the participants.

9. Working language

Working language of the event was mainly German. We had one Finnish speaker representing his alternative in English. Although it did not pose a problem for discussion in the end, it was clear that participants preferred their mother tongue.

⇒ Working language should be considered and from case to case translation might be useful.

10. Outcome of the event

We planned to spread the information of the outcome by publication in professional journals. Moreover, results should be used for an external research project on available alternatives for chromium trioxide. We invited participants to get into direct touch with the project leading company and to take part in an interview.

⇒ Think about how to use the outcome of the event (publication on homepage or in professional journal, research project, initiative etc.).

⇒ Consider if activities, outside of the event, can be combined and should be included into the programme (advertise/create awareness).

4 Conclusion

⇒ Events and workshops are a powerful tool for substitution to exchange information, discuss problems/hurdles and eventually initiate activities to overcome these.

⇒ Information created by such an event raises awareness and can give an incentive for further activities to promote substitution (research projects, initiatives, development/improvement of information tools, campaigns etc.).

⇒ Participants requested that substitution events should be a starting point for continuous dialogue between stakeholders in the supply chain (including authorities), thus, transforming reservations and concerns of different stakeholders into constructive approaches.

⇒ Information created by such an event shall be spread and made accessible for all interested parties (e.g. publication, databases etc.).