The chromium trioxide authorization of CTACSub – and what follows from it!

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Since 2012, CTAC has been working on a joint upstream application for authorization, submitted by seven applicants, covering all downstream users for six defined uses of chromium trioxide (CrO_3). The uses applied for include the manufacture and formulation of mixtures, functional chromium plating, decorative chrome plating or surface treatment for the aerospace industry. The CTACSub consortium for the continued use of chromium trioxide in electroplating is now the only supplier consortium that has a positive authorization decision for the main applications hard chrome and conversion layers, covering about 90 % of the market. The author works actively in CTACSub and shows important results and their possible consequences for companies of galvanic chromium plating and as a result also for all industrial sectors that use chrome-plated components.

1. The CTACSub authorization - what a user must implement now

After almost 10 years, the EU's top authority has approved five applications of chromium trioxide with the consent of the EU member states. The aim of this paper is not to deal with the complexity of this authorization procedure, but to describe what this means for the user and what the next steps are.

The CTACSub authorization, which was jointly obtained by the majority of suppliers, currently covers about 90 % of the user market. The remaining 10 % is mainly covered by own authorizations from downstream users. CTACSub authorizations include five applications like hard chrome and conversation coatings.

First of all, it is important to understand that the authorization covers the uses of the substance. This use takes place at the user's premises, so that the downstream user is ultimately also responsible for implementing the authorization conditions. The national authorities will therefore also monitor users with regard to implementation. The conditions for authorization are intended, inter alia, to ensure that the use is uniform throughout Europe and that the employees handling this substance are adequately protected.

The conditions of authorization, which are addressed below, apply to all companies which are in the direct supply chain of CTACSub authorization holders and do not currently have their own authorization number. For those who already have their own authorization number, the following information is only marginally relevant.

1.1 Updated safety data sheets

The authorization measures that users must implement are described in the exposure scenarios that had to be made available by the direct supplier of chromium trioxide by 18 March 2021. Users need to familiarize themselves with these exposure scenarios and implement them quickly. In order to make the measures comprehensible, they were described again in the so-called *Good Practice Sheets*. Both the exposure scenarios and the leaflets relate to a particular activity related to the use of chromium trioxide. These also help with the expected appointments with the relevant enforcement authorities. If there are delays, the affected users must ensure that the exposure scenarios are made available to them at least as a separate document.

Link to the Good Practice Sheets; III. Good Practice Sheets for Uses of Chromium Trioxide and Miscellaneous Chromates:

➲ **https://jonesdayreach.com/substances/**

1.2 Authorization number

The direct supplier of chromium trioxide must provide the authorization numbers for its supply chain. This could initially be done in writing, after 18 March 2021 these numbers must then be marked on the safety data sheets and product labels. These numbers can also be found on the Internet in the authorization decision on the EUR-LEX page at:

➲ **https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.C_.2020.447.01.0005.01.ENG&toc=OJ%3AC%3A2020%3A447%3ATOC**

1.3 Downstream User Notification

Next, downstream users must register with ECHA. Users of an SVHC substance are obliged to do so in accordance with Article 66, REACh. For this purpose, they must use the REACh-IT platform and create an account for themselves. This does not involve any cost. Information provided here by the user, such as the authorization number, application, the annual quantity of the substance consumed, the core properties of the substance relevant for use, emission and exposure measurements, are then partly transmitted by ECHA to the enforcement authorities in the respective Member States. Even if the deadline for such notification is three months after the first delivery after the authorization has been granted, there is no disadvantage in making the notification earlier.

Link to REACh-IT:

➲ **https://reach-it.echa.europa.eu/reach/**

1.4 Measurements of exposure and emission

Users must carry out exposure and emission measurements at least once a year for all tasks where the employee comes potentially into contact with the substance. In this context, it does not matter what other laws and national regulations require from the user.

These measurements must be completed by 18 June 2021 and the readings must be transmitted to ECHA by 18 December 2021. For this purpose, the created account on the platform REACh-IT on the ECHA website is also used.

Each user should be aware that no limit value for exposure or emission has been defined within the authorization (*Figs. 1* and *2*). Setting a limit would accept an increased risk, which is not enforceable here. It is the continuous risk reduction principle that applies here.

With regard to the issue, it is necessary to follow national legal regulations.

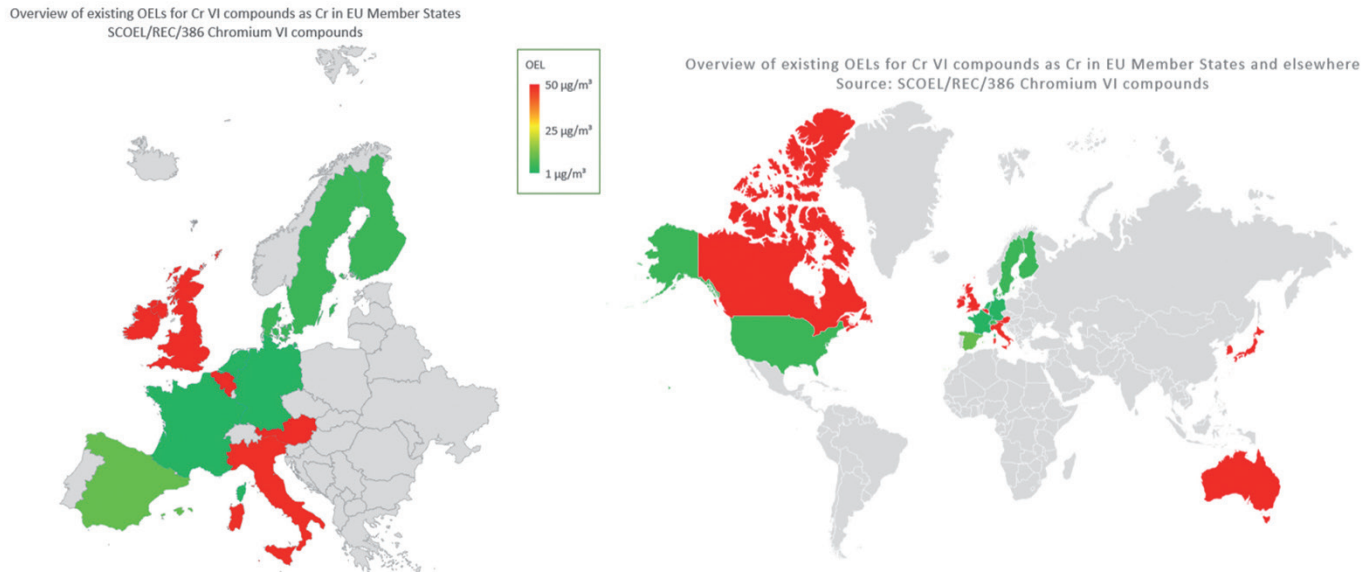

Fig. 1: Occupational Exposure Limits for chromium(VI) in Europe and the rest of the world (SCOEL/REC/386 Chromium VI compounds)

Within the EU Cancer Directive (DIRECTIVE (EU) 2017/2398 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 12 December 2017), there are European limit values that limit exposure at the workplace to 10 micrograms per m^3 and from 2025 down to 5 micrograms per m^3.

With regard to exposure, however, it is highly recommended to all EU downstream users that the appropriate protective measures for employees comply with the exposure levels which are based on the most stringent requirements, such as those in France or the Netherlands. Here, a value of 1 microgram/m^3 applies.

To sum up, protection measures for users and their employees in the EU are now uniformly defined and contribute to further improving the protection of labour and the environment. Several countries have already adapted their national health and safety laws and limit values in parallel with the various authorization procedures. Outside Europe, the picture is similar, nevertheless, it has been difficult to obtain clear limit values for certain countries.

ANNEX

'ANNEX III

Limit values and other directly related provisions (Article 16)

A. LIMIT VALUES FOR OCCUPATIONAL EXPOSURE

Name of agent	EC No (1)	CAS No (2)	Limit values (3)			Notation	Transitional measures
			mg/m³ (4)	ppm (5)	f/ml (6)		
Hardwood dusts	—	—	2 (7)	—	—	—	Limit value 3 mg/m³ until 17 January 2023
Chromium (VI) compounds which are carcinogens within the meaning of point (i) of Article 2(a) (as chromium)	—	—	0,005	—	—	—	Limit value 0,010 mg/m³ until 17 January 2025 Limit value: 0,025 mg/m³ for welding or plasma cutting processes or similar work processes that generate fume until 17 January 2025

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Fig. 2: Extract from the Cancer Directive - Limit value for chromium(VI)

2 CTACSub authorization for decorative chrome plating and etching of plastics

Authorization for decorative chrome plating and etching of plastics (pre-treatment of plastics as a work step in the galvanic coating of plastics) (Use 3) has not yet been granted. After an in-depth assessment, the EU Commission has concluded that alternatives are generally available. Thus, the CTACSub consortium and the other regulatory consortia were invited to draw up substitution plans. The CTACSub substitution plan was created on the basis of information from more than 850 users in Europe and thus has the widest and deepest range. The specific differences between the different end markets were discussed. These include the industrial end sectors automotive, plumbing, furniture, medicine, cosmetics, others.

By June 2021, the substitution plans submitted so far will be reviewed and validated by ECHA. In this context, it is certainly worth taking a look at the relevant publications:

➲ **https://echa.europa.eu/de/-/consultations-start-on-authorization-substitution-plans**

In principle, however, a substitution plan does not yet give the individual user planning certainty with regard to the deadlines by which the use of a substance is permitted. The feedback from the market shows that there is great uncertainty in this regard and investments in alternatives depend on deadlines set by the legislator. However, with the authorization requirement, the latter decided to create a highly complex set of rules that only a few can now follow.

Some of the most important contents of the rules will be discussed below.

3 Import of chrome-plated articles into the EU is legitimised

In addition to the authorization of chromium plating or the substitution obligation of chromium trioxide in Europe, the rules also provide that the import of chromium trioxide-chromium-plated articles from non-EU countries will continue to be legal.

Reference is made here to the entry on the ECHA website, of 18 March 2021, 12:50, (https://echa.europa.eu/de/previous-calls-for-comments-and-evidence/-/substance-rev/27302/term), which contains the following explanation:

ECHA considers that there is no EU use of chromium(VI) compounds in articles that lead to a non-adequately controlled risk that is not already regulated. In addition, based on available information mentioned above, there does not appear to be a presence of

chromium(VI) compounds in articles being imported to the EU.
Therefore, under Article 69(2), ECHA's view is that there is no strong driver for ECHA to develop and submit an Annex XV dossier for restriction at present.

4 Import of hexavalent chrome-plated articles prevents substitution

This assessment by ECHA translates as the EU not having any information that imported, chrome-plated articles are a problem. They are free of hexavalent chromium, but this has been pointed out by the coating industry before and during the authorization process.
For every user in Europe who has to substitute for the substance chromium trioxide on the basis of REACh, this message must sound very irritating, since the EU has set itself the goal of avoiding the use of substances classified as SVHC. The obligation to grant authorization and the still legitimate possibility of importing articles galvanically chromium-plated from non-EU countries using chromium(VI) compounds reduces the pressure to be substituted by other processes, often involving higher costs. It is unlikely that the European coating industry will be able to remain competitive on this basis.
The fact that applications of chromium trioxide are now most likely to be exported on this basis to non-EU countries where there is no authorization requirement or the possibility of close monitoring of users is certainly not a declared objective of the EU. For this, the serious question must be asked whether and why the EU's responsibility should end on the inside of its external borders!
This situation puts not only users at a disadvantage, but also companies that have invested millions in developing technologies to prevent the use of chromium trioxide to comply with REACH. A regulatory vacuum has arisen, which is now being filled by some OEMs in the automotive sector.
This shows once again that the industry sets its own rules before the legislator does. One major car manufacturer has already reacted by banning the use of chromium(VI) in its supply chain for newly advertised decorative, coated parts. Nevertheless, it is a commitment on company level, not industry sector level. But as an example, as this regulation applies worldwide, no supplier is discriminated inside or outside the EU. In the field of purely functional applications, this cannot be an option, as there is a broad consensus on non-availability of alternatives to functional chromium coatings.

5 CTACSub authorization and the EU Parliament's action

The EU Parliament is directly elected by EU citizens and monitors the EU Commission in the implementation of its tasks. The CTACSub consortium is so far the only supplier consortium that has a positive authorization decision and the decision was taken with the support of the EU Member States and is therefore legitimate and valid.
This is welcomed by one part of Parliament, while another part criticizes in principle the fact that authorizations are granted in the first place. In the case of CTACSub, the EU Parliament plans to take the case to court with a narrow majority of the Left, Green, Socialist and Renew fractions, on the grounds that the analysis of the alternatives would not provide sufficient evidence and that the EU Commission would therefore have made the wrong decision. Parliament ignores the fact that the EU Commission has the possibility to review authorizations at any time when there is new information on alternatives.

6 Possible consequences of the action for the market

The pending action has no suspensive effect with regard to the requirements for users to implement the conditions of authorization. The EU Commission is expected to defend its authorization decision in court. However, in the event that this procedure is lost, the authorization will most likely not be automatically refused. The decision is merely reversed, and a new decision must subsequently be taken.
In this context, the question arises why Parliament will complain at all if the exposure scenarios improve health and safety at work in Europe, when users are obliged to monitor health and safety at work on a regular basis and to communicate measurement results, and when there will be a review period up to 2024 during which progress towards alternatives can also be assessed. According to the author, only the appellants themselves can answer that question. The scientific committees, the Commission and the Member States have granted authorization. They had to follow the information provided by the applicants and the results of the public consultation. Until then, the procedure has worked, albeit for a very long time.
Should Parliament win this process, it will certainly weaken the role of ECHA and its RAC and SEAC committees, which have recommended authorization. Future applications for authorization for chrome plating, which have not yet been decided, will probably find it very difficult or no agreement at all, regardless of how safe the use is. At the same time, chrome-plated parts can still be imported into the EU.
In the end, a REACh law without an orderly procedure, which degenerates into an end in itself, only exacerbates the brain drain to non-EU countries and does not create a single job outside Parliament.

7 How are users covered after the 2024 review?

By September 2024, all downstream users in the applicant's supply chain will be covered at no additional cost. As of September 2024, this is no longer possible!
The CTACSub consortium is currently preparing to renew the authorization, regardless of the outcome of the court proceedings. The follow-up consortium, called CTACSub2, is also represented by Ursula Schliessner, JonesDay, Brussels.
The renewal of this authorization requires that all users covered by the up-stream authorization provide data and contribute part of the costs. However, these costs are far lower than those of a separate authorization.
The aim of CTACSub2 is to certainly get a review period as long as possible. However, guaranteeing the extension in advance is highly frivolous, as can be seen from the political situation that has been pointed out in advance.
For users, four basic scenarios have to be distinguished, in which a user must always become active himself!

1. The user who is supplied with chromium trioxide after 21 September 2024 by one of the six CTACSub2 suppliers and does not wish to have its own authorization **must join the CTACSub2 by 31 March 2021**! The user must ensure that his company data appears in the authorization audit report!
2. If the user is planning for an own authorization number for the individual company and wants to receive it before 21 September 2024, it can buy its chromium trioxide products with its own authorization number. This user can also join CTACSub2 as a back-up authorization in case of delays in his own authorization decision.

3. Anyone who is a member of a consortium with pending authorization notice submitted by a single retailer and that dealer has not an authorization number covering the specific use as of **March 31, 2021**, may additionally join CTACSub2 to have a back-up authorization and continued free supplier choice.
4. If you want to stop using chromium trioxide before 21 September 2024, you do not have to join a consortium.

In Scenarios 2 and 3, users must ensure that a guaranteed authorization decision is available before 21 September 2024, otherwise the substance may no longer be used and the company will be without suppliers.

The CTACSub2 contract is signed with the consortium, represented by JonesDay, Brussels, not with the supplier of chromium trioxide or a single consortium member. Memberships in different consortia or an own applications for authorization are also not in conflict with CTACSub2 membership. In any case, every user must now deal intensively with his supply chain.

➲ **https://jonesdayreach.com/substances/**