

EU Authorisation for Hexavalent Chromium – ECHA Compliance

Dott. Julian Rotter, Kaspar Walter GmbH & Co. KG

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Chromium Trioxide – Substance of Very High Concern (SVHC)



CrO₃ listed in REACH Annex XIV and due to its carcinogenic effects

The use of CrO₃ within the European Economic Area requires an authorisation

Rotogravure printing is currently covered by the CTAC authorization application

Since CTAC is an initial application, no decision on an authorisation application is needed for usage



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Chromium Trioxide Authorisation Consortium (CTAC)

Upstream Application by industry consortium covering ~2000 platers of several sectors

- ECHA recommends 7-year review period – until September 2024
- Criticized due to insufficient data collection from Downstream Users (DUs) and an insufficient discussion of possible alternatives → caused many debates and delays
- Several motions have hindered a final decision and the implementation

Current Status

- Member states approved the CTAC application
- Final decision by the EU Commission end of November

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CTAC timeline



October 2020
Voting of MS on CTAC

**Until February 2021
(3 Months after Decision)**
Downstream users need to register their company through REACH-IT

Beginning of 2024
Authorization Period Review Report
IF CTAC will be continued



November 2020
Publication of legally binding Authorisation by the European Commission

Annual environmental monitoring
Reporting exposure measurement data to ECHA and CTAC

September 2024
End of authorization

Until May 2021 (6 Months after Decision)
On-site implementation of annual environmental monitoring program as defined from CTAC





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ChromeXtend – An authorisation for rotogravure and embossing

Representing the whole European rotogravure and embossing industry

IDEA: Rotogravure will not benefit from continuing a joint application with other sectors due to the industry's higher safety standards and clearly defined uses. An assessment of the necessity of CrO₃ and possible substitution technologies can be very specific.

- **One-for-all application** will cover 117 European production sites
- Authorization expected for 7 – 10 years (covering 2020s)
- Process / equipment specific application approach will cover all horizontal plating baths
- Completely funded by K. Walter
- Fundamental cash savings for the industry (company specific application ~300.000 Euro)
- Cooperation and input from the companies fundamental (e.g. past DU survey)

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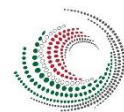
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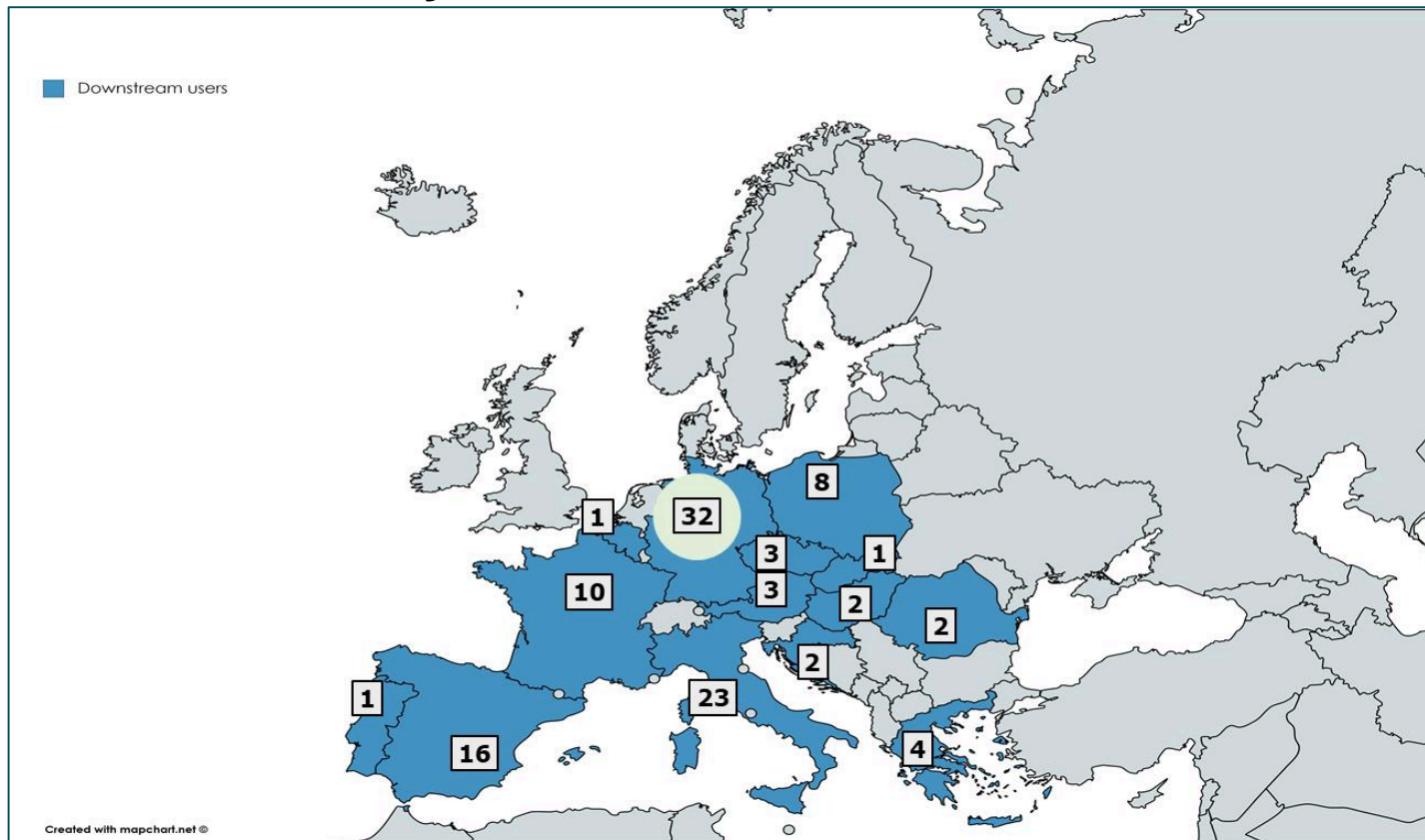
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Downstream User Survey



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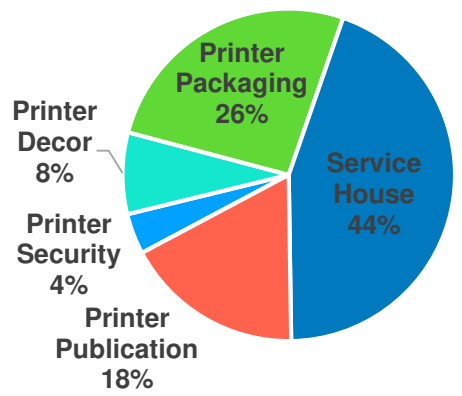
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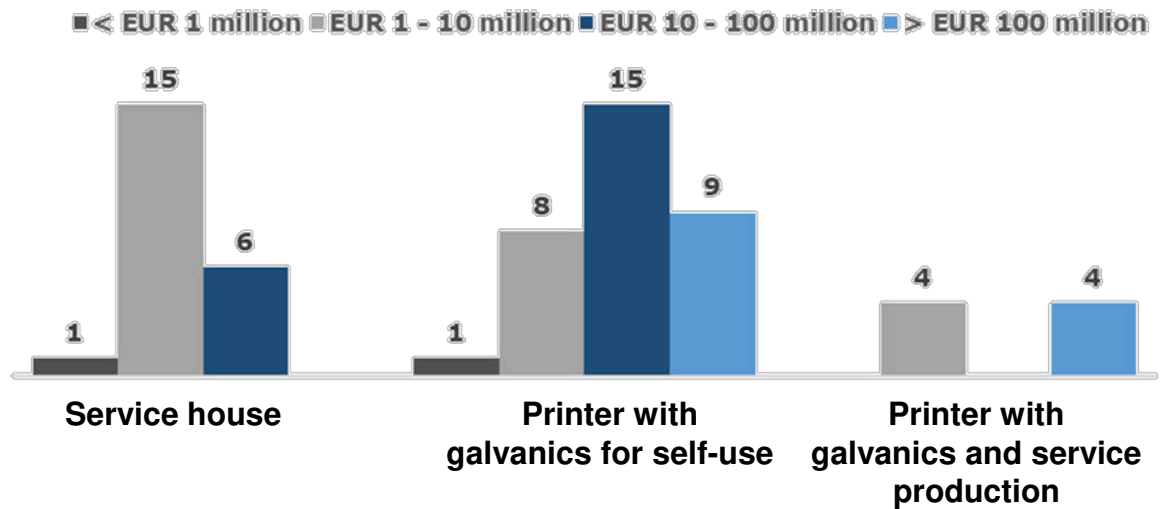


Company types and total annual revenue

Share of plant types



Number of DUs



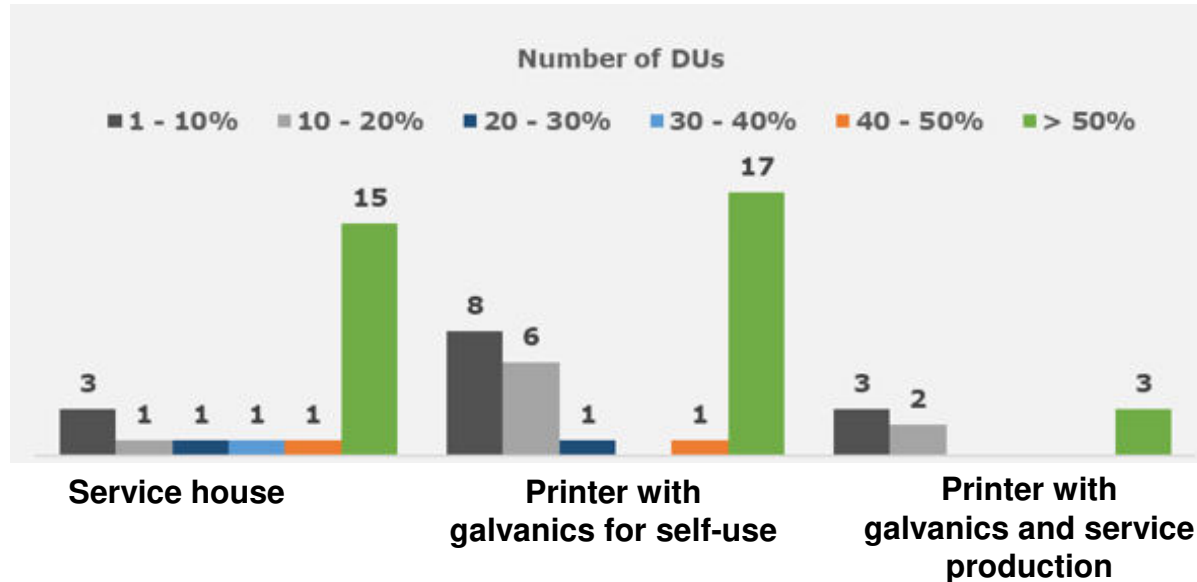
Downstream User Survey

- Company specific socio-economic analysis (SEA) was sent to 105 companies
- Production site specific chemical safety questionnaire (CSR) was sent to 117 sites
- Received an answer from 96 DUs (80%)
- Several DUs answered only one questionnaire
- Very positive feedback from the European Chemical Agency

Answered SEA	Answered CSR	SEA + CSR	Partial answer
74 DUs 70%	88 DUs 75%	77 DUs 64%	96 DUs 80%



Downstream User Share of Revenue related to K.Walter Machines ACiMGA



K. Walter can describe precisely the processes and safety procedures for the industry

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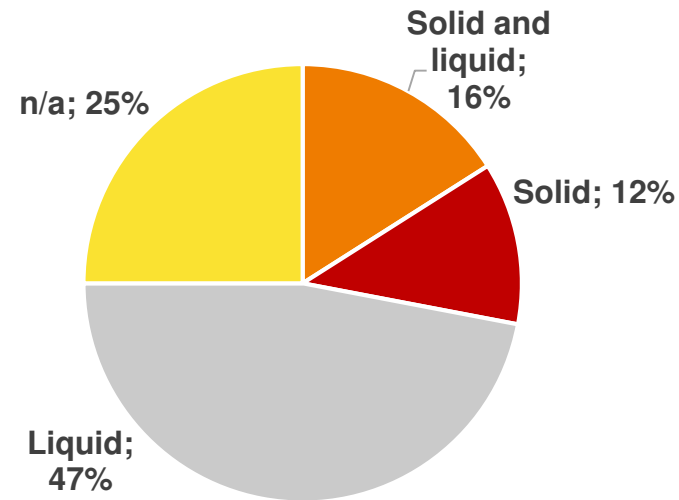


ChromeXtend – Chemical Risk Reduction

- CrO_3 exposure reduction most critical issue
- At 117 production sites a total of 657 employees are exposed
- > 200-fold total exposure reduction possible by switching to liquid formulations

! Use of liquid CrO_3 formulations will become mandatory within ChromeXtend

Distribution of CrO_3 form





ChromeXtend – Supply Chain Design

K. Walter will submit a full supply chain authorisation application



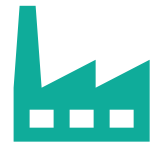
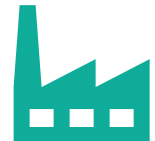
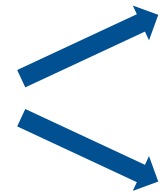
Rotogravure and embossing industry will be independent of other authorisations
Maximum production security for downstream users



Importer
K.Walter



Formulators



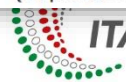
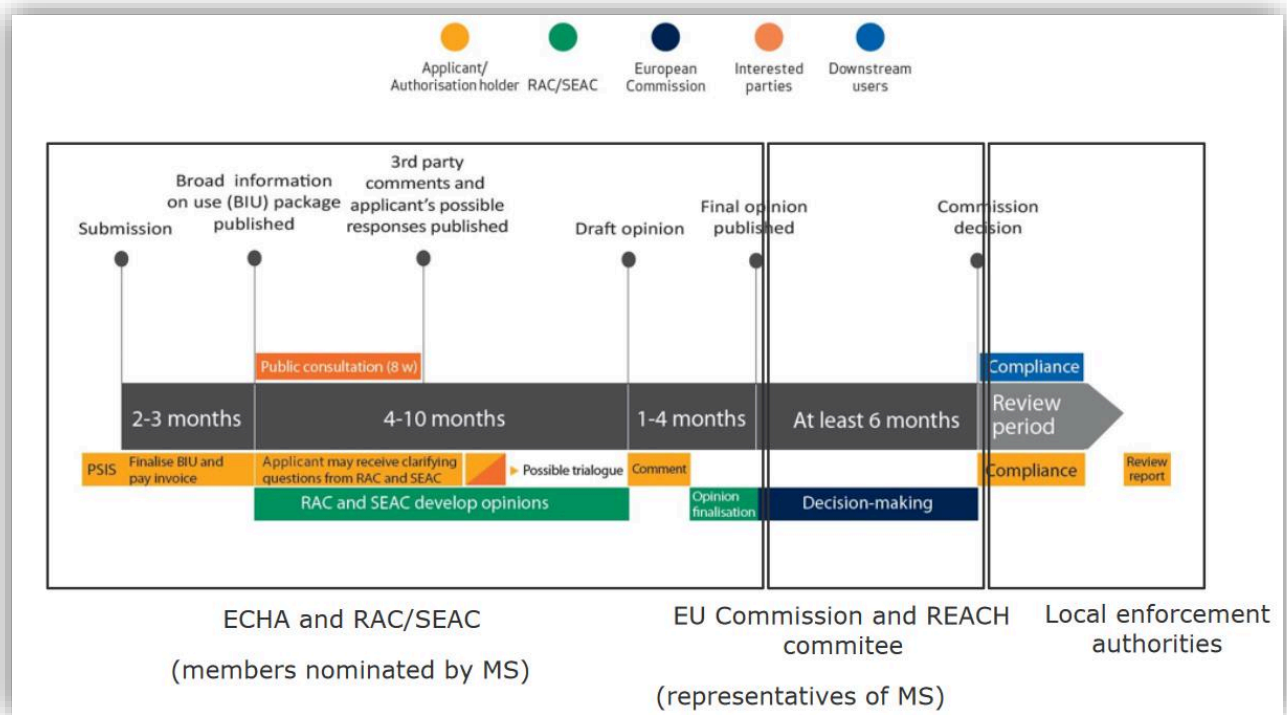
Downstream Users
Printer / Service House





ChromeXtend – Time frame of application procedure

- Application will be filed January 2021
- Official process will take about two years
- Support by different stakeholders needed during trialogue and comment phases needed



Staying up-to-date

CTAC

K. Walter and Comet will provide:

- Equipment and processes to reduce chemical risks
- ERA Webinar about how to implement CTAC requirements beginning of December
- Continuous updates about new regulations and best-practice

ChromeXtend

- Updates about the status of the application
- Approach the DUs when additional input or support is required
- Develop best-practice approaches together with the DUs

helioscope NEWSLETTER

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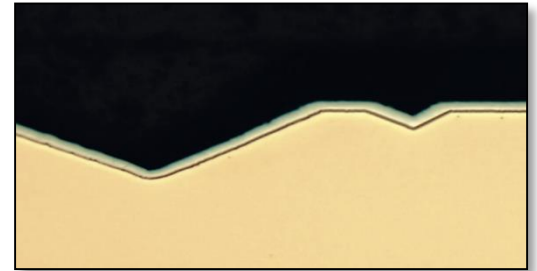
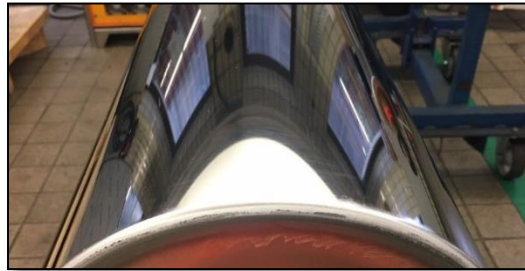
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Substituting Chromium Trioxide – an Outlook

HelioChrome NEO

- Environmentally friendly alternative based on a Cr(III) electrolyte with no regulatory concerns
- 1:1 replacement for Cr(VI) plating equipment and process
- Ongoing development at Huhtamaki Flexible Packaging
- Cylinders in production printing jobs integrated
- Surface quality matches conventional chrome plating



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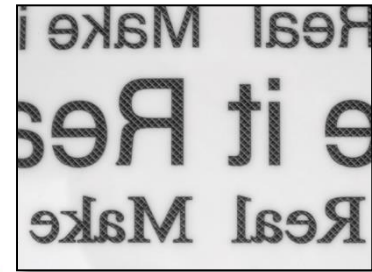
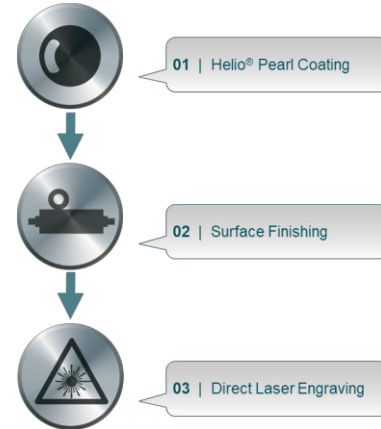
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Substituting Chromium Trioxide – an Outlook

Helio Pearl

- Polymer-based, laser-engravable monolayer for rotogravure
- Eco-friendly, galvanic free with non-toxic materials
- Cylinder production reduced to three manufacturing steps
- Time saving to minimize time to press
- Cost-efficient
- All existing cylinder bases can be used
- Stable printing runs over 100.000 meters



Summary

CTAC

- Authorization granted, awaiting details on environmental monitoring. Updates by K. Walter and Comet
- ERA Webinar about implementing regulations beginning of December
- Authorisation until September 2024

ChromeXtend

- Rotogravure and embossing specific application by K. Walter
- Full supply chain application for maximum production security
- High data quality thanks to the support by the downstream users
- Continuous support from the stakeholders needed throughout the application process
- Authorization will cover the 2020s

Substitution technologies

- Development of new Cylinder coating technologies to become independent of Cr(VI) authorisations
- Cr(III)-based chrome plating as Cr(VI) 1:1 replacement
- New laser-engravable polymer surface

Please contact me if you have any further questions: j.rotter@kwalter.de

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