

ChromeXtend

Authorisation of Chromium Trioxide

ERA Annual Conference 2020



CHROMIUM TRIOXIDE – Substance of Very High Concern



CrO₃ listed in REACH Annex XIV and requires an authorisation to be used in the European Economic Area

The use in gravure printing is currently covered by the CTAC application

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





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CTAC – the current application

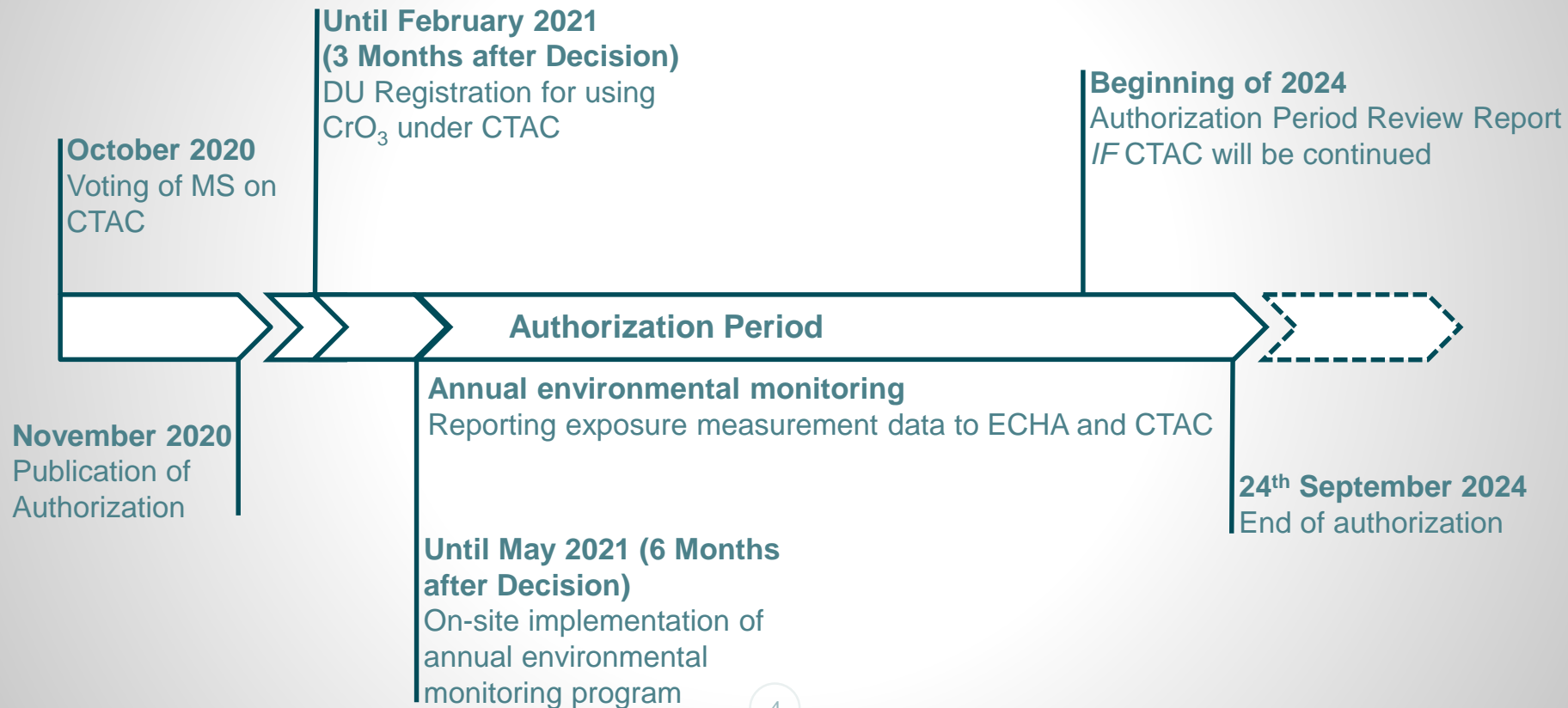
- ▶ 2015: Upstream Application covering ~2000 platers of various sectors using CrO_3
- ▶ ECHA recommends 7-year review period – until **September 2024**
- ▶ Criticized due to insufficient data collection from DUs → Caused many discussions and delays

Current Status

- ▶ Ongoing mail voting of the EU member states. Results expected end of October
- ▶ Qualified majority in a trial voting process



CTAC – timeline





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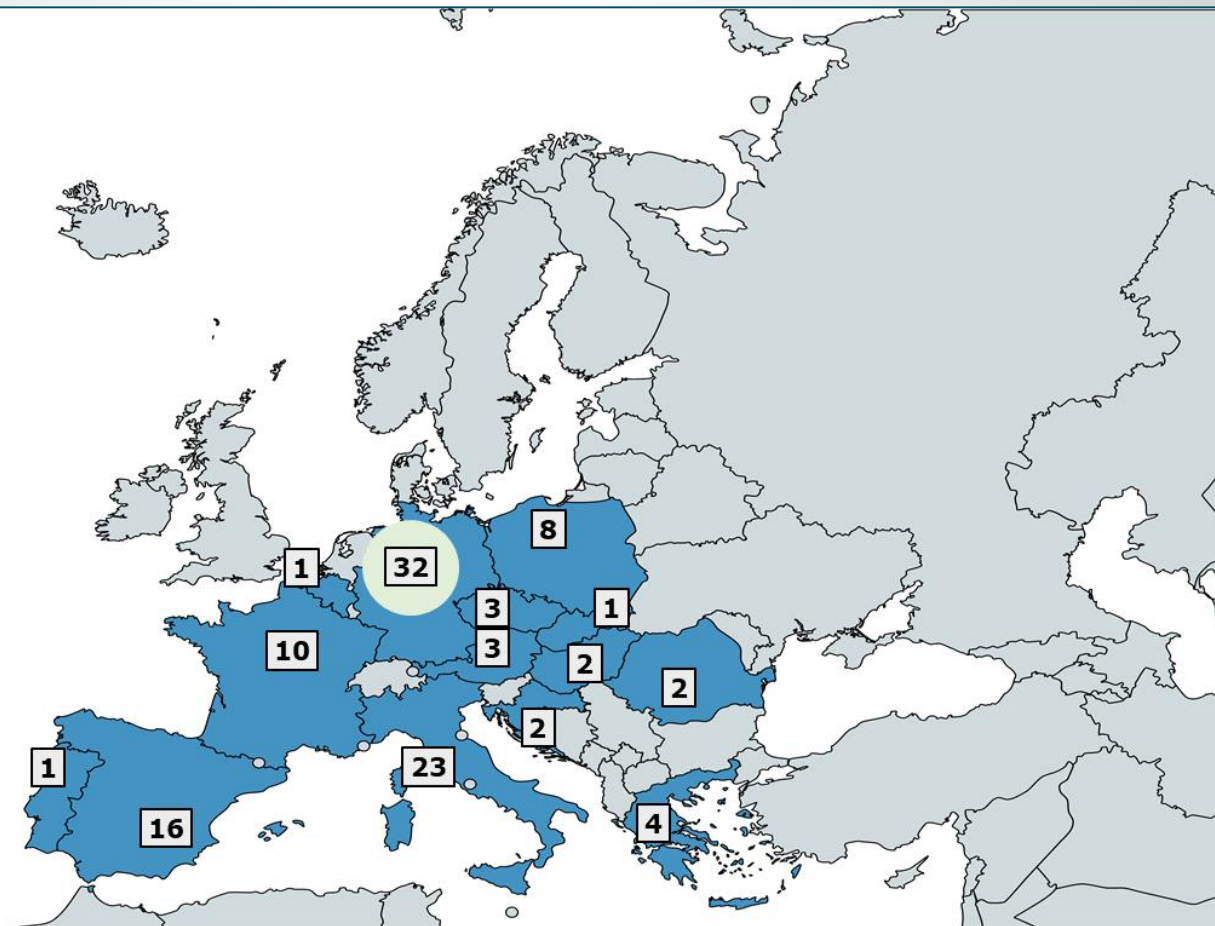
Application for EU Authorisation of Chromium Trioxide

Application by K.Walter for rotogravure and embossing specific authorisation

- ▶ Representing the whole European rotogravure and embossing industry
117 European production sites and 2 % of the CTAC CrO_3 consumption
- ▶ Authorization expected for 7 – 10 years
- ▶ Completely funded by K.Walter
- ▶ Supported by ERA and Bobst
- ▶ Develop high but realistic safety standards for a long authorisation period



■ Downstream users

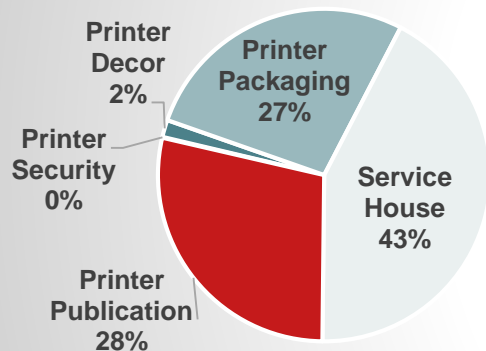


Created with mapchart.net ©



The European Rotogravure Industry

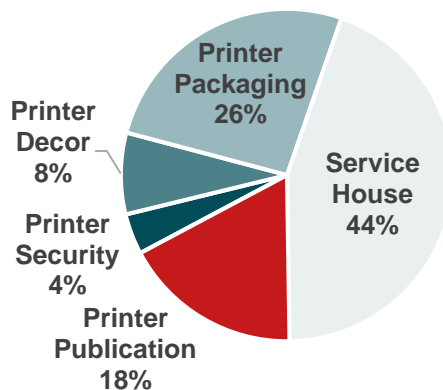
Share of cylinder production per type



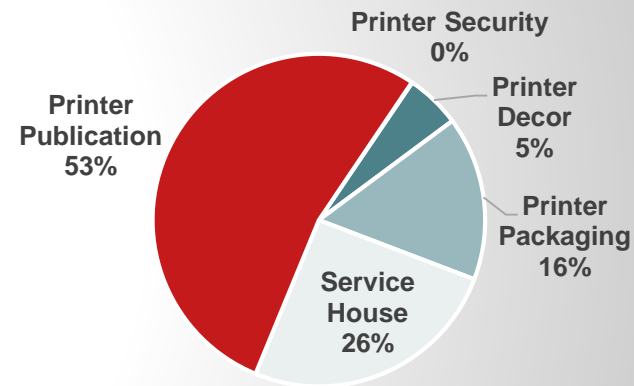
117 production sites

1.250.000 cylinders per year

Share of plant types



Mass of CrO_3 per sector in t /a



~ 180 t CrO_3 per year

~ 2 % of total CrO_3 usage in the EU



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Downstream User (DU) Survey and Results

- ▶ 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

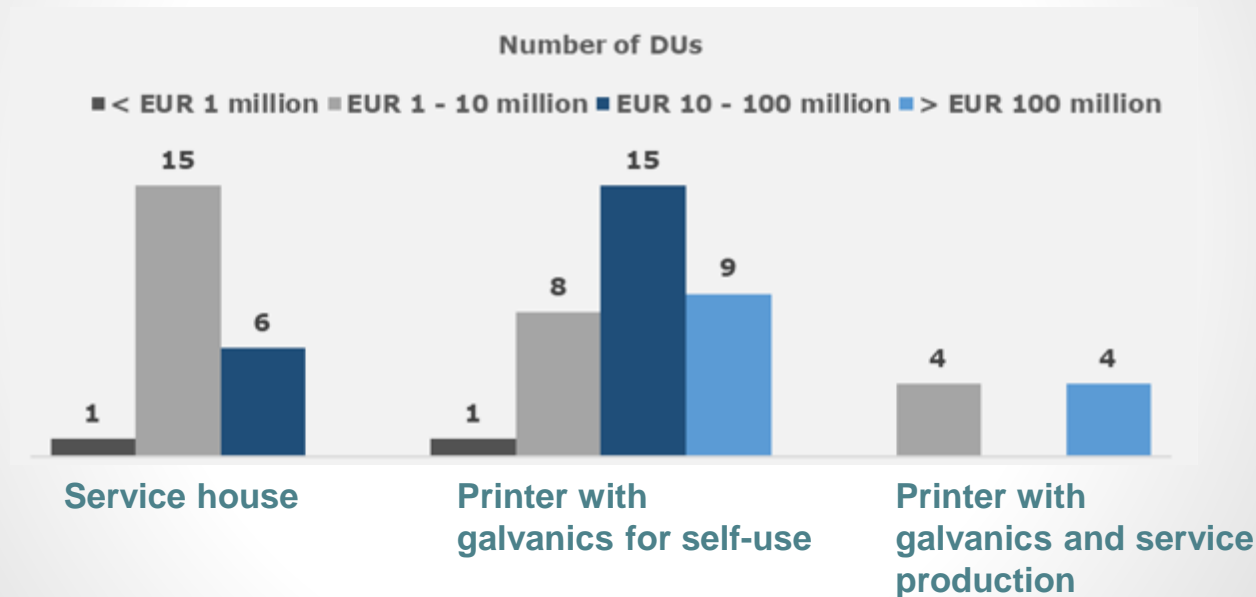
SEA	CSR	Completed questionnaire	Partial answer
74 DUs 70%	88 DUs 75%	77 DUs 64%	96 DUs 80%



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Downstream User (DU) Total Annual Revenue within the EEA

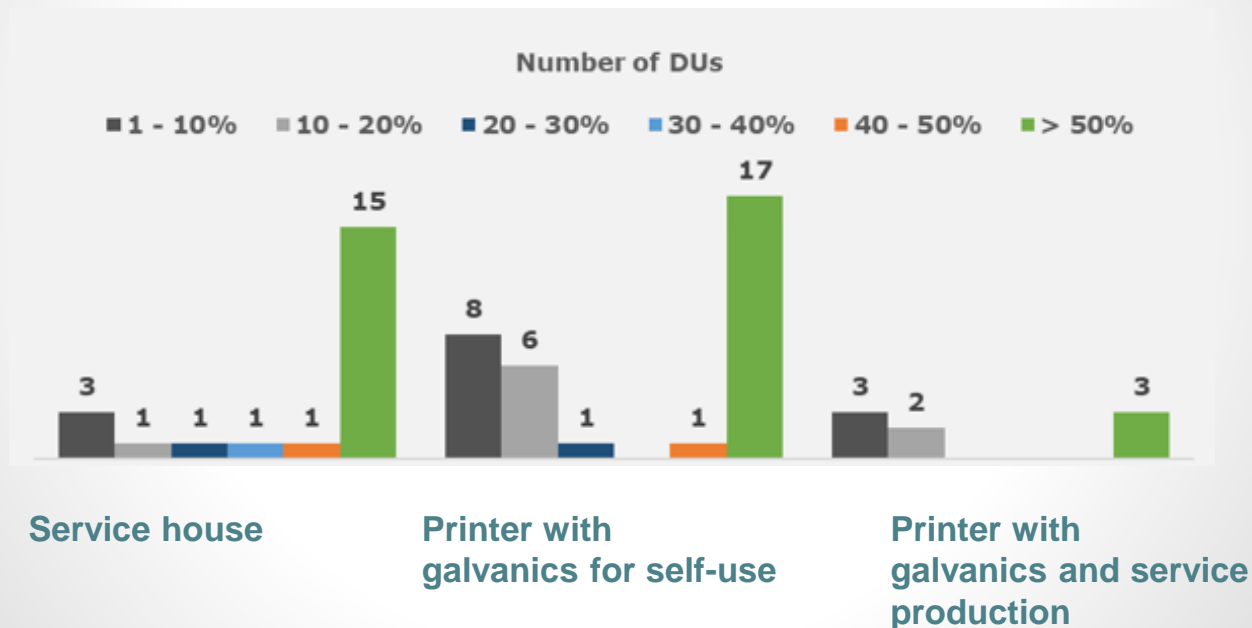




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Downstream User (DU) Share of Revenue related to K.Walter Machines





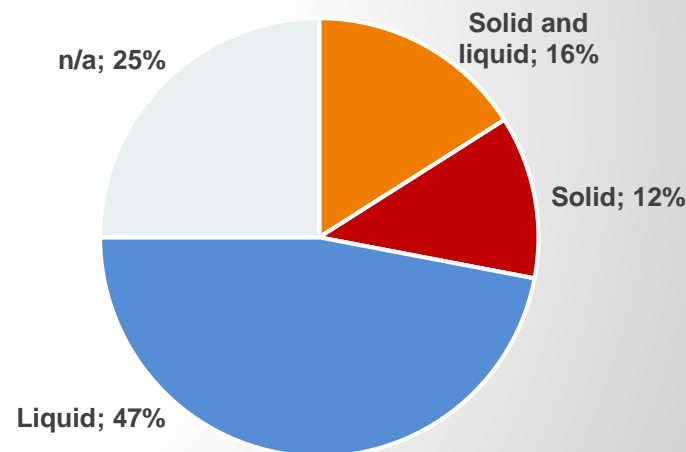
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Downstream User (DU) Survey and Results

- ▶ CrO₃ 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

Distribution of CrO₃ form





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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



Formulator



Downstream Users
Printer / Service House

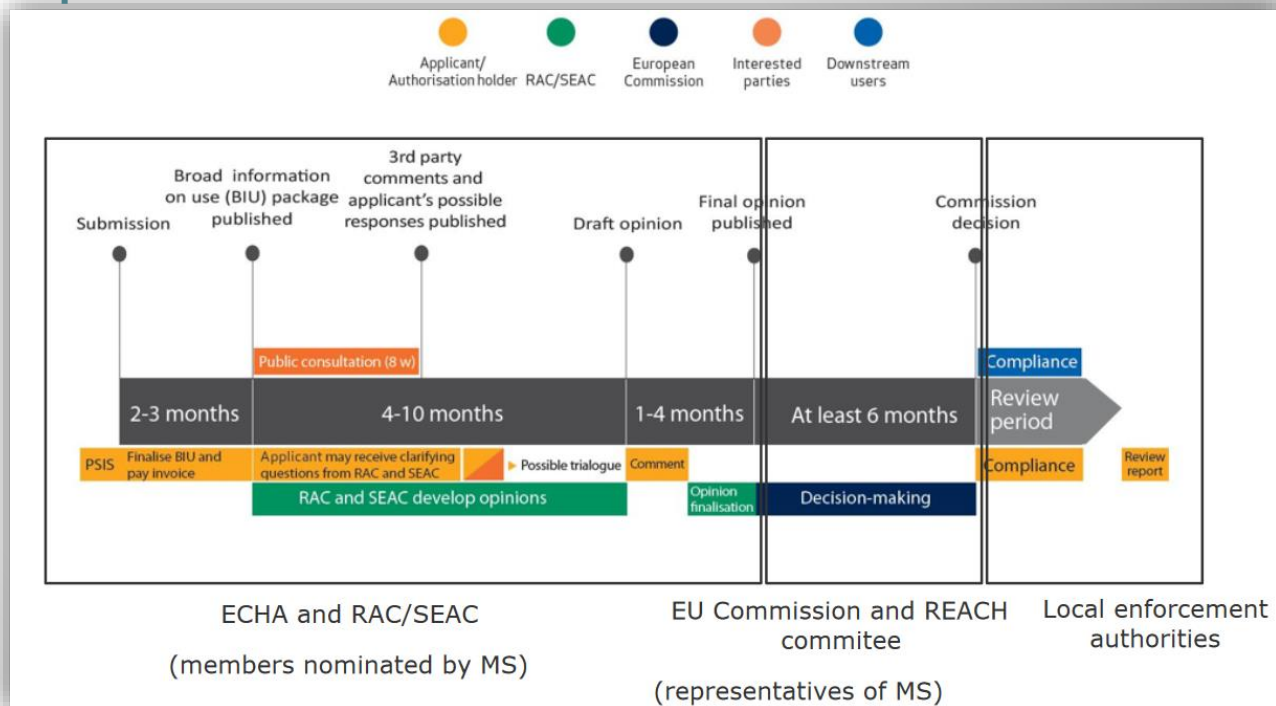


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Time frame of application procedure

- ▶ Application will be filed December 2020
- ▶ Official process will take about two years
- ▶ Support by different stakeholders needed during dialogue and comment phase





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Application for EU Authorisation of Chromium Trioxide

CHROMEXTEND NEWS

CURRENT INFORMATION ON CHROMIUM(VI) AUTHORIZATION

February 2020

ChromeXtend Update 02

Current status regarding CTAC and ChromeXtend, the chromium(VI) authorization application for gravure in the EU

ChromeXtend is an industry initiative by K.Walter to enable the gravure and embossing sector to continue using chromium(VI)/chromium trioxide in the long term beyond 2024.

The European Commission has still not reached a decision regarding the review period for CTAC, and no agreement is expected before April. Despite these circumstances, we are still assuming the CTAC authorization will end in September 2024.

Regardless of this, preparation of the dossier for the ChromeXtend authorization application is well underway. The fact that over 120 production sites in the EU are dependent on the continued authorization of chromium trioxide makes it clear how important the application is for gravure printing in the EU.

The high process reliability of gravure electroplating in general – and the low consumption of chromium trioxide during cylinder manufacturing in particular – demonstrate that a specific industry application such as ChromeXtend is the right solution to ensure the long-term use of chromium trioxide. For example, the some 180 metric tons of chromium trioxide used each year to produce 1.25 million gravure cylinders accounts for just 1.5 percent of the total amount of chromium trioxide imported into the EU.

To prepare the dossier, various data needs to be collected from gravure form manufacturers so as to provide an accurate picture of our sector and obtain the longest possible authorization period. The data requested includes information such as the chemical risks when using chromium trioxide and the expected economic consequences of banning this substance. Our partner Ramboll will collect this data using the SurveyXact platform, save it in an anonymized form, and pass on the aggregated results to K.Walter. The relevant companies will be receiving an invitation to participate in the survey directly from Ramboll on **February 19, 2020**. A number of videos are also being prepared to help answer the questions. **In all our interests, we would ask for your active participation.**

CONTENT

ARTICLE OVERVIEW

SUBSCRIPTION

NEWSLETTER

SUBSCRIPTION

Email *

First Name *

Name *

Country *

☐ I have taken note of
the [privacy policy](#).



HelioChrome[®] NEO

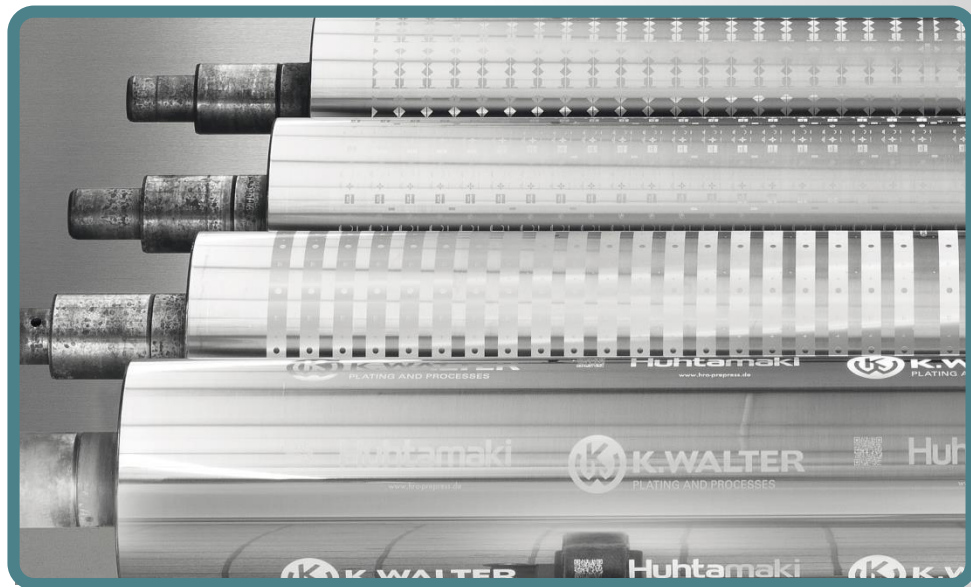
ENVIRONMENTALLY FRIENDLY ELECTROPLATING TECHNOLOGY BASED ON CHROME(III) ELECTROLYTE



HelioChrome® NEO

ENVIRONMENTALLY FRIENDLY ALTERNATIVE TO CHROMIUM TRIOXIDE

- Development at Huhtamaki Flexible Packaging since 2015
- Low toxicity, no regulatory concerns
- Seamless integration in existing process
- 1:1 replacement for Cr(VI) process

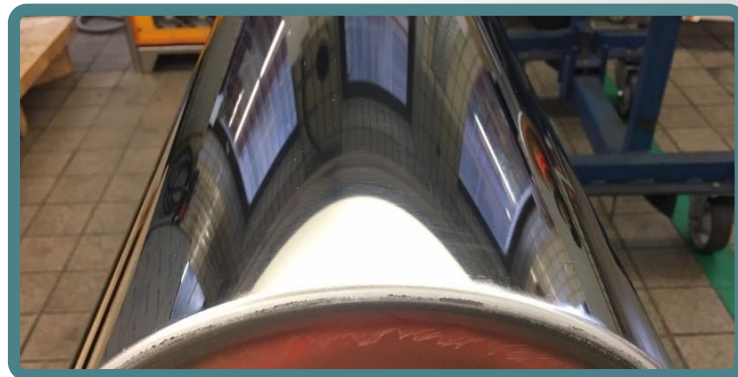
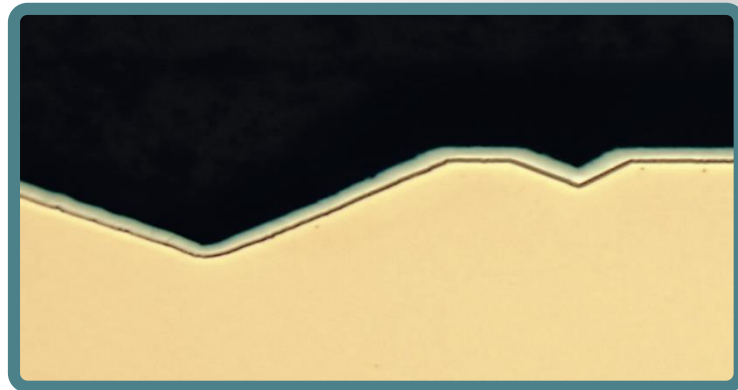




HelioChrome[®] NEO

CURRENT STATUS

- ▶ Two baths installed, one in automatic line
- ▶ Cylinders in production printing jobs integrated
- ▶ Mechanical properties comparable to Cr(VI) process
- ▶ Cylinder surface quality matches those using conventional chrome plating
- ▶ Establishing process stability now





Helio[®] Pearl

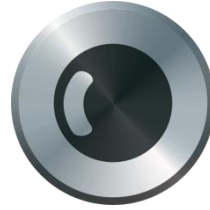
HELIO[®] PEARL - POLYMERIC, LASER-ENGRAVABLE MONOLAYER



Helio® Pearl

- ▶ Polymeric
- ▶ Laser engravable
- ▶ Monolayer

Only 3 process steps



01 | Helio® Pearl Coating



02 | Surface Finishing



03 | Direct Laser Engraving



Helio[®] Pearl

POLYMERIC, LASER-ENGRAVABLE MONOLAYER

- Eco-friendly, galvanic free
- All existing steel, aluminum and copper cylinders can still be used
- Time saving to minimize time to press

CURRENT STATUS

- Evaluation of surface properties
- Multiple printing runs



Thank you for your attention!