



**CHROME (VI)?  
PROBLEM SOLVED!**

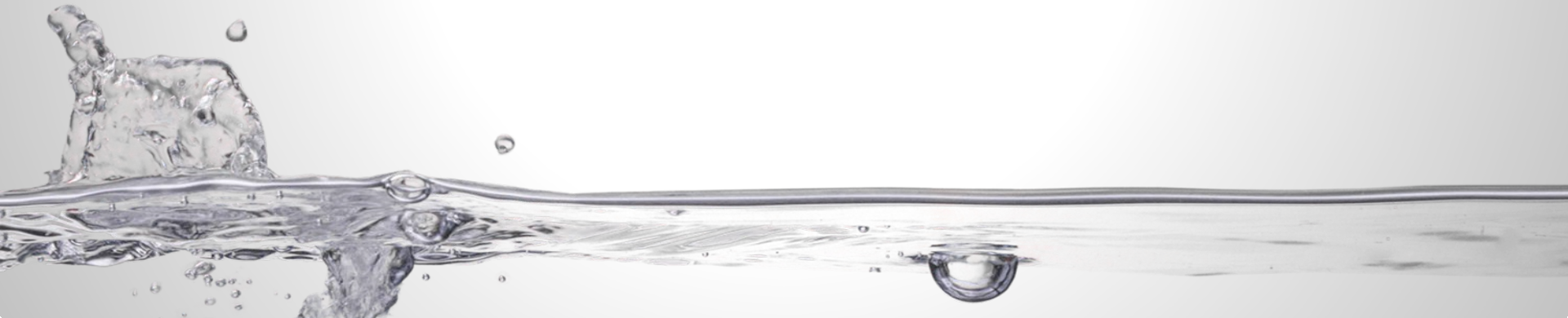
## Our TRIPLE PARALLEL strategy

to secure a leading role for gravure printing in the future



# ChromeXtend

OUR INTERMEDIATE SOLUTION FOR THE FURTHER USE OF CHROMIUM TRIOXIDE



# ChromeXtend

## Status and Timeline of ChromeXtend authorization

### Q1 2022

Opinion draft from ECHA as guidance for EU Commission decision.

*The draft suggests:*

- 12 years of extended use
- parts of the EHS package to become mandatory

### Q4 2024

End of CTAC authorization  
Latest date to become part of the supply chain under ChromeXtend

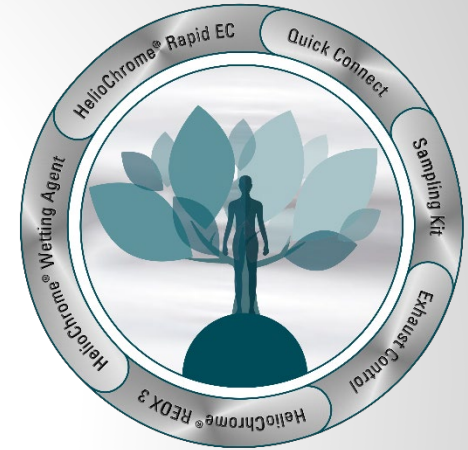
ECHA opinion development

ChromeXtend will allow the use of hexavalent chrome until 31.12.2032

### Q4 2022

EU Commission Decision

## EHS Package

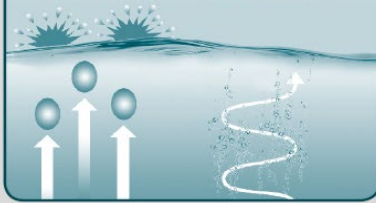


# ChromeXtend

Our new Chrome Plating Standards (EHS package)

Reduced exposure during plating

HelioChrome® Wetting Agent FF



Reduced exposure due to liquid electrolyte dosing

HelioChrome® Rapid EC



Monitoring effective exhaust



Reduced exposure during maintenance



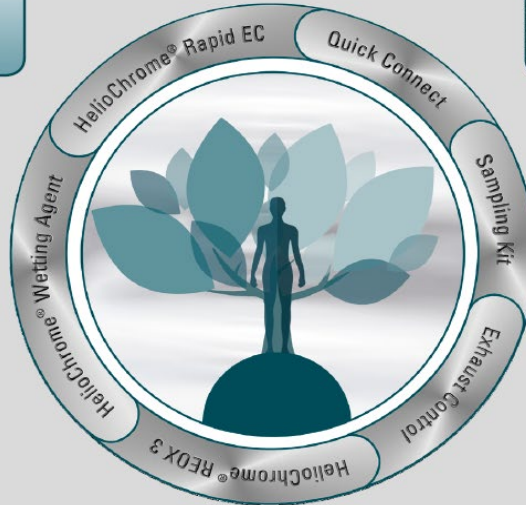
Reduced exposure during handling

Quick Connect



Reduced electrolyte probe contact

Sampling Kit



required by law

recommended

# ChromeXtend



+

CTAC authorization until Sept. 2024

+

ChromeXtend - K.Walter authorization  
valid until Dec. 2032  
(EU authorization imminent)

+

2023 to Dec. 2032 period for substitution  
of chromium (VI) based technologies to  
other technologies (HelioChrome<sup>®</sup> NEO)

# HelioChrome® NEO

THE FUTURE OF HARD CHROME PLATING

**NOW AVAILABLE!**

# HelioChrome® NEO

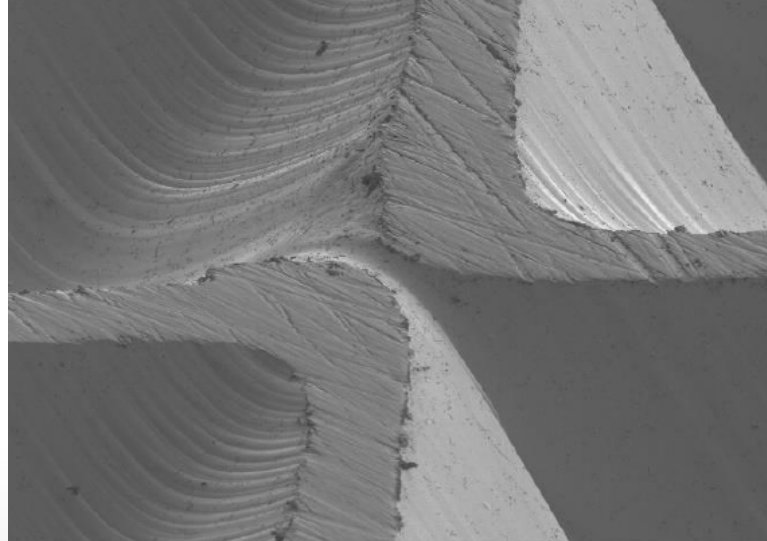
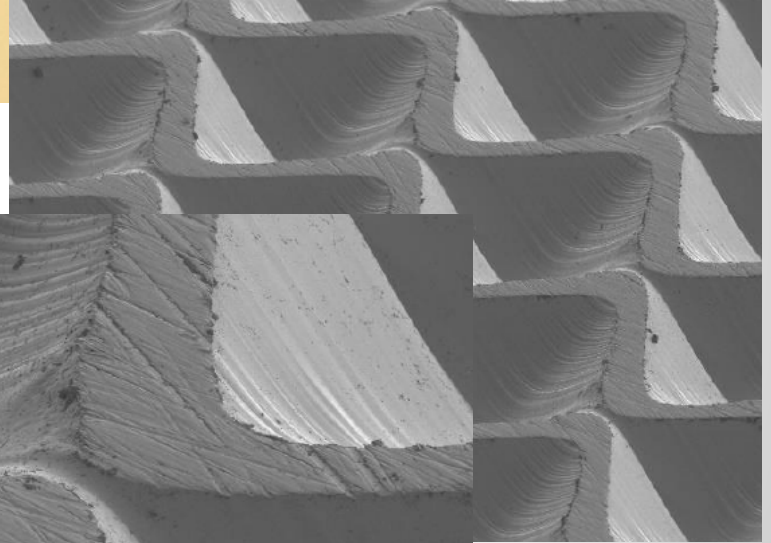
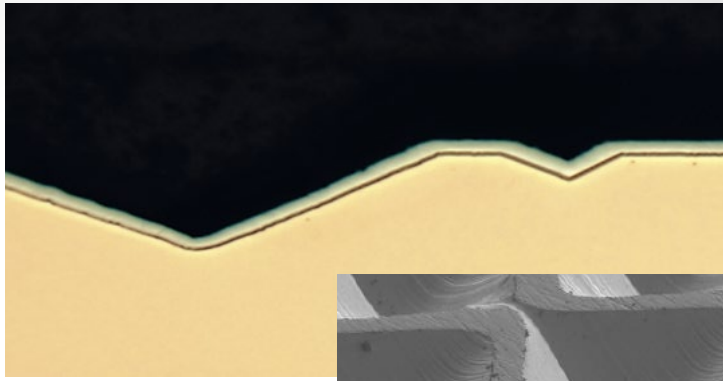
HelioChrome® NEO tank / Chrome nugget dissolution cell





# HelioChrome® NEO

- ▶ Trivalent Chrome Electrolyte
  - ▶ Substitution to current Cr (VI) process
  - ▶ Seamless integration in process flow
  - ▶ Seamless integration in printing process
- 
- ▶ Lower energy consumption
  - ▶ Lower health risks
  - ▶ No ECHA authorization necessary
- 
- ▶ Now available within the EU for packaging size cylinders



# HelioChrome® NEO

Impressions



# HelioChrome® NEO

## Successful printed production:

- ▶ At development partners and pilot customers Huhtamaki, Wipak, A&R Packaging, and Windmüller & Hölscher.
- ▶ On different substrates (cardboard, OPP, BOPP, MDO PP)
- ▶ With different ink systems
- ▶ With different doctor blade systems
- ▶ At different printing speeds (up to 500m/min)
- ▶ With different run lengths (up to 2 million linear meters)





# HelioChrome® NEO



**Seamless integration into existing workflow**



**No carcinogenic or mutagenic exposures/risks to employees/environment**



**Process technology fully digitalized resulting in simple process control**



# Helio<sup>®</sup> Pearl

POLYMERIC – LASER ENGRAVABLE – MONOLAYER  
DEVELOPMENT PROJECT

# Helio® Pearl

The process

**polymeric**

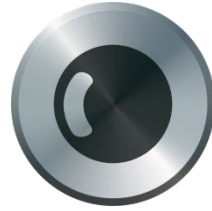
**laser engravable**

**monolayer**

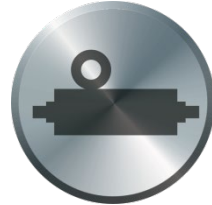
only 3 process steps

90 min. per cylinder

*(1 additional step for recycling (cutting off image))*



1. | Helio® Pearl Coating  
(approx. 30 min/cyl.)



2. | Surface Finishing  
(approx. 30 min/cyl.)



3. | Direct Laser Imaging  
(approx. 30 min/cyl.)

Our targets for a new gravure printing form



**FASTER**



**CHEAPER**

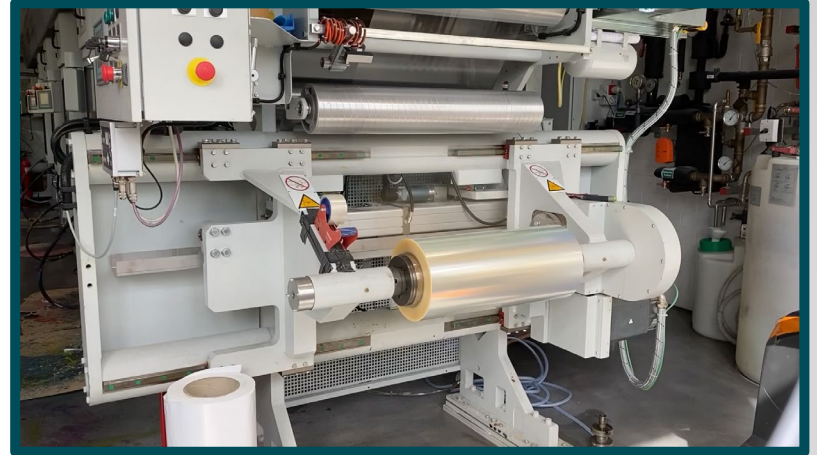


**BETTER**

# Helio<sup>®</sup> Pearl

Current Status development 09/2022

- ▶ Test installation at K. Walter
- ▶ Several successful print tests at W&H and HDM
- ▶ Print tests at regular intervals at HDM I
- ▶ Over 350 cylinders coated
- ▶ 70 HelioPearl cylinders printed already (test prints)



PRINT RUN @ HDM STUTTGART –2022





# Helio<sup>®</sup> Pearl

Under development

+ No galvanic

+ Lower investment

+ Lower Cylinder Costs

+ Faster manufacturing times / time to press



## ChromeXtend

Use of Chrome (VI) until Dez. 2032

**EU authorization imminent**



## HelioChrome® NEO

The future of hard chrome plating

**now available in Europe**



## HelioPearl®

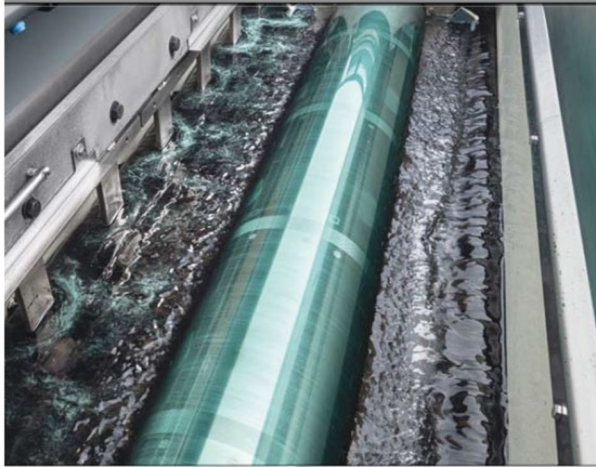
The new gravure printing form as a  
supplement to HelioChrome® NEO

Under  
development

Further information in our new brochures

## HelioChrome® NEO

THE WORLD'S FIRST HARD CHROME PLATING PROCESS FOR GRAVURE BASED ON CHROME(III)



BASED ON INNOVATION.

 **K. WALTER**  
PLATING AND PROCESSES

## New gravure print forms

COST-EFFICIENT, ECO-FRIENDLY, AND FUTUREPROOF GRAVURE CYLINDER COATING UPDATE FALL 2022



BASED ON INNOVATION.

 **K. WALTER**  
PLATING AND PROCESSES



**CHROME (VI) ? – PROBLEM SOLVED!**

**THANK YOU FOR YOUR ATTENTION**