

Safety. Compliance. Sustainability.



ATOTECH



- ✓ Legal
- ✓ Ethic
- ✓ Integrity



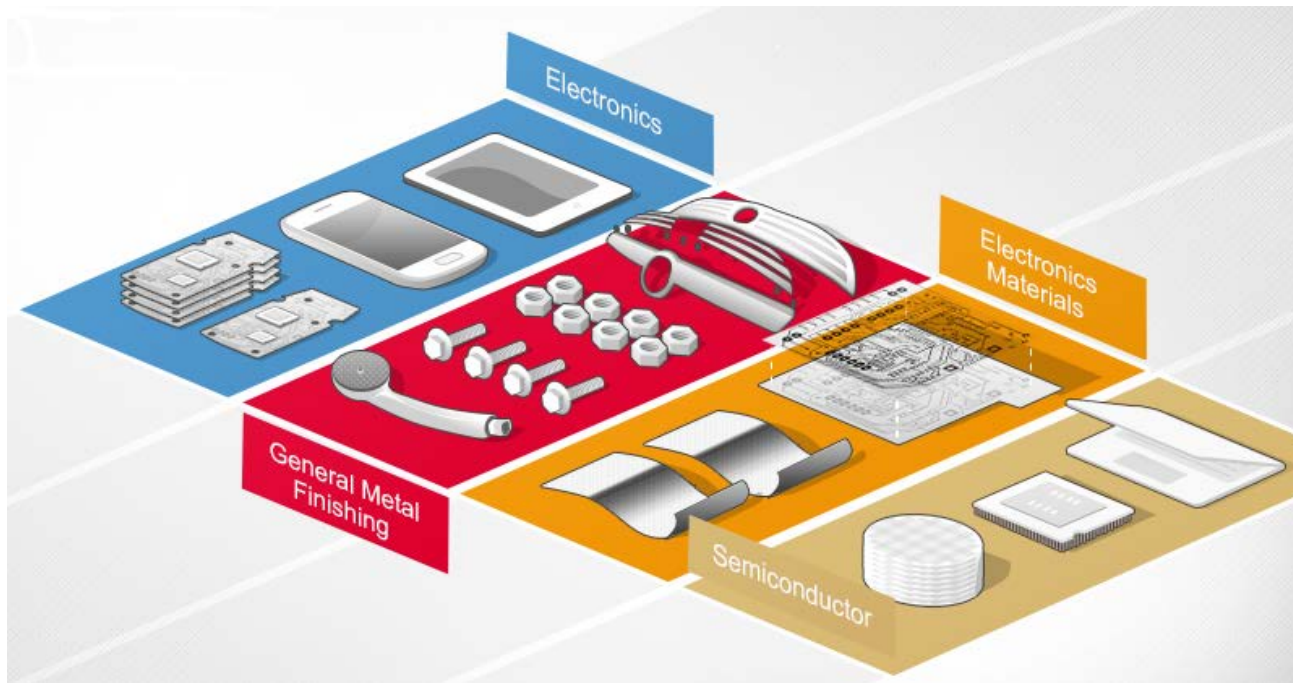
REACH Authorization – a challenge for the supply chain

Perspective of a Formulator

Alexander Samai – Helsinki, April 30, 2014



ATOTECH



- Atotech – A truly international and leading specialty chemicals company for integrated production systems employing about 4,400 people in more than 40 countries.

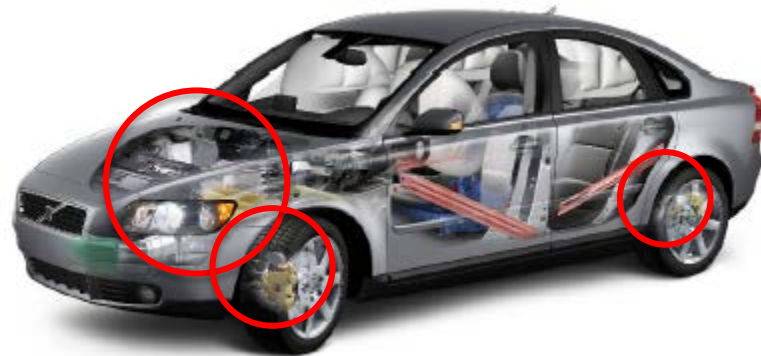
Chromium trioxide & products affected

- Chromium trioxide (CrVI) is the chrome source for chrome electroplating processes
- It is to distinguish between
 - Functional (hard) chromium surfaces
 - Decorative chromium surfaces



Decorative applications

e.g. car interior, -exterior, furniture, sanitary, ...



Functional applications

e.g. suspension struts, piston rings, engine valves, brake pistons, cylinder liners, ...

Electroplated chrome is Cr⁰ – so non-hazardous!

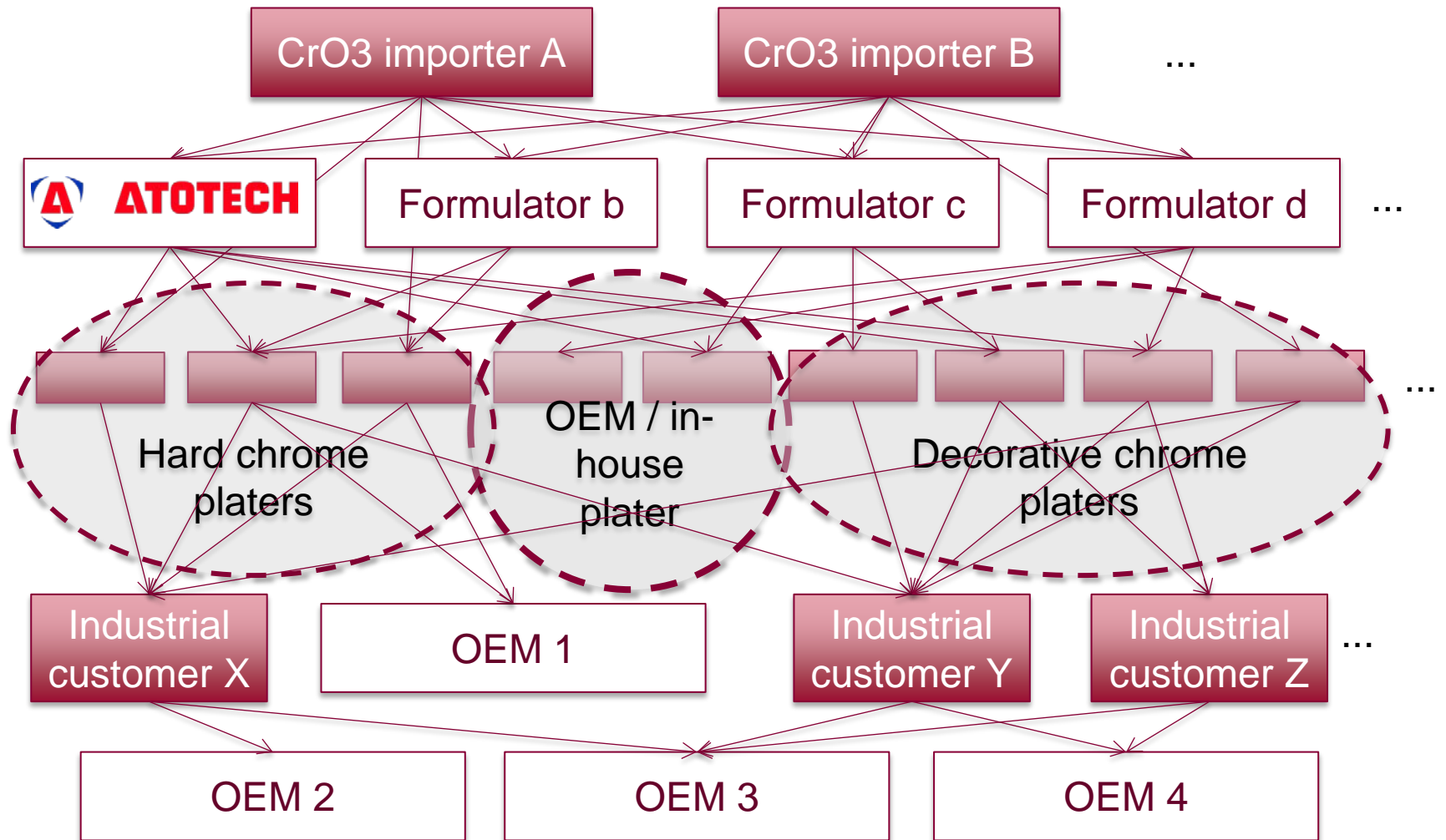


ATOTECH

Authorization a challenge for the supply chain

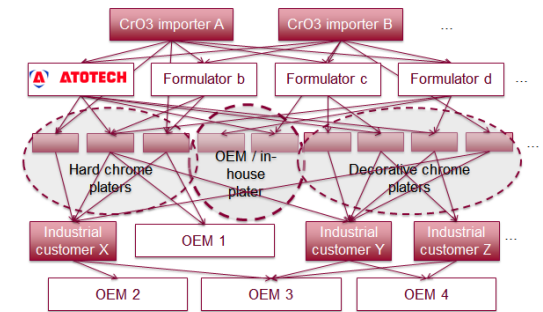


The complexity of our supply chain



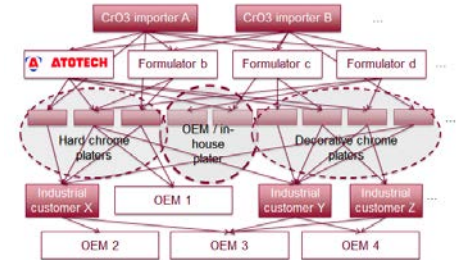
Difficulties for the plating supply chain

- Our customers are no chemical companies
- Our customers have limited experience in REACH
- Associations split up by countries, industry sectors, ...
 - „One voice in EU“ is missing
- Many SMEs
 - No capacity dedicated to REACH
- The final customers (OEMs) are not aware of all substances used in their supply chain
 - It takes time until the consequences are known



Prepare for a successful authorization

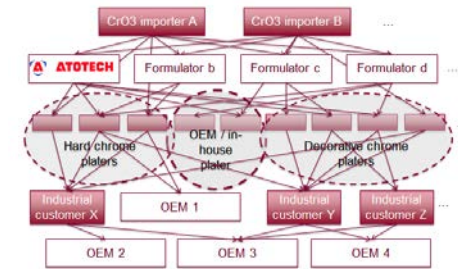
1. Determine interested parties
 - Via associations, suppliers, ...
 2. Inform customers on the consequences
 - Via customer letters, presentations, meetings, ...
 3. A consortium is required for the preparation of the dossier
 - Confidentiality (exchange of AoA / SEA data)
 - Competition law (trustee for data exchange, anonymization)
 - Dossier preparation by specialists, too complex for individual companies
 - Facilitates the joint approach of the industry
 - Economic benefit over individual activities
- Our customers are the key to successful authorization
 - Exposure data, alternatives, economic impact
 - Take care that the consortium covers the whole supply chain



To keep in mind

- The preparation of the authorization takes time
 - It took 1 year to setup CTAC
 - CTAC is now working for almost 2 years on the preparation
 - First authorization dossier from CTAC not before Q1 2015
 - More than 3.5 years from first discussion to the submission
- Authorization is costly
 - More than €2 million budget for CTAC (~150 companies)
 - for the preparation of general application documents only
 - submission fees are not included additional e.g. €38k for a company of Atotech's size and one use only)
 - additional budget required for the authorization management done by consultants
- It takes some effort
 - Coordination inside a company- someone has to take the lead
 - Data collection, review and approval takes time and manpower
 - Strategic decisions need to be taken → top management involved

Who should apply for authorization?



- Authorization can be handed down the supply chain
 - If the first in the supply chain applies for all uses, all of his supply chain is covered
 - If a multitude of users applies it will be challenging to identify ,who is allowed?’ and ,who is not?’
- Least money is spent if only a few apply
 - If the first in the supply chain applies for all, the costs will be minimal for all
 - The more companies apply by themselves the higher the overall costs will rise
- Not all formulators have interest in all uses
 - Atotech: formulation, decorative & functional plating → 3 other uses not covered → would lead to a multitude of applicants
- Application of the formulators and the platers is not leading to the optimal result



ATOTECH

Atotech's approach

Safety. Compliance. Sustainability.



- Legal
- Ethic
- Integrity



Atotech's approach

- Atotech covers an uniquely wide range of applications in the general metal finishing as well as electronics
 - Customers all over the world
- Requirements differ for each application and region
- Examples
 - EU RoHS: phase-out of lead as a solder in consumer products
 - China RoHS: almost 1:1 copy of EU
 - EU ELV: phase-out of CrVI for corrosion resistant coatings
 - POPs: stepwise global phase-out of PFOS
- Only solution: stepwise or immediate substitution
- We had to act fast in the past and we are prepared for the future

POPs = Stockholm Convention on Persistent Organic Pollutants

Atotech a sustainable company

It is our goal to replace step-by-step:

- all CMR substances (Carcinogenic, mutagenic and toxic to reproduction)
- all toxic substances (e.g. cyanide, Cr(VI)) and heavy metals (e.g. Pb, Hg, Cd)
- all allergenic substances

in our products to protect the environment, end users, production workers in the plating industry and Atotech's employees.

BUT

- It takes time and planning to do the switch
- This is why we support those current technologies where no feasible alternative exists



ATOTECH

**Thank you for your
attention!**



- Legal
- Ethic
- Integrity

