The Role of Sustainability in the EU Paint Industry

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☑ Sustainability in EU politics
EU Environment Policy

Some concrete objectives:

- To advance more **sustainable consumption and production patterns**
- To increase demand for ‘green products’ and technologies through **public procurement**
- To better understand the ecological footprints of products throughout their "life"
- To exploit the potential of **waste and recycling policy**
EU needs **green growth** which uses **eco-innovation**.

- Environmental policy to drive eco-innovation
- Create markets via Green Public Procurement
SUSTAINABILITY in the EU paint industry
So far we knew where to get RMs, how to manufacture and how to sell paints, but now we are being asked: What impact does producing and consuming paints have on People? Planet? Prosperity?
Life Cycle of Paint

The environmental costs and benefits to our planet

Extraction
Raw materials
Paint production
Use
End of life

Cradle
Entrance Gate
Exit Gate
Grave

Scope of CEPE's LCI project
Sustainability in the Paint Industry

- Although paint forms just a small part of an article or construction

_The paint producers will have to realize that_

- The context of their business requires them to increase their knowledge on environmental impacts and benefits
Being one of the biggest users of raw materials and having considerable running costs, the *construction and maintenance sector* is an area where sustainable development is highly relevant.
“EUROPEAN Green Building Space to Almost Quadruple by 2016” and reach 687 million square meters, by 2016
Pike Research’s report, Energy Efficient Buildings: Europe

Example of the trend: Netherlands BREEAM registrations in 2010 -2011

“US Green Building Market to reach 145 bil. USD in 2015 (New Non Residential only) ”
McGraw-Hill Construction report
## The 4 Main Green Building Labels In Europe

<table>
<thead>
<tr>
<th>breeam</th>
<th>HQE Association</th>
<th>DGNB</th>
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<tbody>
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<td>UK</td>
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<td>Poland</td>
<td>Bulgaria</td>
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<tr>
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<td>International</td>
<td>Switzerland</td>
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</tbody>
</table>

- France and International
- UK and Germany
- Italy, Spain, UK, and France
- Germany, Austria, and Denmark
- Poland and Hungary
- Russia, Bulgaria, and Switzerland
Green Building Impacts on Paints

Material Efficiency

- Energy consumption
- Carbon footprint
- Pollution
- Resource Depletion
- etc…

Indoor Air Quality

- Healthier indoor environment
Green Building Labels Impact on Paints

Credits in the calculations are given when insight is given in environmental impact (Life Cycle) data.
Example: LEED 2012 – Paint Impact

Intent

To encourage disclosure about environmental attributes and increase the use of products and materials with environmentally, economically, and socially preferable life-cycle impacts.

Requirements

NC, CS, SCHOOLS, RETAIL, DATA CENTERS, WAREHOUSES & DISTRIBUTION CENTERS, HOSPITALITY, HEALTHCARE

Achieve one or more of the options below, for a maximum of 2 points.

Option 1. Assessment of Nonstructural Products (1 point)

Use at least 20%, by cost, permanently installed nonstructural products and elements that meet at least one of the criteria below. Furniture, piping, pipe insulation, ducts, duct insulation, conduit, plumbing fixtures, faucets, showerheads, and lamp housings may be included if they are included consistently in cost-based Materials and Resources credits. Exclude wood products purchased for temporary use on the project. The scope of any environmental product declaration (EPD) must be at least cradle to gate.

- **Industry-wide (generic) EPD.** Products with third-party certification (Type III), including external verification, in which the manufacturer is explicitly recognized as a participant by the program operator, are valued at cost. All environmental product declarations must be consistent with International Standards Organization (ISO) 14025, 14040, 14044, and 21930.
- **Product-specific declaration.** Products with a publicly available, critically reviewed life-cycle assessment compliant with ISO 14044 are valued at half their cost. Products with third-party certification (Type III), including external verification, are valued at twice their cost.

AND/OR

Option 2. Assessment of Structure and Enclosure (1 point)
# Life Cycle Requests of Green Building Labels

<table>
<thead>
<tr>
<th>Green Building Label</th>
<th>Life Cycle Information</th>
<th>EPD for materials (incl. paints)</th>
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<tbody>
<tr>
<td>LEED 2012</td>
<td>Encouraged</td>
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<td>DGNB</td>
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<td>HQE</td>
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<td>BREEAM 2011</td>
<td>Mandatory</td>
<td>Encouraged</td>
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</table>
EPDs May Also Go Beyond Construction

Upcoming Regulations will require Environmental Product Declarations
• e.g. French Regulation (Grenelle II)
• e.g. EU Lead Market Initiative on sustainable construction (Construction Product Regulation)

EPDs also useful outside of construction industry
• DIY market (e.g. Scorecard pilot project in France)
• By demonstrating product sustainability via EPDs, the Paint Industry can go beyond Ecolabelling and reinvent the industry to put more sustainable products on the market...
CEPE’s approach

Serious homework was done over the past 2 years
Enable associations and its members to respond with confidence on questions concerning the environmental impact for the life cycle of paints and printing inks.
The Principle of Life Cycle Thinking (LCT)

Quote from CEPE’s Sustainability charter:

CEPE members will be encouraged in future to also identify and analyse the broader environmental effects of their products (carbon footprint, water usage etc.) over the product’s Life Cycle (from cradle to grave).
People
Principles on how to behave towards neighbours, employees, suppliers and customers.

Planet
Look to the effect of withdrawing raw materials from scarce resources from the planet and to the effect of bringing formulated products into this planet = LCT. Recognizing that Coatings or Responsible Care form a contributing part to it but are not the same nor a substitute.

Prosperity
What the industry contributes to the well-being of society.
The Main Change

Like many others, the paint industry will have to: move to Life Cycle Thinking

The balance of costs and benefits of the Environmental impacts of a product over its life cycle
CEPE LCI Project

Get the coatings industry started with understanding and managing the footprint over the life cycle

Goals:
1. Jointly build LCI databases for main raw materials and production processes for the coatings and inks industry

2. Collect and define standard industry LCI data

3. Help CEPE members understand and answer Life cycle / EPD / footprint questions
Further utilization by:

- Sector groups
- Country organizations
- Individual companies

CEPE LCI Project Deliverables

- CEPE secretariat’s scope
  - CEPE databases
    - LCI data on raw materials and manufacturing
  - CEPE tool
    - Calculating environmental impacts
  - CEPE format
    - Eco-footprint report

Database + documents

CEPE Eco footprint tool

Further utilization by:

- Sector groups
- Country organizations
- Individual companies

- CEPE members’ scope
  - Calculated Eco-footprints per product
  - Scheme related EPDs
  - Validation / Certification
Web-application that enables companies to calculate eco footprints for their products in 3 simple steps, based on paint formulations.
Eco Footprint Leaflet

Test

Product Description
Test Mix

Production Process Description
The cradle-to-gate production process of coatings starts with the extraction of feedstock, the production of raw materials, and the production of paint. Finally, the coating is filled into packaging units. The production process is illustrated in figure 1 on the right.

Functional Unit
This eco-footprint is based on life cycle inventory (LCI) data from eco-matters. It reports the environmental performance indicators associated with the production of 1 kg of paint from cradle-to-gate. This is equivalent to a coating surface of 20 m². At the gate, the product is packaged and ready for shipment. The weight corresponds to the actual product weight, excluding the weight of the packaging material.

Information
This eco-footprint was produced in June 2013. For more information about the product, please contact:

EcoMatters
Max Benjamin
+32(0)545789
maxbenjamin@ecomatters.nl
Use of Eco Footprint Tool

Based on CEPE LCI database
• Eco footprints are mutually comparable, for they are calculated with common datasets

Calculates products’ ecofootprint in easy, quick way
• Easy to use for non-LCA experts

Stimulates design products with lower footprint
• Formulators can see how eco footprint varies with formulation

Helps answer national or sectorial requirements
• Information provided in the CEPE format can be used as main source of technical information when compiling EPDs
Message to Stakeholders in EU

*Paints are part of the solution...*

*NOT of the problem!*

The relatively thin layers we apply to substrates greatly extend the life time of these substrates and make living areas more comfortable.
Paint Industry Focus

**Sustainability**

Demonstrate to be a contributor of sustainable development.

- Sell ‘solutions’ fitting in the life cycle thinking
- Undisputed environmental impact data
- Post-consumer waste
- Bio-renewables; as alternatives to Raw Materials from scarce resources
Sustainable Development in Paint industry

- Higher **resource efficiencies** for use of
  - raw materials
  - energy
  - materials for paint containers

- Increased use of **bio-renewable** raw materials

- Paints with **increased functionality** which contribute to
  energy (carbon) savings or the removal of air-pollutants or bacteria

- Paints with **higher life expectancy**
Thank you for your attention!

Further info via www.cepe.org