

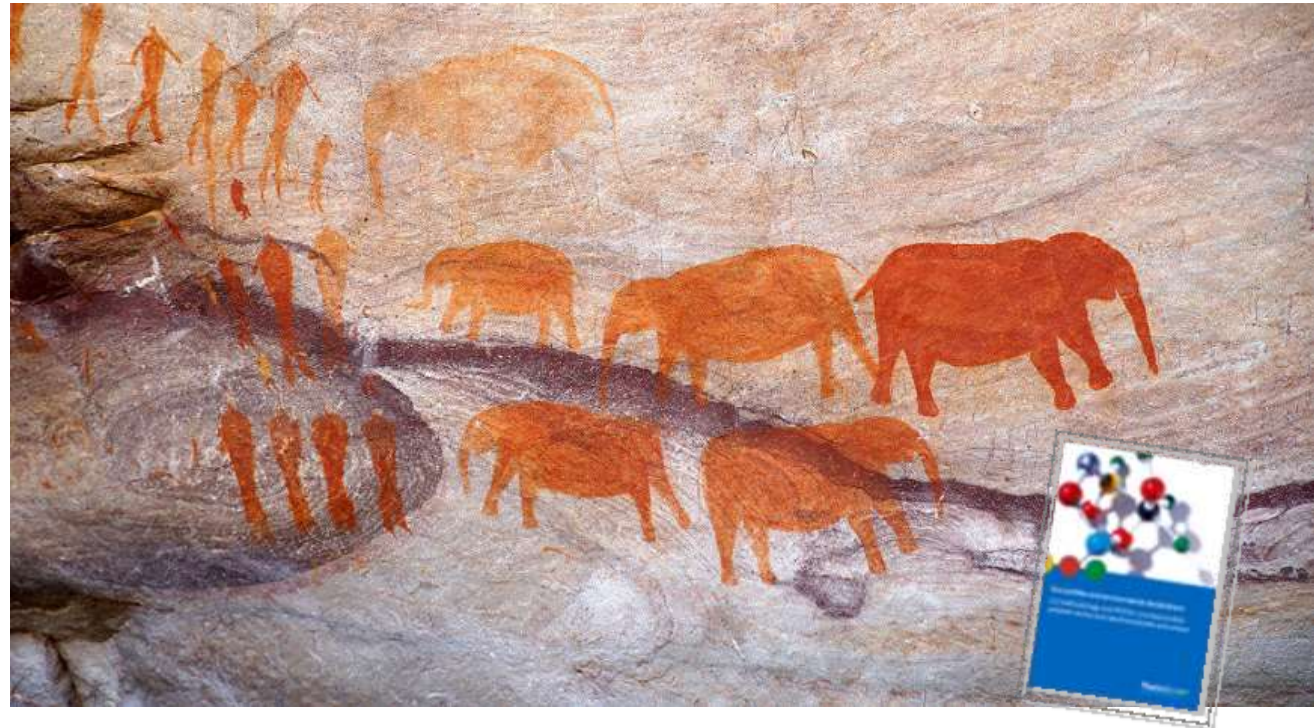


PlasticsEurope learnings and views
Product Environmental Footprint
LCM 2017

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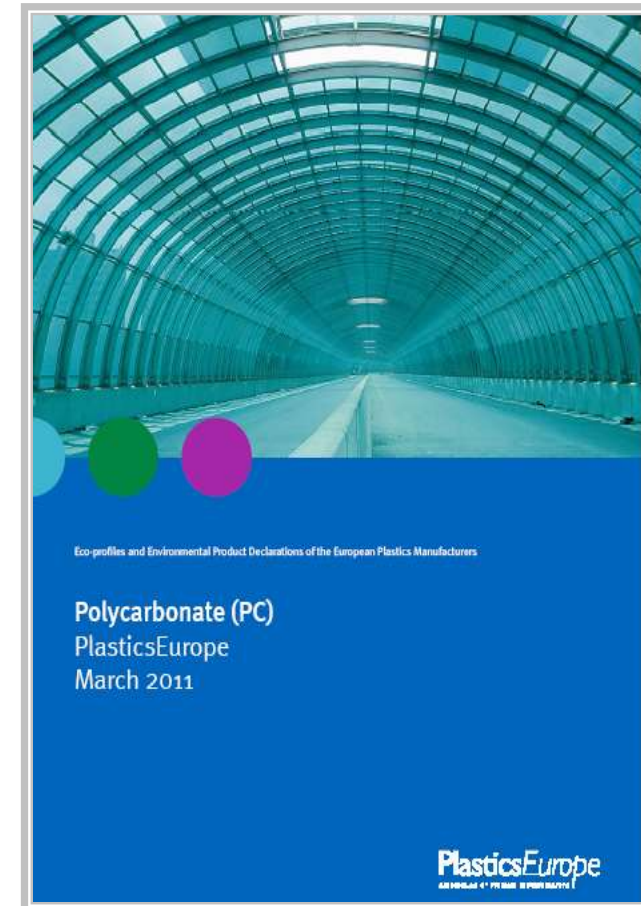
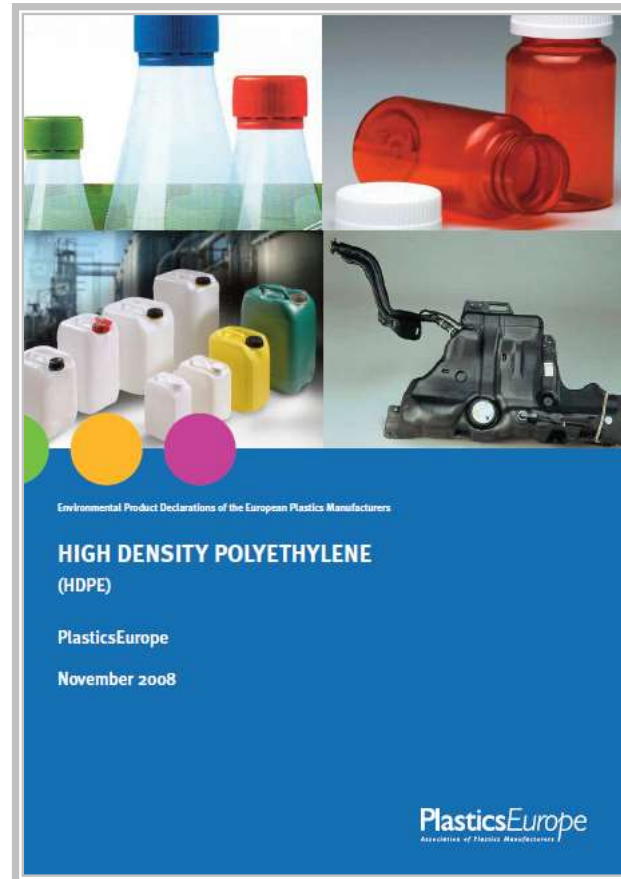
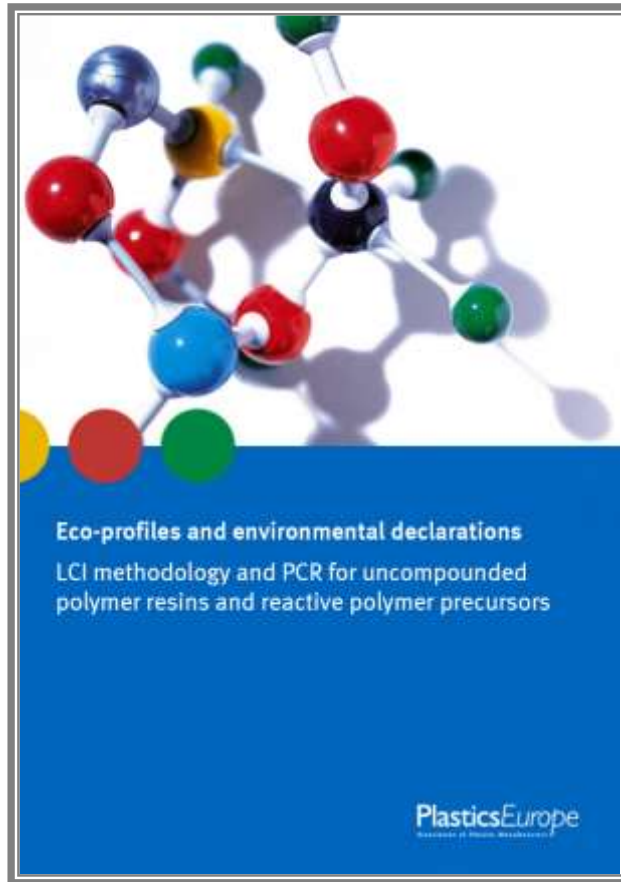
PlasticsEurope
Association of Plastics Manufacturers

- **PlasticsEurope is committed with LCA since long**
- Participation to the Product Environmental Footprint pilots
- Learnings
- Views



Maybe not that long but

Early 1990s: PlasticsEurope started compiling environmental info of polymers



Home > [Plastics & Sustainability](#) > Eco-profiles


Eco-profiles

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Welcome to PlasticsEurope's Eco-profile Programme!

This website provides you with easy access to PlasticsEurope's Eco-profiles. Eco-profiles are Life Cycle Inventory datasets (LCI) and Environmental Product Declarations (EPD) for plastics. For more information, please refer to the Life Cycle Thinking section and to the Eco-profile Methodology Document.

- Browse LCA by Flowchart**
The flowchart shows the interlinking production processes and product flows of the chemical and plastics industry.
[Browse by flowchart](#)
- Browse LCA by Product Family**
These tables enable you to look up polymers and precursors grouped into broad product families.
[Browse by family](#)
- Browse LCA by Product List**
This list provides you with an alphabetical directory of all polymers and precursors.
[Browse by list](#)

Contact our expert!
 [Guy Castelan](#)

Related information

- 
[Methodology \(PDF\)](#)
- [More about Life Cycle Thinking](#)
- [Questions? FAQ](#)

Transparency of
- Reports
- Methodology
- Elaboration Process



We also participate actively in LCA developments

<http://lcinitiative.unep.fr/>

- UNEP: United Nation Environmental Programme
- SETAC: Society of Environmental Toxicology and Chemistry
- **The main mission of the Life Cycle Initiative is to put science-based Life Cycle approaches into practice worldwide.**

- **PlasticsEurope gold partner**



LCTS is the technical working group within PlasticsEurope dealing with all types of issues related to life cycle assessments, life cycle thinking, eco-efficiency, and sustainability

Its mission is to support the European plastics industry in fulfilling the demand of its stakeholders for reliable, credible and scientifically sound information on sustainability aspects with regard to the full life cycle of its products.



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A yes, but...state of mind

We support LCA based and application oriented assessment of products

We support development of LCA for this purpose, providing it is :

- kept feasible and affordable
- kept fair
- not reinventing the wheel



We cannot lead a PEF pilot because we don't want to benchmark polymers (or any material) as such on a per kg basis. Competition makes sense only within the scope of an application.

Therefore we participate constructively through pilots team and horizontal working groups.

- 2011-2012 contribution to the first experimentation in partnership with JRC-IES



- 2013 participation to 3 pilots with our value chain

- Water Supply Pipes



- Paint



- Thermal Insulation



- Packaging group

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- **Toxicity:**

- Usetox is not considered robust enough for PEF yet
- Inventory datasets are not consistent in regard to LCA (eco) tox indicators
- LCA approach may be appropriate to screen (eco) tox hot spot along the LC but not to compare products.
- ProScale is a different but promising approach, a life cycle oriented method to compare toxicological potential of product systems, based on existing data and models from risk assessment

LCM2017 session on
toxicity TU-203

Tuesday 14:00 – 15:30,
Salle E

- **Resource depletion**

- Today model based on ultimate reserve
- Works started by the metal industry to take into account the metal capitalized in the technosphere
- The concept is smart and we want to contribute to keep it feasible and fair



- **Use phase** is not properly taken into account by some pilots (some possible benefits are not considered by the functional unit definition)
 - Food loss prevention from packaging
 - Building insulation efficiency
- **End of LC** formula based on offer/demand market

$$\left(1 - \frac{R_1}{2}\right) \times E_V + \frac{R_1}{2} \times E_{recycled} + \frac{R_2}{2} \times \left(E_{recyclingBL} - E^* \times \frac{Q_S}{Q_P}\right) + R_3 \times \left(E_{ER} - LHV \times X_{ER,heat} \times E_{SE,heat} - LHV \times X_{ER,elec} \times E_{SE,elec}\right) + \left(1 - \frac{R_2}{2} - R_3\right) E_D - \frac{R_1}{2} \times E_D^*$$

- When demand of recycle limits the recycling rate, benefits of recycling is allocated mainly as a function of the recycled content
- When offer of recycle limits the recycling rate, benefits of recycling is allocated mainly as a function of the recycling rate
- When balanced/fluctuating market (plastics) benefits is allocated 50/50 in function of both
- It is important to keep the same rationale for energy valorization so that all the benefits of energy recovery goes to the product supplying the fueled waste



- PlasticsEurope dataset
 - Our program will benefit from
 - the harmonisation of background data for energy and transport
 - the harmonisation of format towards ILCD
 - the relevance of using average data for many PEF studies
 - We can live with a partial disaggregation for commodities
 - provide the Bill of Material, the energy and transport input, the foreground emissions to the environment (VOC, COD, BOD...) but taking care that none of these values would be specific to a few plants only (risk of divulging confidential information).
 - Take care to regionalization of water
 - Small chemicals input non divulged and approximated as generic
 - For chemicals manufactured within only a few plants
 - No BoM and energy divulged, because correlated to cost (respect of competition law). Minimum number of plants to be determined with lawyers.

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We can expect a little more science...
and we welcome it!



For example

- Apply the Materiality principle in Ecolabels instead of too many criterias (set criteria on what matters and not everywhere)
- Question pre-formed opinion (organic/craft/industry/recycled/bio...)

We acknowledge the progress brought by PEF to LCA

We support LCA based developments but

- PEF should be implemented progressively and on a voluntary basis
- PEF should preserve the existing momentum, like the EPD programs in Building and Construction
- PEF should fully consider confidentiality and competition laws obligation
- PEF should keep standing on LCA principles when implemented



Plastics

The Material for the 21st Century