
BETON VAN *A* TOT *Z*

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Provinciale Contactdag “Beton in de Wegenbouw” - Scherpenheuvel – 20 mei 2014

A – Aarschot

- Van “kasseistampers” naar wandelaars, fietsers,... op betonstraatstenen
- Levensduur > 20 jaar



A – Aarschot

- Doortochten
 - Aarschot, Rillaar, Langdorp, Wolfsdonk



B – Beton – Busbaan - Boordsteen

- Zichtbaarheid
- Stroefheid
- Comfort



– Crematoria te Holsbeek en Zemst

- Gebouw en omgevingsaanleg in okerbruin beton



D – Duurzaam bouwen

- EU : Green Public Procurement
- LCA > Carbon Footprint
- EC – Joint Research Centre :

Why the evaluation must be broadened to avoid misleading results and wrong decisions?

Although building upon a life cycle approach, carbon footprints address only impacts on climate change. When exclusively carbon footprint data are used to support procurement decisions or to improve goods and services, other important environmental impacts are neglected while often running opposite to climate change, resulting in a “shifting of burdens”. **Achieving sustainable consumption and production requires the consideration and evaluation of all relevant environmental impacts** at the same time, such as e.g. acid rain, summer smog, cancer effects and land use. This can only be ensured by the more complete Life Cycle Assessment.

E – EPD

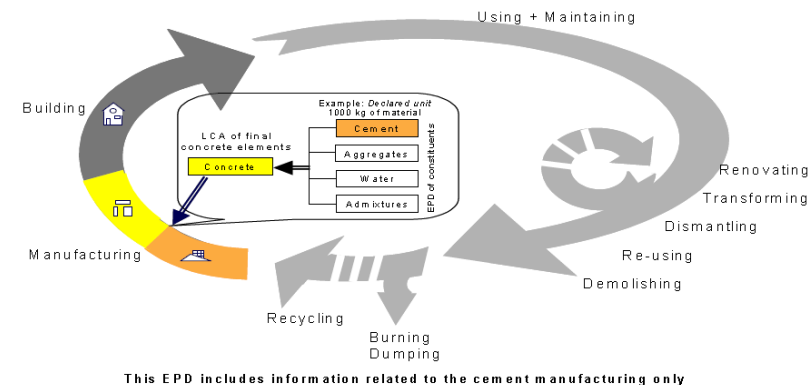
- Environmental Product Declaration
- Beschikbaar voor 3 types Belgische cementen

Environmental Product Declaration for Belgian Cement - Cembureau EPD Format

Cement CEM III/A 42.5 N LA
according to EN 197-1 (2000)

In compliance with ISO 14020, ISO TR 14025 and ISO 14040-43

Aim and Scope	Key information
<p>This Environmental Product Declaration (EPD) is mainly intended for Business-to-Business (B2B) communication and its prime purpose is to provide measurable and verifiable input for the environmental assessment of construction works.</p> <p>As the applications of cement as an intermediate material are numerous, a unique <i>functional unit</i> cannot be defined and therefore this EPD is based on a <i>declared unit</i>.</p> <p>This EPD has been specifically prepared for the cradle-to-gate life stages of cement. This is illustrated in the figure hereafter. See <i>Users' Guide</i> for more information.</p>	<p>Declared unit: 1 000 kg of cement</p> <p>Issue date: February 07, 2012</p> <p>Revision date: n.r.</p> <p>EPD owner: Febelcem</p> <p>Contact person: A. Jasienski a.jasienski@febelcem.be</p> <p>Author: SGS INTRON BV</p> <p>Third party reviewer: IVAM UvA BV</p>



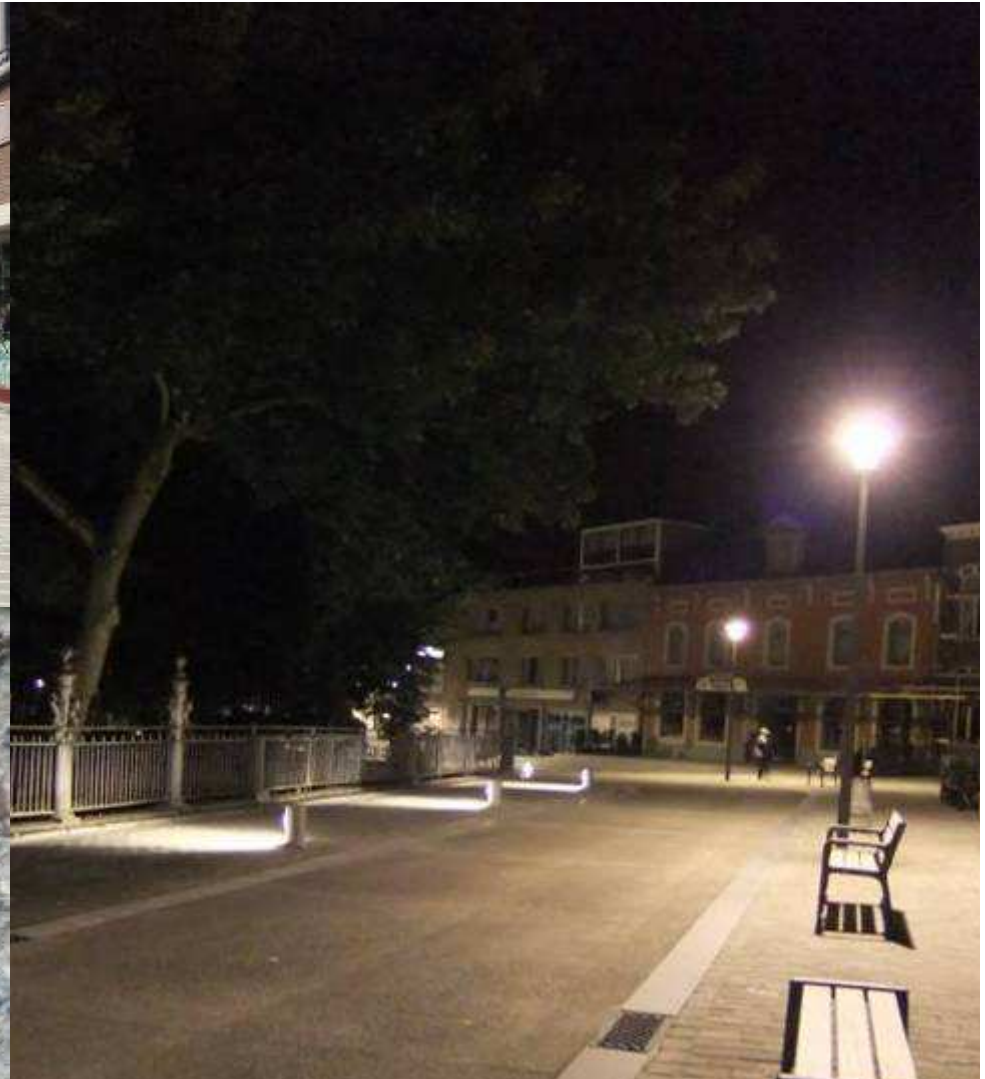
F – Fijnfrezen



G – Grinding



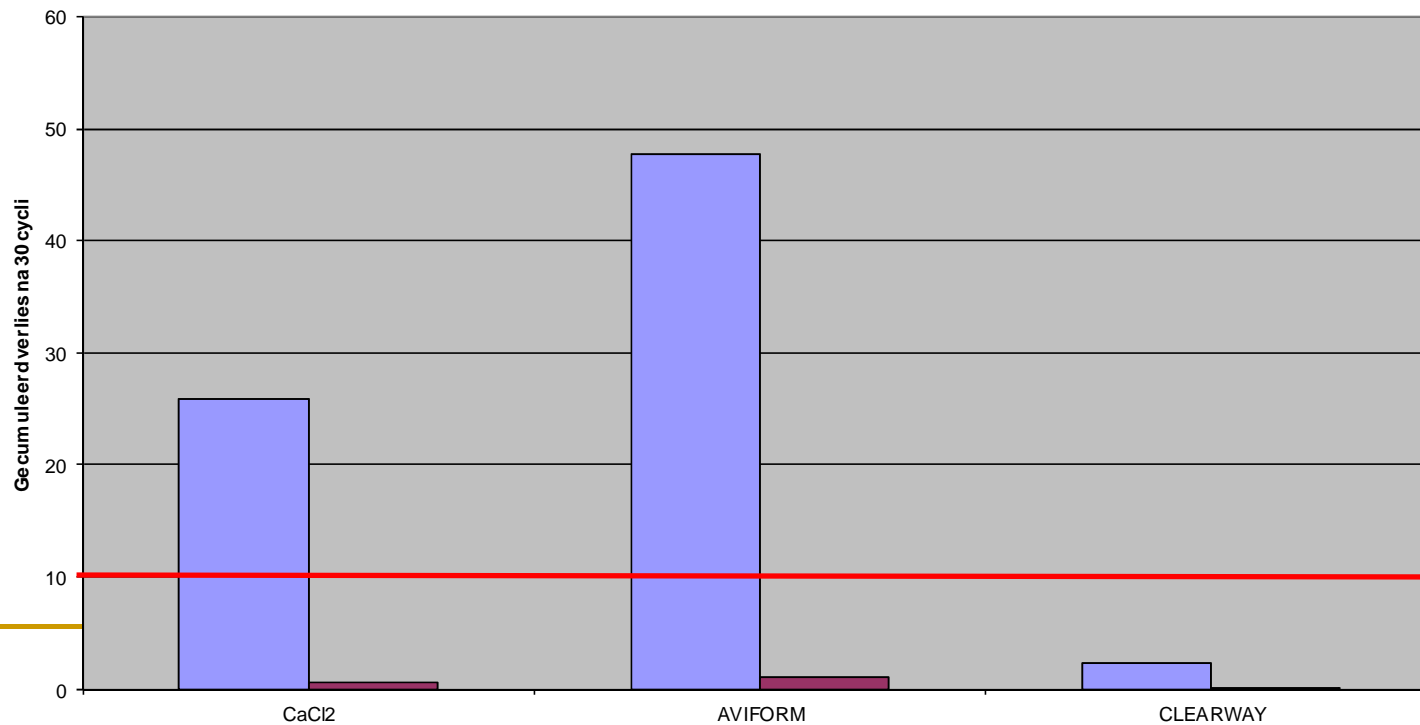
H – HOSBUR



I– Impregnatie

- Efficiënte bescherming betonoppervlak tegen vorst en dooizouten
- Noodzaak geteste producten

Doeltreffendheid impregneringsmiddel



Vergelijking onbehandelde proefstukken met geïmpregneerde

J– Jong beton

- Belang van snelle en efficiënte nabehandeling
- Bindingsvertrager is niet noodzakelijk curing compound



K – Kampenhout

- Industriezone

- Rijweg in uitgewassen beton
- Fietspad in rood beton

- Proeven op fietspadbeton

- 6 kernen
- $f_{cm,90d} = 66,9 \text{ N/mm}^2$
- $W_m = 5,4 \%$
- Vorstdooi : massaverlies na 30 cycli : $7,69 \text{ g/dm}^2$

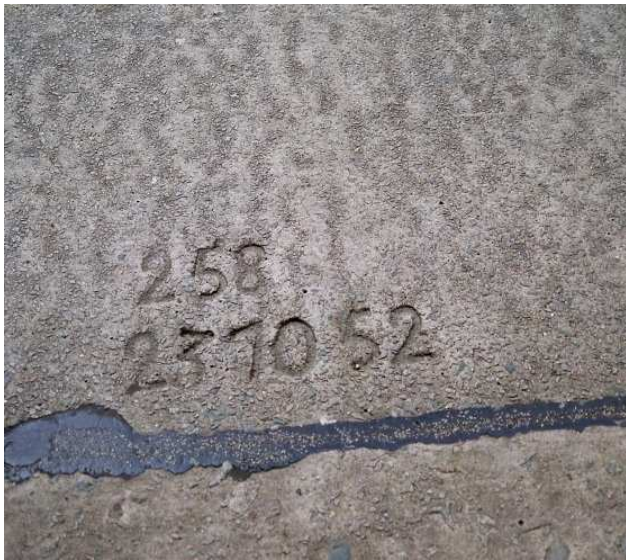


L – Leuven



M – Meise

- “Nieuwe”laan
- 62 jaar dienst



N – NAC Herent



O – Overlay

- N10 Scherpenheuvel – Diest
- DGB - 1994



P – Praag



Innovative Solutions – Benefiting Society

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Q – Quiet pavements

- CPX – metingen
- 80 km/h

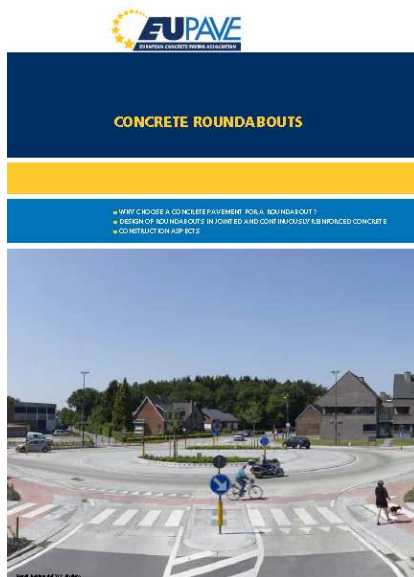
Road section	Pavement type	Year of construction	Rolling noise d(B)A
A14 – Deerlijk-Gent	Stone Mastic Asphalt 0/10	2003	100,3
A14 – Courtrai – France border	Stone Mastic Asphalt 0/10	2011/2012	98,8
A14 – Courtrai – France border	Stone Mastic Asphalt 0/6,3	2008	97,8
A14 – Temse – Sint-Niklaas	Single layered CRCP 0/20	2008	101,8
A14 – De Pinte-Kortrijk	Single layered CRCP 0/20	2010	99,7
A14 – De Pinte-Kortrijk	Single layered CRCP 0/20	2011	99,0
A14 – Deinze - Gent	Single layered CRCP 0/20	2011	98,8
A13 – double layered	Double layered CRCP 0/6,3	2012	98,0

P – Rotondes

- Rotondes DGB : zie SB250



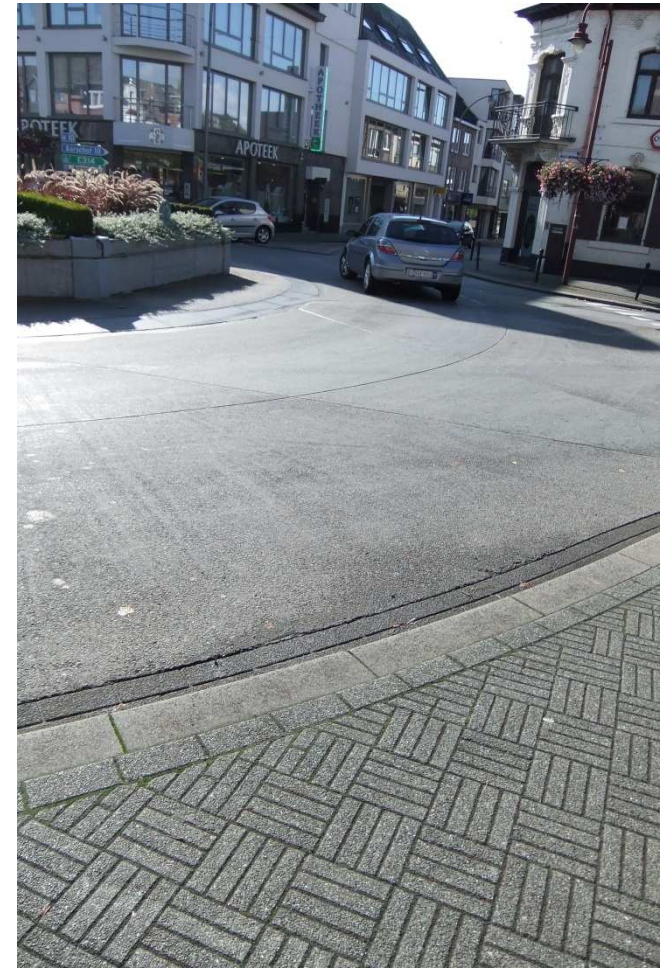
- Belgische en internationale ervaring in EUPAVE-brochure



Everberg : lokale rotonde in betonstraatstenen

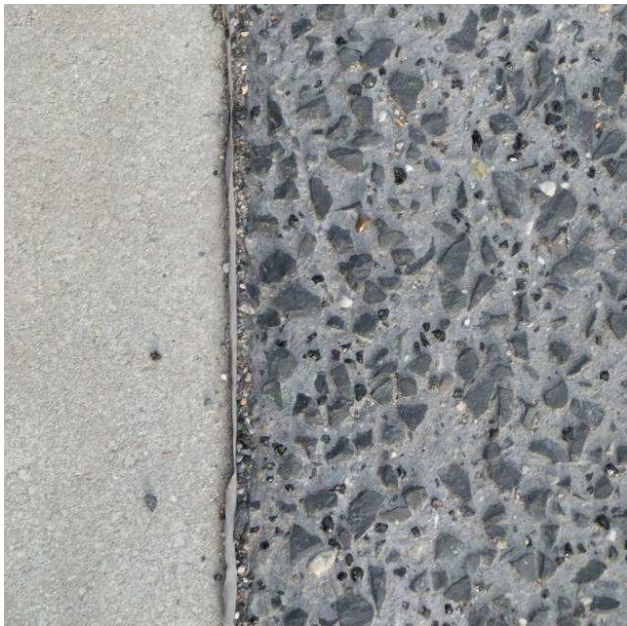
Scherpenheuvel

- Rotonde in stervorm



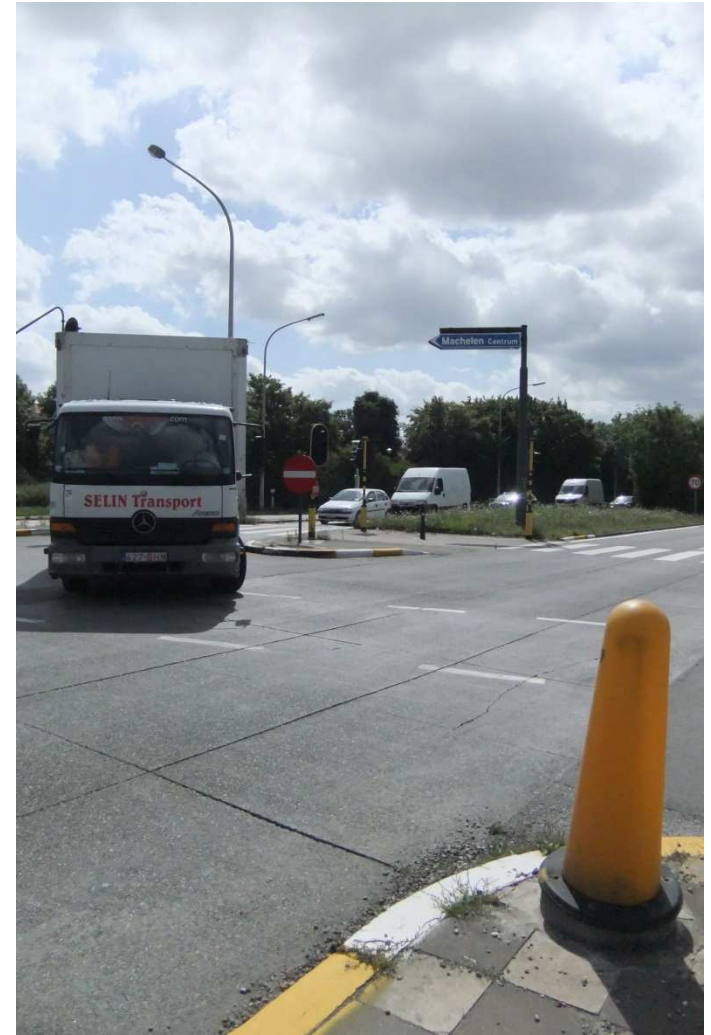
T-Tremelo

- Kruispunten in zwart beton
- Combinatie basalt en glanskies



U-UTW Machelen

- Ultra thin white topping
- 15 cm dikte - 2003



V – Voegenplan

- Respect regels geometrie platenbeton
- Vermijden scherpe hoeken
- Aandacht singuliere punten
- Netwapening bovenaan waar nodig



W – Waterdoorlatend



GELRODE : verkaveling

LANGDORP: parking station

X – Xinghui en Hao Hao

- Ook panda's houden van beton...



\mathcal{Y} – Young's modulus

- Voor wegenbeton : ca. 35.000 N/mm²
 - Goede lastenspreiding
 - Goede vermoeiingsweerstand
- $E = \sigma / \varepsilon$
 - Spanningen !
 - Controle scheurvorming door zaagsneden en kwaliteit beton



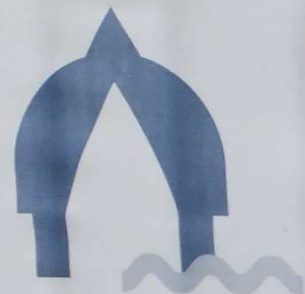
Z – Zaventem



Conclusies

- Beton is aanwezig in diverse toepassingen van Aarschot tot Zoutleeuw
- Sleutelwoorden
 - Duurzaamheid
 - Kwaliteit
 - Innovatie
 - Diversiteit





scherpenheuvel
zichem ●●●●●

Dank u voor uw aandacht

niet alleen de witte is hier thuis

www.scherpenheuvel-zichem.be