



The European voice of the
adhesive and **sealant industry**



LESS COSTS, LESS BURDEN, MORE PRODUCTS COVERED

15 OCTOBER 2015 BRUSSELS

10:30 – 14:00

EU-Model Environmental Product Declarations (EPDs)
because less is more!

Avenue E. Van Nieuwenhuysse 4, 1160 Brussels | Belgium



Mark SCHNEIDER
Head Global Product Sustainability
SIKA SERVICES AG

This document is under copyright of its author(s). Reproduction, distribution of any part of this document is prohibited without prior written consent of the author(s).





FEICA EU MODEL-EPD SEMINAR

INDUSTRY EXPERIENCE WITH MODEL-EPD

15 OCTOBER 2015, MARK SCHNEIDER
SIKA SERVICES AG/ GLOBAL PRODUCT SUSTAINABILITY

BUILDING TRUST



SIKA AT A GLANCE

- World market leader in construction chemicals
- Sales CHF 5.57 bn
- Over 100 years of innovation
- Presence in 91 countries
- Over 170 factories
- 16'900 employees



CONCRETE



WATERPROOFING



ROOFING



FLOORING & COATING



SEALING & BONDING



REFURBISHMENT



INDUSTRY

STRATEGIC SUSTAINABILITY CHALLENGES FOR SIKA

URBANIZATION & SUSTAINABILITY

Higher demand for durable infrastructure and refurbishment solutions

Increasing world population with urbanization and megacities

Increased safety, fire, water, earthquake and quality requirements

Increasing demand for safe-to-use and low-emission products

Rising demand for high performance concrete, sealing and waterproofing

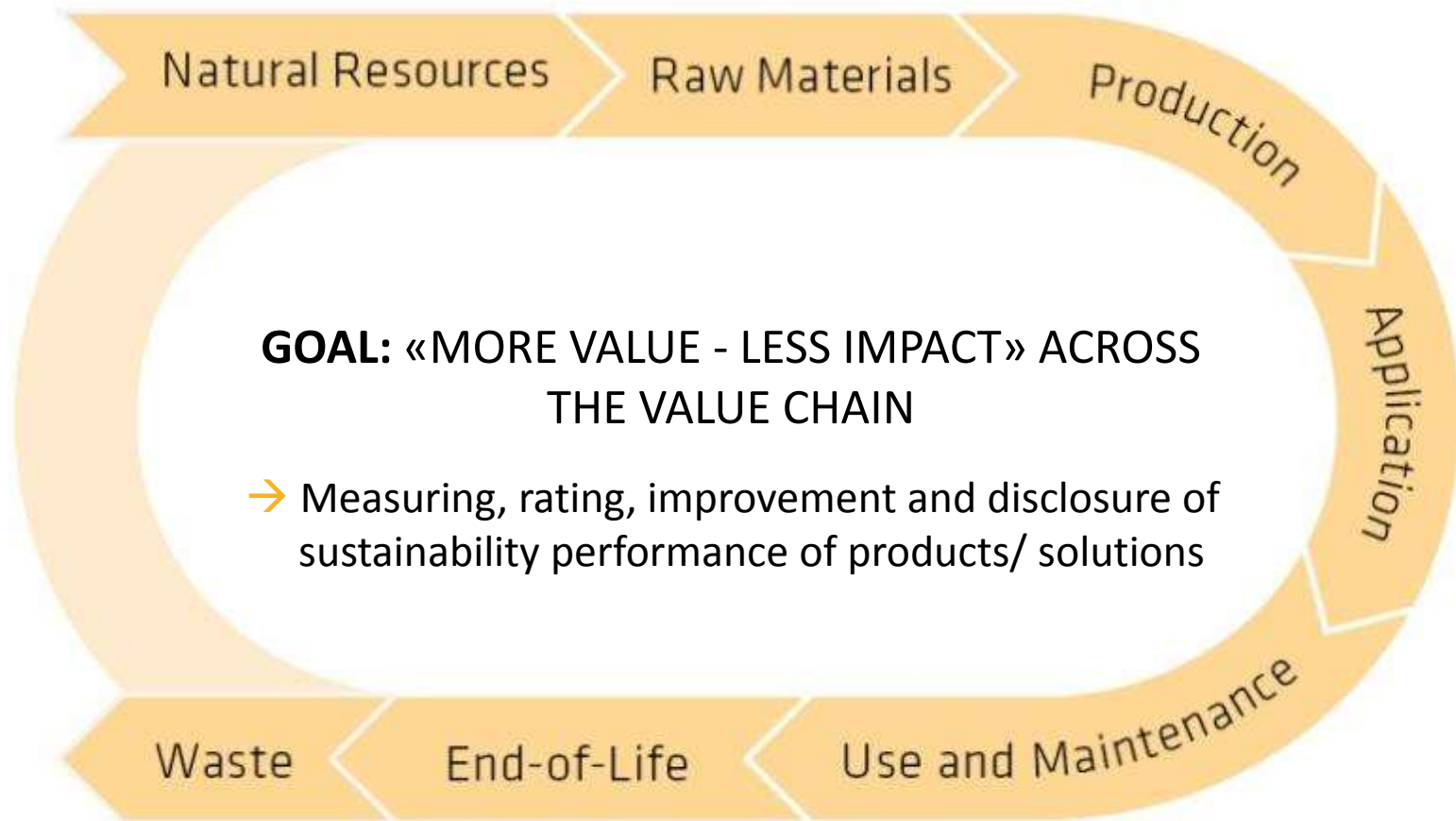
Green building frameworks and environmental regulation

Energy efficient, carbon neutral housing

SUSTAINABLE VALUE CREATION IN CONSTRUCTION

SIKA LIFE CYCLE MANAGEMENT APPROACH

«Less impact»



«More value»

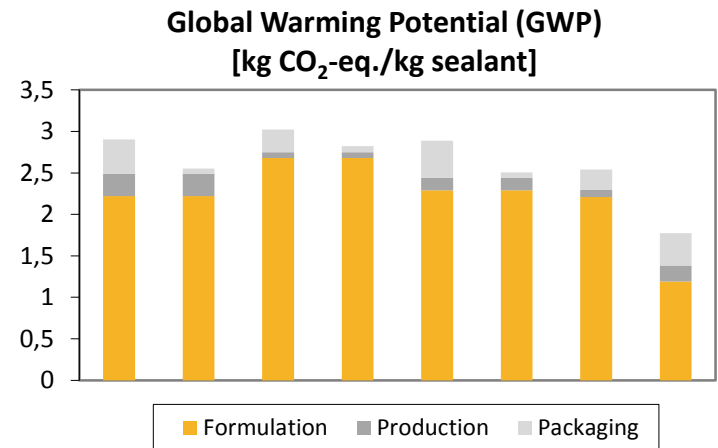
SUSTAINABLE VALUE CREATION IN CONSTRUCTION

LCA@SIKA: ROOF TO BASEMENT

Why LCA?

«More value – Less impact» across the value chain

- LCAs for all Technologies and Solutions
- Quantitative, sound basis for decision-making
- Determine hot spots (more value – less impact)
- Evaluate new product developments
- Support R&D in developing a more sustainable portfolio
- Answer customer requests
- Use for communication, marketing and sales



SEALANTS AND ADHESIVES

Internal LCAs show no major differentiation between chemically similar technologies.

Important: take the right solution for the right application!

SUSTAINABLE VALUE CREATION IN CONSTRUCTION

EPD@SIKA: ROOF TO BASEMENT

Why EPD?

Provide quantitative environmental information across the product's life cycle to different stakeholders in standardized way (architects, specifiers, planners, owners, contractors and regulators).

- Standard business-to-business communication tool to answer a growing number of customer demands
- Tendering specifications
- Respond to Green Building Program requirements
- Differentiation

SEALANTS AND ADHESIVES

No major differentiation through LCA
→ no major differentiation through EPD

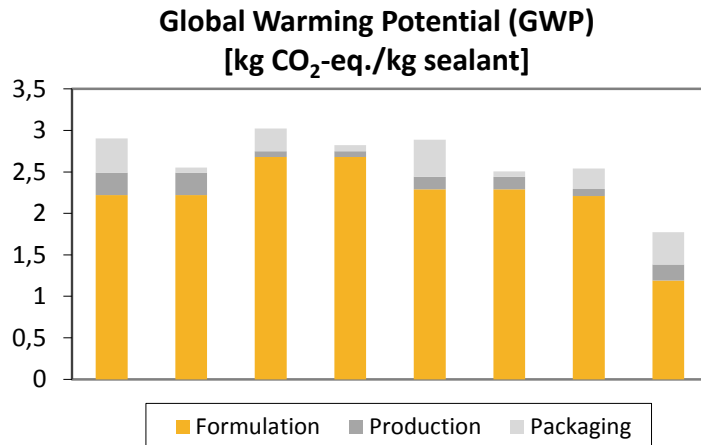


FEICA MODEL EPD

ADVANTAGES

- Industry united
- A large spectrum of products/ technologies is covered (5 groups with 17 classes)
- No significant differentiation for LCA of sealants and adhesives (S&A) which are chemically similar (no differentiation, lower priority for companies to invest)
→ high efforts for company specific EPDs with limited added value

CARBON FOOTPRINT: DIFFERENT SEALANT TECHNOLOGIES FOR WEATHER SEALING



Only **small differences** in environmental impacts between chemically similar sealants & adhesives.

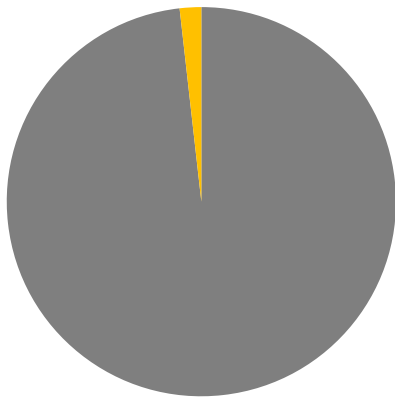
FEICA MODEL EPD

ADVANTAGES

- The LCA impact of S&A in comparison to the whole building is rather low
 - Worst case scenario, no risk of 'greenwashing'
 - Architects need to choose the «right» product for optimum functionality and durability depending on the specific application, the environmental conditions and the quality of the product
- use phase benefits should be the key message

CASE STUDY: FAMILY HOUSE IN SWITZERLAND

Energy consumption vs. Energy Savings Contribution



- Energy saving potential through S&A solutions during use phase (20 years)
- Cumulative Energy Demand of S&A for tight building envelope

Impacts of sealants & adhesives is **almost negligible** compared to energy saving potential during lifetime.

FEICA MODEL EPD ADVANTAGES

- Available in English
- EPDs with European scope (products manufactured in Europe), not country-specific
- Acceptance in market (according to DBC Model EPD experience)
- Generally no negative reaction from EPD program operators
- Could be used for **Green Building Programs, e.g. LEED v4 (MRc2)**
 - Product-specific declaration (publicly available, critically reviewed LCA, min. cradle to gate) - valued as $\frac{1}{4}$ of a product
 - Industry-wide (generic) EPD (externally verified, manufacturer explicitly recognized as a participant by the program operator) - valued as $\frac{1}{2}$ of a product
 - Product-specific EPD (externally verified) - valued as 1 (whole) product
- But not accepted so far by BRE for BREEAM UK NC 2014 (Mat01)



FEICA MODEL EPD ADVANTAGES

- Simple process to verify if product is in Model EPD scope with scoring guideline



- Manufacturer can directly refer to the Model EPD through «Manufacturer Declaration» (Product xx fulfills the EPD yy etc.)
- Possibility of individualization is still under discussion
- Cost effective solution (faster and cheaper than individual EPDs)
- Low administrative efforts for large and frequently changing portfolios



FEICA MODEL EPD

DBC MODEL EPD APPROACH

INDIVIDUALISATION

TRANSLATION

MUTUAL RECOGNITION

UMWELT-PRODUKTDEKLARATION
nach ISO 14025 und EN 15804

Deklarationsinhaber:	Sika Deutschland GmbH
Herstellerteil:	Institut Bauteil und Umwelt e.V. (IBU)
Programmanbieter:	Institut Bauteil und Umwelt e.V. (IBU)
Deklarationsnummer:	EPD-50K-20140215-IBG1-DE
Ausstellungsdatum:	14.11.2014
Dauert bis:	13.11.2019


Fußbodenklebstoffe:

ENVIRONMENTAL PRODUCT DECLARATION
as per ISO 14025 and EN 15804

Owner of the Declaration:	Sika Deutschland GmbH
Programme holder:	IBU - Institut Bauteil und Umwelt e.V. (IBU)
Publisher:	Institut Bauteil und Umwelt e.V. (IBU)
Declaration number:	EPD-50K-20140215-IBG1-DE
Issue date:	14.11.2014
Valid to:	13.11.2019

Flooring adhesives:
SikaBond-54 Parquet,
SikaBond-52 Parquet,
SikaBond-95 Parquet,

epd-norge.no
The Norwegian EPD Foundation



ENVIRONMENTAL PRODUCT DECLARATION
in accordance with ISO 14025, ISO 21930 and EN 15804

Owner of the Declaration:	Sika Deutschland GmbH
Program operator:	IBU - Institut Bauteil und Umwelt e.V.
Publisher:	The Norwegian EPD Foundation
Declaration number:	EPD-50K-20140215-IBG1-EN
Registration number:	NBPD-343-233-EN
Issue date:	14.11.2014
Valid to:	13.11.2019

Flooring adhesives:
SikaBond-54 Parquet, SikaBond-52 Parquet, SikaBond-95 Parquet,
SikaBond-50 Parquet, SikaBond AT-80, SikaBond AT-82, SikaBond T-40

FEICA Model EPD:

- IBU with several mutual recognition agreements established
- Individualisation possible?
- Otherwise mutual recognition of Model EPD?



Added: specific technical info and VOC emission testing (Emicode)





Annex added: transport to Norway, dangerous substances content and emission testing (M1)

FEICA MODEL EPD

MUTUAL RECOGNITION AND ACCEPTANCE

EU wide acceptance by major national EPD program operators

- Mutual recognition of association model EPDs
 - FEICA can actively support ECO platform in the discussion with major operators (e.g. BRE (UK) etc.)

Acceptance by national authorities

- France/ Belgium («green/ environmental claims»)
 - FEICA can actively support the discussion

Acceptance by major international Green Building Programs

- USGBC (LEED v4, MRc2): avoid «race» for product-specific EPD (valued as 1 (whole) product)
- BRE (BREEAM UK NC 2014, Mat01): Green Guide ratings for building elements and EPD uplift credit
 - FEICA can actively inform/ clear up major GBCs about «equivalence» of S&A model EPDs with specific EPDs (e.g. USGBC through ASC, BRE (UK) etc.)

FEICA MODEL EPD

CONCLUSION

- Simple and cost effective approach to get an EN 15804 compliant EPD which is widely accepted across Europe by different stakeholder groups
- «Industry united» is the right approach, as LCA and EPDs show no major differentiation between chemically similar S&A technologies
 - Company specific EPDs for individual products or product groups = high efforts with limited added value (customers, differentiation)
- Small quantity of S&A on building level
 - **low contribution to the environmental impact** caused by the construction of the building (impact of S&A in comparison to the whole building is rather low)
 - their proper use, performance, quality and longevity are of **great importance to the total environmental performance of a building** during its whole lifetime incl. use phase benefits (e.g. energy savings through tight building envelopes)
- Mutual recognition and acceptance by major EPD program operators, national authorities and major Green Building Programs is crucial to avoid double work



THANK YOU FOR YOUR ATTENTION

BUILDING TRUST

