



# EPD Overview

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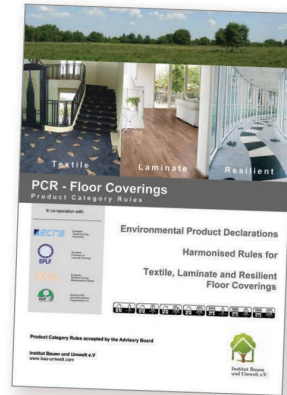
# An introduction to EPD



LCA  
Life Cycle Assessment



PCR  
Product Category Rules



EPD Environmental  
Product Declaration



Image courtesy InterfaceFLOR

<https://asbp.org.uk/briefing-paper/epd-an-introduction>

This paper has been authored by Jane Anderson, ASBP Board Member & Director of Construction.CA, and peer reviewed by the ASBP's Natural Fibre Insulation Group.

**ASBP** The Alliance for Sustainable Building Products

## ENVIRONMENTAL PRODUCT DECLARATIONS (EPD) - AN INTRODUCTION

ASBP Briefing Paper | December 2019

This paper is the first in a series of ASBP industry briefing papers focusing on Environmental Product Declarations (EPD). The aim is to generate a greater understanding of sustainable construction products and the methods of assessing sustainability. In doing this, we hope to enable industry to deliver better buildings that utilize information provided by Environmental Product Declarations.

**Introduction**

What are Environmental Product Declarations (EPD)? EPD provide a standard way of declaring the impacts of manufacturing and using products through Life Cycle Assessment (LCA). Construction products are assessed using a single set of Product Category Rules (PCR) ensuring consistent reporting for similar products. EPD should be independently verified by an expert familiar with the product category.

**Governing standards**

ISO 14025: 2006 sets out the overarching procedures and requirements for producing EPD for all product types. EN 15804:2012+A1:2013 sets out the Core PCR for the product category, construction products. There are additional standardised PCR for specific types of construction products that include timber, concrete, thermal insulation, cement and ceramic tiles.

**EPD programmes**

This is a database of verified EPDs managed and updated by an EPD Programme Operator that is usually an independent operator and sometimes a manufacturing group or trade association. The governing standards determine General Programme Instructions, PCR, rules for appointing Verifiers and any EPD format that must be followed. A PCR that fairly reflects the product type and EPD verification that is fully independent are essential.

**Verification**

EN 15804 requires EPD to be verified by an expert in

LCA not associated with the owner of the EPD, and not involved in the EPD development. The verifier ensures that the EPD has been produced in accordance with the Governing Standards, the PCR and General Programme Instructions.

**Mutual recognition**

It is possible for an EPD to be listed in more than one EPD programme where the programmes follow the same rules. This avoids producing separate EPD for each programme. A number of EPD programmes for construction products now have mutual recognition agreements in place, shown in Figure 1.

**Availability of EPD**

The number of construction product EPD has grown steadily since 2012. In 2019 there were over 6000 downloadable EPD to EN 15804 within EPD Programmes. The largest number are in France (Fies, PEP ecosystem), Germany (IBU) and the USA (UL Environment). A small but growing number have been produced by UK companies.

The largest product groups in terms of published EPD include insulation, floor coverings, gypsum products, paints, precast concrete, ready mix concrete and mortars, metal products, windows and doors.

Many EPD programmes are now providing their EPD data digitally for use within BIM and building LCA tools. Some are providing this free whilst others charge and/or require the data use to be approved.

ASBP | [asbp.org.uk](http://asbp.org.uk) | December 2019

# What information do they contain?

- It's not just carbon.

## Potential environmental impact – mandatory indicators according to EN 15804

Results per functional or declared unit		
Indicator	A1-A3 (Total)	Unit
Global Warming Potential total	812.3	kg CO <sub>2</sub> eq.
Global Warming Potential fossil fuels <sup>1)</sup>	812.0	kg CO <sub>2</sub> eq.
Global Warming Potential biogenic <sup>2)</sup>	0.2047	kg CO <sub>2</sub> eq.
Global Warming Potential land use and land use change	5.705E-2	kg CO <sub>2</sub> eq.
Depletion potential of the stratospheric ozone layer	1.027E-5	kg CFC 11 eq.
Acidification potential, Accumulated Exceedance	2.010	mol H <sup>+</sup> eq.
Eutrophication potential, fraction of nutrients reaching freshwater end compartment	0.2139	kg PO <sub>4</sub> eq.
Eutrophication potential, fraction of nutrients reaching freshwater end compartment	6.977E-2	kg P eq.
Eutrophication potential, fraction of nutrients reaching marine end compartment	5.016E-3	kg N eq.
Eutrophication potential, Accumulated Exceedance	6.451	mol N eq.
Formation potential of tropospheric ozone	1.567	kg NMVOC eq.
Abiotic depletion potential for non- fossil resources*	1.663E-4	kg Sb eq.
Abiotic depletion for fossil resources potential*	2738	MJ, net calorific value
Water (user) deprivation potential, deprivation-weighted water consumption*	45.16	m <sup>3</sup> world eq. deprived

## Use of resources

Results per functional or declared unit		
Indicator	A1-A3 (Total)	Unit
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	568.9	MJ, net calorific value
Use of renewable primary energy resources used as raw materials	89.08	MJ, net calorific value
Total use of renewable primary energy resources	657.9	MJ, net calorific value
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	2712	MJ, net calorific value
Use of non-renewable primary energy resources used as raw materials	26.03	MJ, net calorific value
Total use of non-renewable primary energy resources	2738	MJ, net calorific value
Use of secondary materials	78.52	kg
Use of renewable secondary fuels	411.2	MJ, net calorific value
Use of non-renewable secondary fuels	757.0	MJ, net calorific value
Net use of fresh water	1.071	m <sup>3</sup>

## Output flows

Results per functional or declared unit		
Indicator	A1-A3 (Total)	Unit
Components for re-use	0	kg
Materials for recycling	0	kg
Materials for energy recovery	0	kg
Exported energy	0	MJ per energy carrier

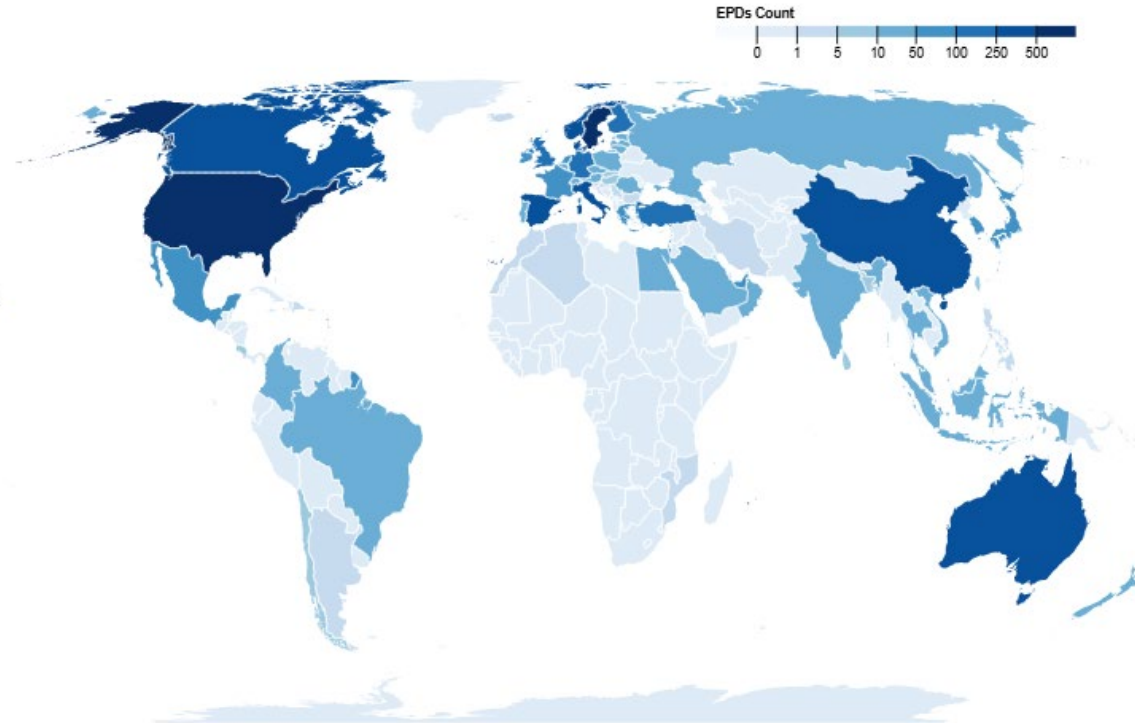
## Information on biogenic carbon content

Results per functional or declared unit		
BIOGENIC CARBON CONTENT	QUANTITY	Unit
Biogenic carbon content in product	0	kg C
Biogenic carbon content in packaging	2.9	kg C

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO<sub>2</sub>.

# The International Perspective

- ▶ There are construction product EPD Programmes in:
- ▶ Most European countries
- ▶ USA and Canada
- ▶ Australasia
- ▶ Turkey
- ▶ Brazil, Latin America, Argentina
- ▶ China, Japan, South East Asia
- ▶ India
- ▶ Egypt...

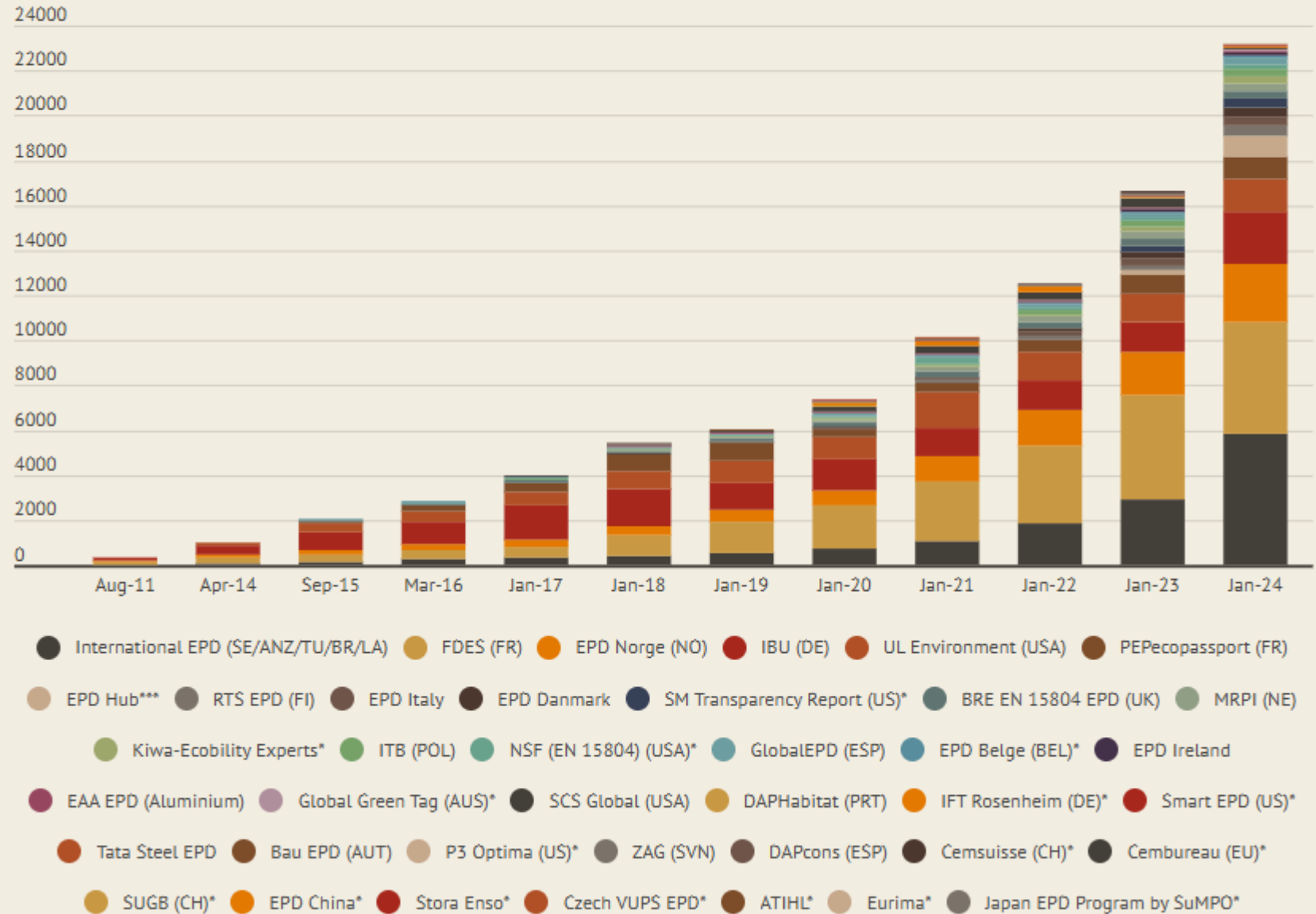


Source: EC3

# How many EPD are there?

- ▶ These are just the EPD to EN 15804 that are published via an EPD Programme...
- ▶ There are more than 50,000 verified EPD in Europe and over 70,000 EPD in North America

## Growth in numbers of Construction Product EPD to EN 15804



# ASBP EPD

## ▶ ASBP Member EPD Database

This database showcases a curated selection of Environmental Product Declarations (EPD) for ASBP member building products. This is not an exhaustive list – please visit the respective manufacturer's website to see a full selection of EPD. An Environmental Product Declaration provides environmental information about a product in a standardised format using a consistent methodology. EPD enables architects, designers and specifiers to make more considered product choices.

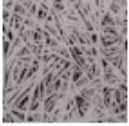















Products listed on this database are not officially endorsed by ASBP and not all products with EPD are necessarily sustainable.

























For more information about EPD including free briefing papers and webinar recordings, please visit our [EPD webinar page](#). If you are an ASBP member and would like to submit an EPD for inclusion on the database, [click here](#).












Filter by manufacturer:

Filter by ASBP member:  Filter by product type:

Sort by:

 <b>Acoustic Panel, 25mm, natural grey, painted</b> Manufacturer: Tröskold Type: Acoustic Panel Member: Mörby Värje	 <b>Acoustic Panel, 25mm, natural grey, unpainted</b> Manufacturer: Tröskold Type: Acoustic Panel Member: Mörby Värje	 <b>Acoustic Panel, 25mm, natural wood, painted</b> Manufacturer: Tröskold Type: Acoustic Panel Member: Mörby Värje	 <b>Acoustic Panel, 25mm, natural wood, unpainted</b> Manufacturer: Tröskold Type: Acoustic Panel Member: Mörby Värje
 <b>Adaptable Wall</b> Manufacturer: Optima Products Ltd. Type: Partitions Member: Optima Products Ltd.	 <b>CASEA</b> bauprotect 900/900/RHS bauprotect 900/FF Klima/Inputor RFF Mineral Finish Coat K. Manufacturer: CASEA Type: Plaster/Render/Mortar Member: Sörest Building Products	 <b>CASEA</b> bauprotect 950M, 900E, GUP Manufacturer: CASEA Type: Plaster/Render/Mortar Member: Sörest Building Products	 <b>Silestone cladding and decking boards</b> Manufacturer: Versium-Tonkin Type: Cladding Member: Versium-Tonkin
 <b>Clay glasters (Rustic, Demi Rustic, Smooth, Toral)</b> Manufacturer: Claycote Type: Plaster/Render/Mortar Member: Claycote	 <b>Climate Board</b> Manufacturer: Cabitec Type: Insulation Member: Prological Building Systems	 <b>CozyWool Sheep's Wool Insulation</b> Manufacturer: Thermoform Type: Insulation Member: Thermoform	 <b>DF 108 Flexible Designer Tile Grout</b> Manufacturer: Sopro Type: Filler/Grout/Sealant Member: Sörest Building Products
 <b>Diatomite</b> Manufacturer: Sörest Type: Plaster/Render/Mortar Member: Prological Building Systems	 <b>FF 450 Flexible Tile Adhesive</b> Manufacturer: Sopro Type: Tile adhesive Member: Sörest Building Products	 <b>Flit 232 Amapel High Performance Insulating Plaster</b> Manufacturer: Perotec Type: Plaster/Render/Mortar Member: Back to Earth	 <b>FKM Silver 600 Extra Rapid Set Tile Adhesive</b> Manufacturer: Sopro Type: Tile adhesive Member: Sörest Building Products

 <b>FKM XL 444 - Extra Light Weight Tile Adhesive</b> Manufacturer: Sopro Type: Tile adhesive Member: Sörest Building Products	 <b>FL Plus - Flexible Tile Grout</b> Manufacturer: Sopro Type: Filler/Grout/Sealant Member: Sörest Building Products	 <b>Flagon PVC</b> Manufacturer: Sopro Type: Membrane Member: Sopro	 <b>FS 15 plus Levelling Compound 2 - 150 mm</b> Manufacturer: Sopro Type: Filler/Grout/Sealant Member: Sörest Building Products
 <b>HSF 748 Flexible Bonding Slurry with Trass</b> Manufacturer: Sopro Type: Filler/Grout/Sealant Member: Sörest Building Products	 <b>UtaFol Lightweight Flowing Floor Screed</b> Manufacturer: SART Type: Filler/Grout/Sealant Member: Sörest Building Products	 <b>Modular Skylight (triple glazing configuration)</b> Manufacturer: Voka Type: Roof window Member: Voka	 <b>Multiplex Top</b> Manufacturer: Günter Type: Insulation Member: Prological Building Systems
 <b>Multitherm</b> Manufacturer: Günter Type: Insulation Member: Prological Building Systems	 <b>OF3 240 Contract Floor Levelling Compound 3-25mm</b> Manufacturer: Sopro Type: Filler/Grout/Sealant Member: Sörest Building Products	 <b>PWWEX Dry process wood fibre insulation</b> Manufacturer: Purotherm SE Type: Insulation Member: Sopro	 <b>Phonotherm 200</b> Manufacturer: Ring Type: Insulation Member: Prological Building Systems
 <b>Proplex Standard</b> Manufacturer: Prolex Type: Temporary protection Member: Prolex International Ltd.	 <b>ProplexR and 'D' Profile impactboard</b> Manufacturer: Prolex Type: Temporary protection Member: Prolex International Ltd.	 <b>ProplexCC</b> Manufacturer: Prolex Type: Temporary protection Member: Prolex International Ltd.	 <b>RAM 30-45 - Renovation and Levelling Mortar</b> Manufacturer: Sopro Type: Plaster/Render/Mortar Member: Sörest Building Products
 <b>Raplorun 85 Rapid Drying Scraped Blinder</b> Manufacturer: Sopro Type: Filler/Grout/Sealant Member: Sörest Building Products	 <b>STEICO LVL laminated veneer lumber</b> Manufacturer: Steico Type: LVL Member: Steico	 <b>Steico wood fibre insulation boards (dry process)</b> Manufacturer: Steico Type: Insulation Member: Steico	 <b>STEICO wood fibre insulation boards (wet process)</b> Manufacturer: Steico Type: Insulation Member: Steico
 <b>STICOflex flexible wood fibre cavity insulation</b> Manufacturer: Steico Type: Insulation Member: Steico	 <b>STICOwall and STICOfloor i-joint products</b> Manufacturer: Steico Type: Insulation Member: Steico	 <b>STICOwall wood fibre air-injected insulation</b> Manufacturer: Steico Type: Insulation Member: Steico	 <b>Straw insulation</b> Manufacturer: Cabitec Type: Insulation Member: Prological Building Systems

 <b>Sücanit 280 Alpha Hemihydrate Binder</b> Manufacturer: CERS Type: Filler/Grout/Sealant Member: Sörest Building Products	 <b>SUPASOFT</b> Recycled PET Microfibre Insulation Manufacturer: Thermoform Type: Insulation Member: Thermoform	 <b>SuperPan VapourStop</b> Manufacturer: Finca Type: Backing board Member: Prological Building Systems	 <b>Tapered Climate Board</b> Manufacturer: Cabitec Type: Insulation Member: Prological Building Systems
 <b>Thermafibres</b> Manufacturer: Günter Type: Insulation Member: Prological Building Systems	 <b>Thermaflex</b> Manufacturer: Günter Type: Insulation Member: Prological Building Systems	 <b>Thermroom</b> Manufacturer: Günter Type: Insulation Member: Prological Building Systems	 <b>UK Clay Brick</b> Manufacturer: Multiple Type: Brick Member: Wincoblen
 <b>Ultratherm</b> Manufacturer: Günter Type: Insulation Member: Prological Building Systems	 <b>therma fleece</b> UltraWool Sheep's Wool Insulation Manufacturer: Thermoform Type: Insulation Member: Thermoform	 <b>Window Softix Climate Board</b> Manufacturer: Cabitec Type: Insulation Member: Prological Building Systems	

# The International Perspective Regulation

## How are they used

- ▶ To combat Greenwashing in France and Belgium
- ▶ In Green Public Procurement in Norway
- ▶ To provide evidence of recycled content in Italy
- ▶ To obtain credits in BREEAM and LEED
- ▶ To improve required assessments of public building embodied impact in Germany and Belgium
- ▶ To improve regulated assessments of building embodied impact in France, The Netherlands, Denmark, Finland, Sweden
- ▶ <https://asbp.org.uk/briefing-paper/epd-how-to-use>

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## ENVIRONMENTAL PRODUCT DECLARATIONS (EPD) - HOW TO USE

ASBP Briefing Paper | January 2020

This paper is the second in a series of ASBP industry briefing papers focussing on Environmental Product Declarations (EPD). The aim is to generate a greater understanding of sustainable construction products and the methods of assessing sustainability. In doing this, we hope to enable industry to deliver better buildings that utilise information provided by Environmental Product Declarations.

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### How can you use EPD?

#### Building Assessment

EPD indicators for products are critical in conducting whole building assessments.

#### Carbon Footprinting

Both PAS 2050:2011 and ISO 14067:2018 provide rules for assessing the carbon footprint of products. BSI have confirmed that the GWP Indicator provided in "Cradle to Gate" and "Cradle to Grave" BS EN 15804:2012 EPD can be considered to be the same as the GHG emissions provided by PAS 2050:2011.

#### Embodied Carbon and Whole Life Carbon assessment

Embodied Carbon is the greenhouse gas (GHG) emissions associated with making, moving, installing and disposing of construction products in buildings and infrastructure and is same as the GWP indicator in construction product EPD.

#### Marketing

EPD enable companies to make credible and verifiable environmental claims about their products. This enhances credibility and allows comparisons against similar products.

#### Procurement

EPD can be used as source information in the procurement and purchase of products. They provide buyers with the confidence of knowing that the environmental performance of a specific product has been reviewed and validated by an independent expert with expertise in LCA.

#### Product Comparison

Where the same Product Category Rules have been used, and all the relevant life cycle stages have been included, EPD can be readily compared providing their functionality and use is considered. It is also important to take into account additional materials or work required to make the same products achieve a similar level of performance, e.g. fire retardants or foundation supports and to take account of any differences in service life, maintenance and disposal.

#### Specification

Specifiers can include information provided in EPD in their performance specifications, to ensure that products used in the building meeting their requirements for environmental performance.

#### Supply chain

EPD verification will cover the specific information provided by the supply chain as well as the product manufacturer to ensure the robustness of data and identify opportunities for improvement throughout the supply chain.

# The International Perspective

Will EPD be mandated?

- ▶ Between 2025 and 2040, construction products marketed in the EU and covered by the **recast Construction Products Regulation [CPR]** or by the **Ecodesign for Sustainable Products Regulation [ESPR]** will have to first provide verified GWP [embodied carbon] information for their products over their life cycle and then LCA impact information as part of CE Marking
- ▶ Product Groups have been prioritized for the CPR to provide this information - the first construction products to provide information will be steel, concrete, windows, insulation and paints. Other sectors such as glass are “fast tracking”.
- ▶ Via the [International Deep Decarbonisation Initiative](#), Canada, Germany and the USA already have requirements for public bodies to purchase low carbon steel and/or concrete based on EPD results and the UK will do in future.

# Using EPD for Green Claims

- ▶ EPD are independently verified by an experienced expert approved by an EPD Programme
- ▶ ECO Platform audited EPD Programmes have been checked to ensure their Verifiers are qualified and use a detailed verification checklist
- ▶ In France and Belgium, it is already a requirement to provide an EPD if you make an environmental claim about a construction product
- ▶ In the UK, the Green Claims Code is clear that green claims must not be misleading, must be robust and cover the whole life cycle. EPD are able to provide this evidence.



# UK Green Claims Code

- ▶ Green claims must:
  - ▶ **1. Be truthful and accurate:** Businesses must live up to the claims they make about their products, services, brands and activities
  - ▶ **2. Be clear and unambiguous:** The meaning that a consumer is likely to take from a product's messaging and the credentials of that product should match
  - ▶ **3. Not omit or hide important information:** Claims must not prevent someone from making an informed choice **because of the information they leave out**
  - ▶ **4. Only make fair and meaningful comparisons:** **Any products compared should meet the same needs or be intended for the same purpose**
  - ▶ **5. Consider the full life cycle of the product:** When making claims, businesses must consider the total impact of a product or service. Claims can be misleading where they don't reflect the overall impact or where they focus on one aspect of it but not another
  - ▶ **6. Be substantiated:** Businesses should be able to back up their claims with **robust, credible and up to date evidence**

<https://greenclaims.campaign.gov.uk/check-your-green-claims/>

# 10 basics to consider

- ▶ The EPD Programme - is it a member of ECO Platform?
- ▶ Issue date - is it still valid?
- ▶ The functional or declared unit used - how does it relate the product you'll install
- ▶ The product description - does it match what you want?
- ▶ The scope - does it provide information on transport, installation, and maintenance?
- ▶ Biogenic carbon in the product and packaging
- ▶ The end of life phase - are the scenarios relevant to the use in your building?
- ▶ Manufacturing location and year of data - is this relevant to your building?
- ▶ The LCA results themselves, and....

<https://asbp.org.uk/wp-content/uploads/2021/12/Top-10-things-to-look-for-in-an-EPD-ASBP-EPD-Webinar-08.12.21.pdf>

## Top 10 things to look out for when reading an EPD

### 10... ..other things to consider! (Some optional/not listed in all EPD)

- 1. LCA interpretation** - This is really useful for understanding where the main impacts are caused during manufacturing.
- 2. Environment and health during use** - Useful to understand if the product will emit harmful VOCs during its use.
- 3. Density** - Find out the density of the product you plan to use and compare to declared density of the EPD. If different refer to specific formulas to amend results.
- 4. Certification** - Check to see if EPD has been verified externally.
- 5. Manufacturing process** - Useful to understand how the product has been made.
- 6. Reference service life** - service life is useful to understand potential replacement cycles which impacts (B4)
- 7. Fire** - Useful to know fire rating to understand application limits of the product.
- 8. Disposal** - What it likely in one country isn't always likely in another, and may be different even if same process (e.g. whether ENW recovers electricity and heat, and what energy is substituted in Module D.
- 9. Cut off criteria** - Note references and inclusion of biogenic carbon.
- 10. Use of secondary materials and Module D** - useful to understand how the product contributes to the circular economy

# Where can you find EPD?

- ▶ [ECO Platform ECO Portal](#)
- ▶ [Inies - French EPD Database](#)
- ▶ [B-EPD - Belgian EPD Database \[free registration\]](#)
- ▶ [Building Transparency EC3 database \[free registration\]](#)
- ▶ [EPD Hub](#)
- ▶ [Tata Steel EPD Programme](#)
- ▶ [European Aluminium EPD Programme](#)

## ENVIRONMENTAL PRODUCT DECLARATIONS (EPD) - WHERE TO FIND

ASBP Briefing Paper | March 2020

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### What type of EPD are available for construction products?

In Europe, EN 15804:2012+A1:2013 is the standard which is currently used by all construction product EPD programmes. This standard is also used by some programmes in North America, and in Australasia, India and Latin America.

An amendment to the standard, EN 15804:2012+A2:2019 will come in to force gradually, with +A2 EPD providing more, and different environmental indicators. During a transition period, EPD will probably provide both types of indicators.

Outside of Europe, some construction product EPD programmes use ISO 21930, both the 2007 version and the revised 2017 version. The 2017 version is very close to the EN 15804+A1 standard and EPD could be compared if necessary. EPD to the 2007 version do not have the same product category rules and should not be compared with EN 15804 EPD.

### How many EPD are there?

At the start of 2019 there were over 7000 EPD to EN 15804 registered within EPD Programmes and available for download, although only a small proportion of them have been produced by UK companies or trade associations, mostly within the BRE and International EPD programmes.

### Where can you find EPD?

[ECO Platform](#) is an association of European construction product EPD Programmes that sets standards for verification and mutual recognition between programmes for example. It provides member programmes with the opportunity to list EPD on their website.

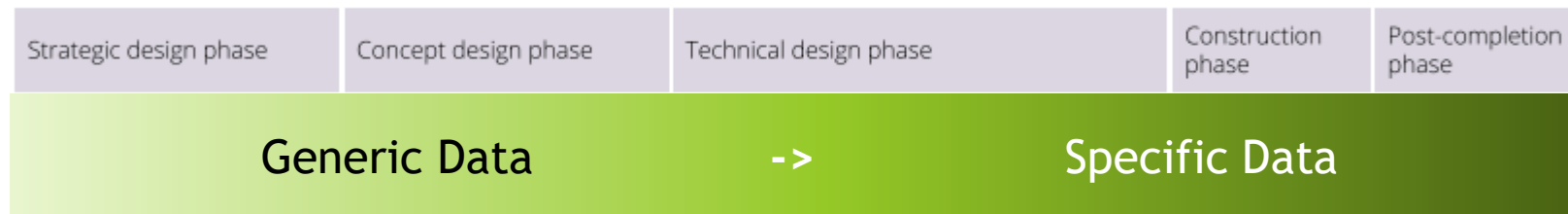
ECO Platform Programme Operators member websites (all to EN 15804)

EPD Programme Operators are required in ISO 14025, the overarching standard for EPD, to publish EPD and most make their EPD available as downloadable PDFs on their websites.

- Austria: [Bau EPD](#)
- Belgium: [B-EPD](#) (FOD Volksgezondheid)
- Denmark: [EPD Danmark](#)
- Finland: [RT EPD](#) (The Building Information Foundation RTS)
- France: [FDES](#) (Alliance HQE- GBC / Programme FDES INIES)
- France: [PEP EcoPassport](#) (electronic items)
- Germany: [IBU](#) (Institut Bau und Umwelt)
- Ireland: [EPD Ireland](#) (IGBC)
- Italy: [EPD Italia](#) (ICMQ)
- Netherlands: [MRPI](#) (Milieurelevante Product informatie)

# Selecting data

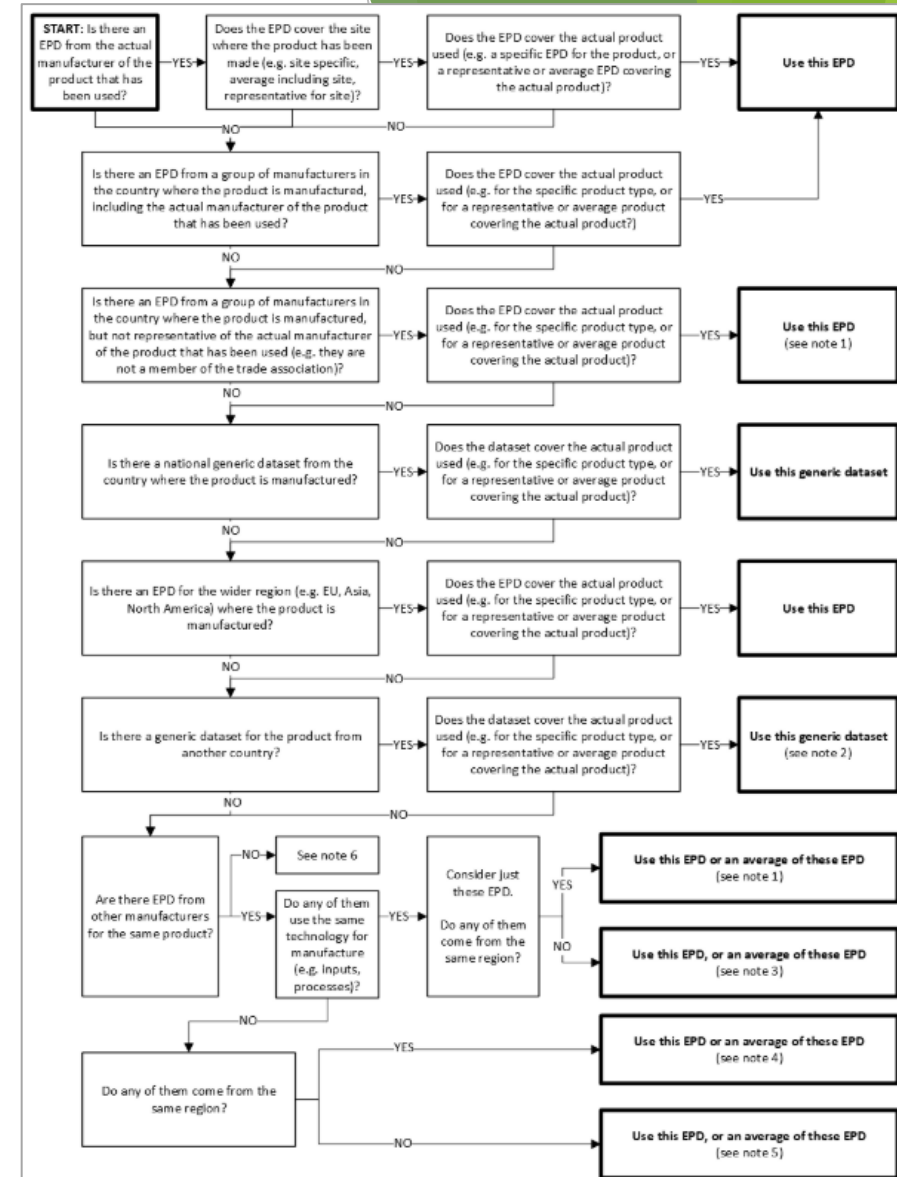
- ▶ The process is different at different design phases....



- ▶ In early design stages, generic data for the UK such as sector EPD or the ICE database embodied carbon figures are representative of typical UK products
- ▶ In later design phases, and for as built assessments, manufacturer specific EPD for the particular products used and project specific EPD will provide geographically and technically representative data

# Selecting data: As built Assessments

- ▶ The UK Net Zero Carbon Buildings Standard provides a flow chart showing how to select appropriate data for as built assessments.
- ▶ It would also be appropriate once products have been chosen in technical design and construction phases.
- ▶ It follows the approach of the RICS Professional Standard on Whole Life Carbon in the Built Environment in addressing the uncertainty of embodied carbon data.
- ▶ <https://www.nzcbuildings.co.uk/pilotversion>



# How to assess the carbon uncertainty factor according to the RICS PS

- ▶ The Carbon Uncertainty Factor is intended to represent the level of uncertainty associated with the embodied carbon data used from the Technical Design phase onwards
- ▶ Only applies to the 10 carbon datasets with greatest impact on the asset's embodied carbon (modules A1-A5, B1-B5, C1-C4).
- ▶ For each dataset, the geography and technology of the actual product used is compared to the geography, technology and other aspects of the chosen dataset.
- ▶ A manufacturer specific EPD for the actual product used is likely to have the highest data confidence score. A proxy dataset or average data from a different region is likely to have much lower data confidence.

	Geographical representativeness (maximum 10 points)		Technological representativeness (maximum 12 points)				Temporal representativeness – assess either as an EPD or generic dataset (maximum 8 points)				Data aspects (maximum 10 points)			
	Geography		Technology		Product specificity		For EPD		For generic datasets		Granularity		Verification	
Very good	Refers to the specific geographic context for large countries, same region (e.g. UK for UK)	10	Reflects identical technology (e.g. BF/BOF steel with similar recycled content)	6	Data for actual product used	6	Year of data collection less than 4 years from year of construction	8	Reference year less than 3 years or published less than 2 years from year of construction	8	Site-specific data (actual factory and manufacturer used)	5	Third-party independently verified to EN 15804 or ISO 21930	5
Good	Refers to a similar geographic context (e.g. UK data for Ireland)	7	Partially reflects the technology and technical characteristics (e.g. BF/BOF steel with different recycled content)	4	Representative or average product adapted by relevant characteristic (e.g. data per m <sup>2</sup> adapted by mass/ m <sup>2</sup> or scaling factor provided)	5	Year of data collection less than 7 years from year of construction	6	Reference year less than 6 years or published less than 5 years from year of construction	6	Manufacturer specific data (actual manufacturer used and average site or different site)	4	Independently verified to ISO 14025 or EN 50693	4
Fair	Refers to a very different geographic context or much larger region (e.g. Italy for UK, EU for UK)	4	Does not satisfactorily reflect the technology and technical characteristics (e.g. steel generally)	3	Average data/ representative product for product group of actual product used	4	Year of data collection less than 10 years from year of construction	4	Reference year less than 10 years or published less than 10 years from year of construction	4	Regional sector data (e.g. UK or EU)	3	Peer reviewed to ISO 14044	3
Poor	Refers to a totally different context (different continent, e.g. Canada for UK, EU for China)	2	Does not reflect the technology and technical characteristics at all (e.g. EAF steel for BOF steel)	1	Any proxy dataset or data extrapolated from group of datasets	2	Year of data collection less than 15 years or published more than 10 years from year of construction	2	Reference year less than 15 years or published more than 10 years from year of construction	2	Global sector data	2	Not verified or peer reviewed	0
Very poor	No evaluation made	0	No evaluation made	0	No evaluation made	0	Other or no evaluation made	0	No evaluation made	0	Proxy data or no evaluation made	0	No evaluation made	0

# Actual Product: ACME Lightweight Aggregate Block Dataset: ICE database medium dense concrete block

25 points out of 40

	Geographical representativeness (maximum 10 points)		Technological representativeness (maximum 12 points)			Temporal representativeness – assess either as an EPD or generic dataset (maximum 8 points)				Data aspects (maximum 10 points)				
	Geography		Technology	Product specificity		For EPD		For generic datasets		Granularity	Verification			
Very good	Refers to the specific geographic context for large countries, same region (e.g. UK for UK)	10	Reflects identical technology (e.g. BF/BOF steel with similar recycled content)	6	Data for actual product used	6	Year of data collection less than 4 years from year of construction	8	Reference year less than 3 years or published less than 2 years from year of construction	8	Site-specific data (actual factory and manufacturer used)	5	Third-party independently verified to EN 15804 or ISO 21930	5
Good	Refers to a similar geographic context (e.g. UK data for Ireland)	7	Partially reflects the technology and technical characteristics (e.g. BF/BOF steel with different recycled content)	4	Representative or average product adapted by relevant characteristic (e.g. data per m <sup>2</sup> adapted by mass/ m <sup>2</sup> or scaling factor provided)	5	Year of data collection less than 7 years from year of construction	6	Reference year less than 6 years or published less than 5 years from year of construction	6	Manufacturer specific data (actual manufacturer used and average site or different site)	4	Independently verified to ISO 14025 or EN 50693	4
Fair	Refers to a very different geographic context or much larger region (e.g. Italy for UK, EU for UK)	4	Does not satisfactorily reflect the technology and technical characteristics (e.g. steel generally)	3	Average data/ representative product for product group of actual product used	4	Year of data collection less than 10 years from year of construction	4	Reference year less than 10 years or published less than 10 years from year of construction	4	Regional sector data (e.g. UK or EU)	3	Peer reviewed to ISO 14044	3
Poor	Refers to a totally different context (different continent, e.g. Canada for UK, EU for China)	2	Does not reflect the technology and technical characteristics at all (e.g. EAF steel for BOF steel)	1	Any proxy dataset or data extrapolated from group of datasets	2	Year of data collection less than 15 years or published more than 10 years from year of construction	2	Reference year less than 15 years or published more than 10 years from year of construction	2	Global sector data	2	Not verified or peer reviewed	0
Very poor	No evaluation made	0	No evaluation made	0	No evaluation made	0	Other or no evaluation made	0	No evaluation made	0	Proxy data or no evaluation made	0	No evaluation made	0

# Actual Product: Roadstone Thermal Liteblock

## Dataset: EPD for Roadstone Thermal Liteblock

38 points out of 40

	Geographical representativeness (maximum 10 points)		Technological representativeness (maximum 12 points)			Temporal representativeness – assess either as an EPD or generic dataset (maximum 8 points)				Data aspects (maximum 10 points)				
	Geography		Technology	Product specificity		For EPD		For generic datasets		Granularity	Verification			
Very good	Refers to the specific geographic context for large countries, same region (e.g. UK for UK)	10	Reflects identical technology (e.g. BF/BOF steel with similar recycled content)	6	Data for actual product used	6	Year of data collection less than 4 years from year of construction	8	Reference year less than 3 years or published less than 2 years from year of construction	8	Site-specific data (actual factory and manufacturer used)	5	Third-party independently verified to EN 15804 or ISO 21930	5
Good	Refers to a similar geographic context (e.g. UK data for Ireland)	7	Partially reflects the technology and technical characteristics (e.g. BF/BOF steel with different recycled content)	4	Representative or average product adapted by relevant characteristic (e.g. data per m <sup>2</sup> adapted by mass/ m <sup>2</sup> or scaling factor provided)	5	Year of data collection less than 7 years from year of construction	6	Reference year less than 6 years or published less than 5 years from year of construction	6	Manufacturer specific data (actual manufacturer used and average site or different site)	4	Independently verified to ISO 14025 or EN 50693	4
Fair	Refers to a very different geographic context or much larger region (e.g. Italy for UK, EU for UK)	4	Does not satisfactorily reflect the technology and technical characteristics (e.g. steel generally)	3	Average data/ representative product for product group of actual product used	4	Year of data collection less than 10 years from year of construction	4	Reference year less than 10 years or published less than 10 years from year of construction	4	Regional sector data (e.g. UK or EU)	3	Peer reviewed to ISO 14044	3
Poor	Refers to a totally different context (different continent, e.g. Canada for UK, EU for China)	2	Does not reflect the technology and technical characteristics at all (e.g. EAF steel for BOF steel)	1	Any proxy dataset or data extrapolated from group of datasets	2	Year of data collection less than 15 years or published more than 10 years from year of construction	2	Reference year less than 15 years or published more than 10 years from year of construction	2	Global sector data	2	Not verified or peer reviewed	0
Very poor	No evaluation made	0	No evaluation made	0	No evaluation made	0	Other or no evaluation made	0	No evaluation made	0	Proxy data or no evaluation made	0	No evaluation made	0

Making  
comparisons  
with other  
products



# EN 15804 Rules for Comparison

Comparison of the environmental performance of construction products using the EPD information shall be based on the product's use in and its impacts on the building, and shall consider the complete life cycle.

Product comparison is possible if:

- ▶ **the same functional requirements** as defined by **legislation** or in the **client's brief** are met, and
- ▶ **the environmental performance and technical performance** of any assembled systems, components, or products excluded are the same, and
- ▶ the amounts of **any material excluded are the same**, and excluded processes, modules or life cycle stages are the same; and
- ▶ the influence of the product systems on **the operational aspects and impacts of the construction works** are taken into account;
- ▶ **biogenic carbon content, the potential to carbonate, net calorific value and other inherent properties** are considered completely and consistently

# Comparing EPD - things to watch out for

- ▶ What is the scope of each EPD - what is included, where is it relevant?
- ▶ Can you convert the EPD to the same declared or functional unit that responds to how you will use the product in the building?
- ▶ Have you considered other ancillary items, e.g. adhesives and fixings, so that the functionality of the two products is the same?
- ▶ Will the products have different services lives, or demands for maintenance and repair?
- ▶ Is the end of life route the same for both products? Is it relevant to the building?

# What emerging technologies and platforms might assist

- ▶ The [Built Environment Carbon Database](#) is developed in partnership with organisations operating across every part of the construction sector, is free-to-access and is designed to become the main source of carbon estimating and benchmarking for the UK industry. It will include both EPD and generic data relevant to the UK.
- ▶ [EC3 EPD database](#) - free to access - provides EPD search by location and performance for a range of construction product categories
- ▶ [EPD Analyser](#) from Brands & Values - can visualize EPD results and benchmark products, and manage EPD data
- ▶ [EU Digital Product Passports](#) - how the CPR and ESPR will require regulated product data to be digitised - will cover technical and environmental performance
- ▶ One Click LCA [Materials Compass](#) - subscription based service to compare EPD

Questions?

