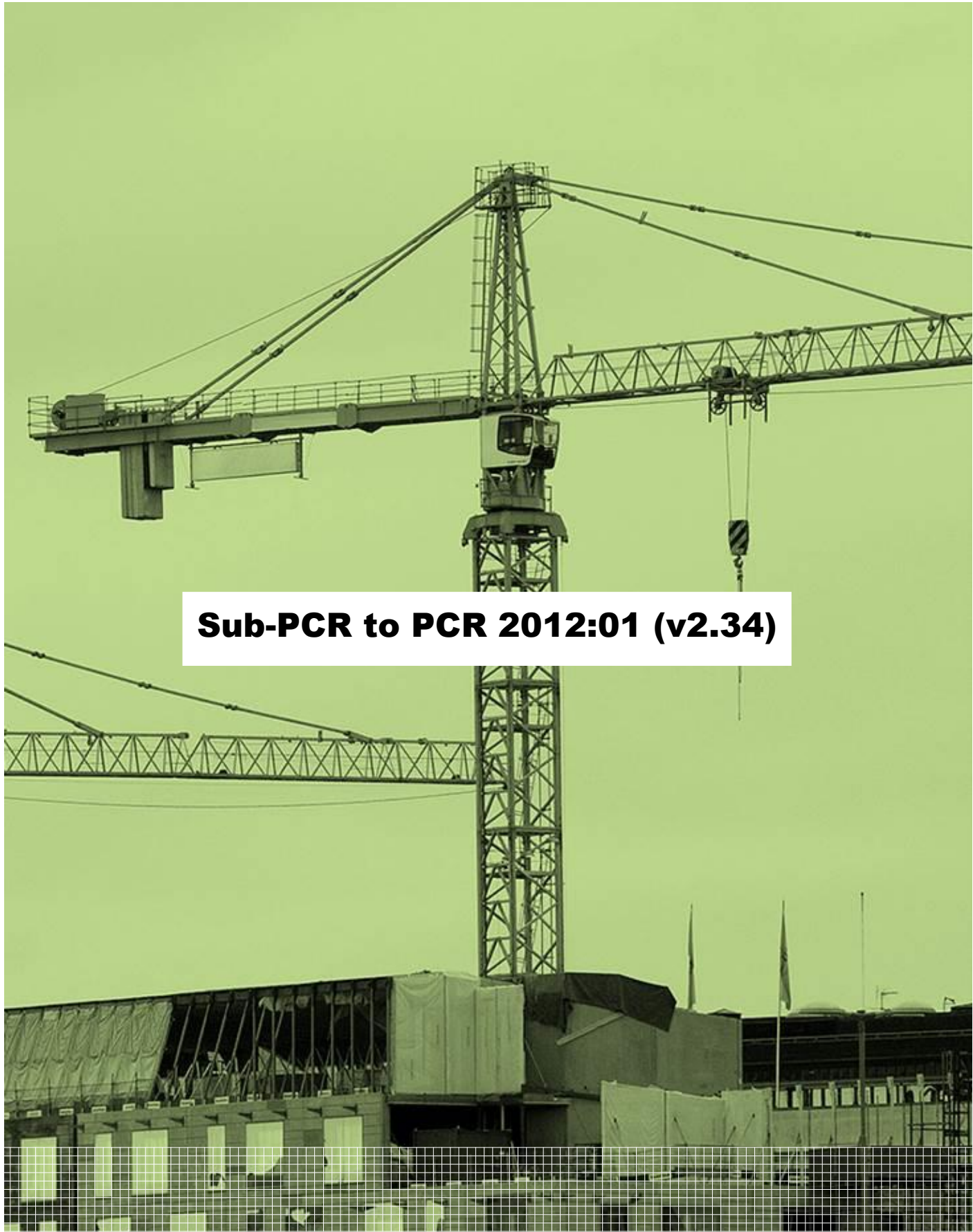


MORTARS APPLIED TO A SURFACE (CONSTRUCTION PRODUCT)

PCR 2012:01-SUB-PCR-A



Sub-PCR to PCR 2012:01 (v2.34)

INTRODUCTION

This document is a sub-PCR to *PCR 2012:01 Construction products and construction services*, version 2.31, available at www.environdec.com. Please note that it is **not** a PCR in its own, but intended to be a further specification of a specific product group to be used together with PCR 2012:01. See Figure 1 for the role of this sub-PCR.

For more details about the scope of this sub-PCR see the Section 2 of this document and Section 7 of PCR 2012:01.

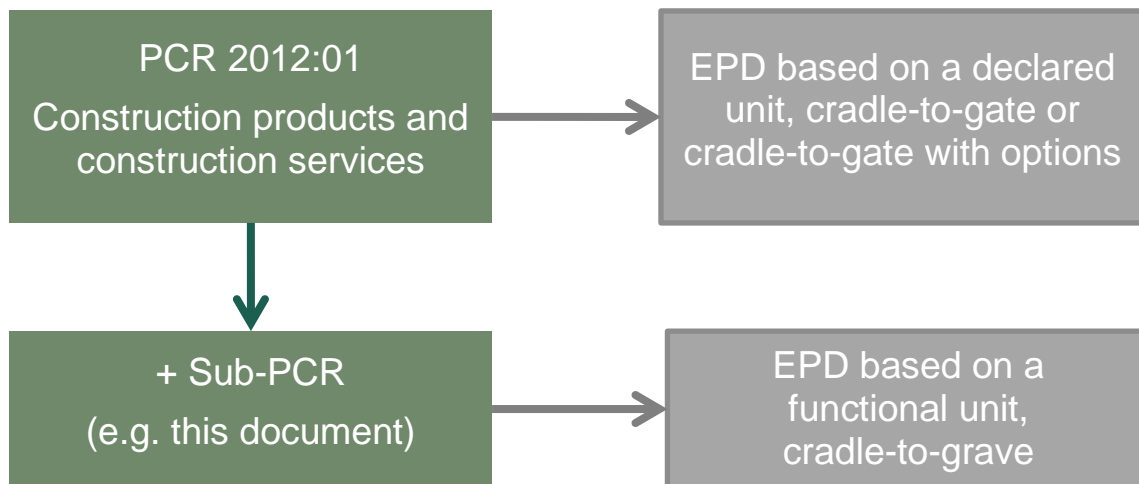


Figure 1 Overview of PCR 2012:01 and its sub-PCRs to create EPDs with different scopes.


This sub-PCR was originally developed in the following procedure:

1. Draft proposed by industry stakeholders
2. Coordination of this document in relation to the PCR for Construction product and construction services and other similar documents (Secretariat of the International EPD® System and PCR Moderator of PCR for Construction product and construction services)
3. Review and approval (Technical Committee of the International EPD® System)
4. Publication on www.environdec.com

Please note that this document has not been subject to open consultation. It is subject to review and update together with the PCR for Construction product and construction services.

MORTARS APPLIED TO A SURFACE
(CONSTRUCTION PRODUCT)

1 GENERAL INFORMATION

Name:	Mortars applied to a surface (construction product)
Registration no:	PCR 2012:01-Sub-PCR-A.
Programme:	 The International EPD® System
Programme operator:	EPD International AB, Box 210 60, SE-100 31 Stockholm, Sweden. Website: www.environdec.com E-mail: info@environdec.com
Date:	2021-11-08
This sub-PCR was prepared by	Pierre Landel, Saint-Gobain Weber, pierre.landel@saint-gobain.com Carola Mattson, Saint-Gobain Byggprodukter AB, carola.mattson@weber.se Martin Erlandsson, IVL Swedish Environmental Research Institute Martin.erlandsson@ivl.se
Appointed PCR moderator:	Martin Erlandsson, IVL Swedish Environmental Research Institute Martin.erlandsson@ivl.se
Open consultation period:	Not applicable (see Introduction)
Review panel for this PCR:	The Technical Committee of the International EPD® System. Full list of TC members available on www.environdec.com/TC
Valid within the following geographical representativeness:	Global
PCR language:	English. The English version takes precedence over any translated versions.
Valid until:	2022-02-28 <i>The validity of this sub-PCR is dependent on the validity of PCR 2012:01 Construction products and construction services.</i>

This document provides further specification to PCR 2012:01 Construction products and construction services, Version 2.34. It may be used for Environmental Product Declarations that have a cradle-to-grave scope and uses a functional unit for the product group "Mortars applied on a surface".

This document was developed to define details for stages A4-C4, that were not specified in detail by similar available PCR's, i.e. EPD Norway, NPCR 09 Technical-Chemical products (Jan 2012) or IBU 2012-07 Mineral factory-made mortar (Jul 2012). Harmonization of LCA methodology with these documents was aimed for, e.g. in terms of the reference service life, but the General Programme Instructions of the International EPD® System and the PCR 2012:01 where given priority in case of any discrepancies.

This sub-PCR is publically available on www.environdec.com. It is a living document. If relevant changes in the LCA methodology or in the technology for the product category occur, the documents will be revised and any changes will be published on the website.

MORTARS APPLIED TO A SURFACE
(CONSTRUCTION PRODUCT)

Any comments to this document may be given on the PCR Forum or directly to the PCR moderator during the period of validity.

The EPD shall refer to a specific PCR version number, as well as this sub-PCR. The production of new PCR versions does not affect the EPD certification period.

MORTARS APPLIED TO A SURFACE
(CONSTRUCTION PRODUCT)

2 DEFINITION OF THE PRODUCT GROUP

The products covered by this sub-PCR are a family of mortars used in various surface applications. They can fulfil a number of different applications like floor screed, tile adhesives, renders, plasters and masonry mortars.

The products can be fed through bulk, big bags or handy bags. They can be applied manually or via designated equipment requiring no manual mixing.

The floor screeds are typically designed, produced and CE marked according to EN 13813.

The renders are typically designed, produced and CE-marked according to EN 998-1.

The masonry mortars are typically designed, produced and CE-marked according to EN 998-2.

The tile adhesives are typically designed, produced and CE-marked according to EN 12004.

The products are supplied from production in dry form, premixed in respect of all contents but water. Water is added at the workplace, in a defined amount and technique.

3 REFERENCE SERVICE LIFE (RSL)

Mortars exposed to minor environmental load are expected to last for the lifetime of the building construction, that for common European buildings is estimated to be 60 years (Referring to ISO 15686-1, based on considered commercial lifetime of domestic, retail, office or industry buildings, indoor use and experiences in Sweden, Norway and France). Mortars intended for heavy environmental exposure, when RSL is expected to be lower, shall be declared in the EPD.

4 STAGES INCLUDED

The LCA will include all stages of the Life Cycle and reported based on the functional unit.

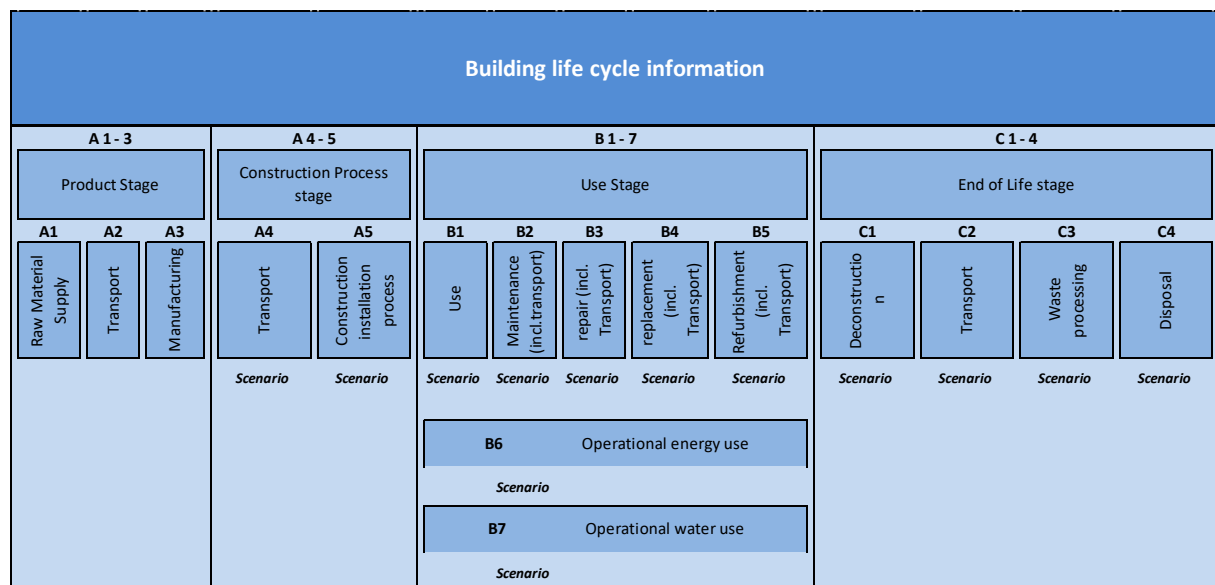


Figure 2 Life cycle stages included.

MORTARS APPLIED TO A SURFACE
(CONSTRUCTION PRODUCT)

A1-3 PRODUCT STAGE

It follows PCR 2012:01 *Construction products and construction services*, Version 2.2.

A4 TRANSPORT TO CONSTRUCTION SITE

The real distance to customer is estimated including the percentage of empty return. In case of non-availability of this data, 500 km by lorry can be used as default.

A5 CONSTRUCTION INSTALLATION PROCESS

Any water, energy used if mechanically applied is accounted for. The waste from product packaging, load bearings and application are taken into account. The waste will be treated according to the local requirement.

B1 USE

Any expected emissions to air, water or ground, through evaporation, leakage or radiation during the use stage shall be declared in the EPD.

B2-B5 MAINTENANCE REPAIR REPLACEMENT REFURBISHMENT

Depending on the end use and environmental exposure to mechanical or chemical pollution, abrasion or other loads through air or water, the need for maintenance, repair replacement or refurbishment during the RSL are very different. Mortars with little exposure normally require no maintenance/repair/refurbish during the RSL. Mortars exposed to surroundings, e.g. typically renders or finishing flooring products may require maintenance or repair.

Mortars exposed to maintenance through e.g. regular cleaning (typically finishing flooring products), the use of water, energy, material (e.g. cleaning products and solvents), detergents and accessories, by FU and frequency during the RSL shall be declared in the EPD.

Mortars exposed to environments where repair/refurbishment is likely to be required the energy, water, material required for optional removing of obsolete material, waste generated and the application of new mortar shall be calculated by FU and frequency during the RSL and declared in the EPD.

B6-B7 USE OF WATER AND ELECTRICITY

Mortars are static construction materials, and require no water or energy in the use stage.

C1 DEMOLITION

Mortars for surface use are typically not considered as part of the structure of the building. During the building destruction, the quantity of extra energy required to break these application can be neglected compared to the energy required to demolish the structure of the building. Any other case shall be specified in the EPD.

C2 TRANSPORT

The distance to final waste treatment is by default estimated to be 50 km by a lorry. Any other case shall be specified in the EPD.

C3 C4 WASTE TREATMENT AND DISPOSAL

The waste from end-of-life is a cured, hard, non-reactive and rigid mortar material.

In case a reprocessing procedure is established, the impact shall be specified in the EPD. Unless a reprocessing procedure is available, the material is considered landfilled as non-hazardous waste or recycled as crushed material.

5 FUNCTIONAL UNIT DEFINITION

The objective of these mortars is to cover a surface for one or more specific technical purposes (e.g. levelling, adhesion). Use can be for e.g. floor purposes or wall/façade covering. The generic functional unit is thus considered as:

Providing technical properties on 1 m² of surface.

Each product is expected to have a range of thicknesses of possible use, as well as potentially different densities.

The EPD shall define reference values for calculation and comparability between different products by a reference mass of material (e.g. declared unit, dry weight kg) per end use surface (m²), defined by the relation between typical product density (kg/dm³) and a typical layer thickness (mm) for reference.

Example:

<i>Reference layer thickness of applied product:</i>	<i>20 mm</i>
<i>Typical density of mortar:</i>	<i>1,7 kg/dm³</i>
<i>→ Reference mass by 1 m²:</i>	<i>34 kg</i>

Note: EPDs from this PCR might not be strictly comparable if the reference thickness is not equivalent for different products.

6 OTHER ENVIRONMENTAL INDICATORS

If emission to surrounding media (through VOC, leaking or other) is regulated according to harmonised European standard, i.e. CE labelling, in any European country this result will be mandatory information in the EPD. The emission value (or class) for the regulated substances shall be included in the EPD.

7 CHANGES IN THIS SUB-PCR

VERSION 2013-08-21

Original version, based on PCR 2012:01 *Construction products and construction services*, Version 1.2.

VERSION 2015-03-12

Editorial update to comply with version 2.0 of PCR 2012:01 *Construction products and construction services*.

VERSION 2017-05-30

- Updated nomenclature of sub-PCRs in accordance with version 2.2 of PCR 2012:01.
- Editorial changes

VERSION 2018-11-16

- Updated validity to 2020-03-03 to align with version 2.3 of PCR 2012:01.
- Editorial changes

MORTARS APPLIED TO A SURFACE
(CONSTRUCTION PRODUCT)

VERSION 2020-01-29

- Updated validity to 2020-09-01 to align with version 2.31 of PCR 2012:01.

VERSION 2020-07-02

- Updated validity to 2020-12-31 to align with version 2.32 of PCR 2012:01

VERSION 2020-09-18

- Updated validity to 2021-12-31 to align with version 2.33 of PCR 2012:01

VERSION 2021-11-08

- Updated validity to 2022-02-28 to align with version 2.34 of PCR 2012:01

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