

**ENVIRONMENTAL PRODUCT DECLARATION**

ISO 14025 ISO 21930 EN 15804

**epd-norge.no**

The Norwegian EPD Foundation

|                          |                              |
|--------------------------|------------------------------|
| Owner of the declaration | Saint-Gobain Byggevarer as   |
| Program holder           | The Norwegian EPD Foundation |
| Declaration number       | NEPD00275E                   |
| Issue date               | 20.10.2014                   |
| Valid to                 | 20.10.2019                   |

**weber B30, dry mortar**

Product

**Saint-Gobain Byggevarer as**

Owner of the declaration



## General information

**Product:**

weber B30, dry mortar

**Program holder:**

The Norwegian EPD Foundation  
P.O.Box 5250 Majorstuen  
0303 Oslo  
Phone: +47 23 08 80 00  
e-mail: [post@epd-norge.no](mailto:post@epd-norge.no)

**Declaration number:**
**This declaration is based on Product Category Rules:**

EN 15804:2012+A1:2013 serve as core PCR  
Req. on the EPD for Mineral factory-made mortar

**Declared unit:**

1 kg weber B30, dry mortar

**Declared unit with option:**

A1,A2,A3,A4

**Functional unit:**
**The EPD has been worked out by:**

The declaration has been developed using EPDGen-version 1.0, Approval: NEPDT02

Company specific data are collected and registry by:

**Line Holaker**

Company specific data are audited by:

**Stian Gravnås**

**Verification:**

Independent verification of data, other environmental information and EPD has been carried out in accordance with ISO14025, 8.1.3 and 8.1.4

externally



Senior Researcher Anne Rønning  
(Independent verifier approved by EPD-Norway)

**Owner of the declaration:**

Saint-Gobain Byggevarer as  
Contact person: Line Holaker  
Phone: +47 22 88 77 00  
e-mail: [info\(at\)weber-norge.no](mailto:info(at)weber-norge.no)

**Manufacturer:**

Saint-Gobain Byggevarer as

**Place of production:**

Weber Leca Ski, Norway

**Management system:**

ISO 9001, ISO 14001

**Org. No:**

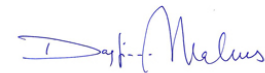
940 198 178

**Issue date:**
**Valid to:**
**Comparability:**

EPD of construction products may not be comparable if they not comply with EN 15804 and seen in a building context.

**Year of study:**

2014

**Approved:**


Dagfinn Malnes  
Managing Director of EPD-Norway

**Declared unit:**

1 kg weber B30, dry mortar

| Key environmental indicators | Unit       | Cradle to gate<br>A1 - A3 | Transport A4 |
|------------------------------|------------|---------------------------|--------------|
| Global warming               | kg CO2 eqv | 0,177002                  | 0,00369      |
| Energy use                   | MJ         | 1,54389649                | 0,0482830    |
| Dangerous substances         |            | *                         | *            |

\*The product contains no substances from the REACH Candidate list or the Norwegian priority list

## Product

### Product description:

weber B30 is a premixed dry mortar based on cement and sand. When mixed with water, weber B30 is a ready-to-use mortar for indoor and outdoor concrete work.

### Technical data:

Compressive strength 28 days: > 35 MPa. Flexural strength 28 days: > 6 MPa. For further information see [www.weber-norge.no](http://www.weber-norge.no)

### Reference service life:

As for the building

### Product specification:

The composition of the product is described in the following table:

| Materials | Percent |
|-----------|---------|
| Cement    | 21,48   |
| Aggregate | 73,24   |
| Filler    | 2,93    |
| Packaging | 2,34    |

### Market:

Norway

## LCA: Calculation rules

### Declared unit:

1 kg weber B30, dry mortar

### Cut-off criteria:

All major raw materials and all the essential energy is included. The production process for raw materials and energy flows that are included with very small amounts (<1%) are not included.

### Allocation:

The allocation is made in accordance with provisions in EN 15804. Incoming energy and water, and in-house waste from the production, is allocated equally among all products through mass allocation. Effects of primary production of recycled materials are allocated to the main product in which the material was used. The recycling process and transportation of the material is allocated to this analysis.

### Data quality:

| Materials | Data quality     | Source           | Year |
|-----------|------------------|------------------|------|
| Cement    | EPD              | NEPD00024N       | 2013 |
| Cement    | EPD              | NEPD00023N       | 2013 |
| Filler    | Database         | Østfoldforskning | 2013 |
| Aggregate | Supplier data    | Østfoldforskning | 2013 |
| Packaging |                  |                  |      |
| Packaging | European Average | APME             |      |
| Packaging |                  |                  |      |

### System boundary:

All processes from raw material extraction to product from the factory gate are included in the analysis (A1-A3). In addition, transportation to a central warehouse placed in accordance with guidelines issued by the EPD Norway (A4) is included.

### FlowChart:



## LCA: Scenarios and additional technical information

The following information describe the scenarios in the different modules of the EPD.

### Transport from production site to user (A4)

| Type    | Capacity utilisation (incl. return) % | Type of vehicle | Distance km | Fuel/Energy consumption | Unit  | Value (l/t) |
|---------|---------------------------------------|-----------------|-------------|-------------------------|-------|-------------|
| Truck   | 75 %                                  | Lorry to market | 50          | 0,015594                | l/tkm | 0,78        |
| Railway | .                                     | .               | .           | .                       | .     | .           |
| Boat    | .                                     | .               | .           | .                       | .     | .           |
| Other   | .                                     | .               | .           | .                       | .     | .           |

### Installation in the building (A5)

| .                                     | Unit           | Value |
|---------------------------------------|----------------|-------|
| Auxiliary                             | kg             | 0     |
| Water consumption                     | m <sup>3</sup> | 0     |
| Electricity consumption               | kWh            | 0     |
| Other energy carriers                 | MJ             | 0     |
| Material loss                         | kg             | 0     |
| Output materials from waste treatment | kg             | 0     |
| Dust in the air                       | kg             | 0     |

Label

### Maintenance (B2)/Repair (B3)

| .                       | Unit           | Value |
|-------------------------|----------------|-------|
| Maintenance cycle       | .              | 0     |
| Auxiliary               | kg             | 0     |
| Other resources         | kg             | 0     |
| Water consumption       | M <sup>3</sup> | 0     |
| Electricity consumption | kWh            | 0     |
| Other energy carriers   | MJ             | 0     |
| Material loss           | kg             | 0     |

### Use (B1):

| .         | Unit | Value |
|-----------|------|-------|
| No effect | 0    | 0     |

### End of Life (C1, C3, C4)

| .                                     | Unit | Value |
|---------------------------------------|------|-------|
| Hazardous waste disposed              | kg   | 0     |
| Collected as mixed construction waste | kg   | 0     |
| Reuse                                 | kg   | 0     |
| Recycling                             | kg   | 0     |
| Energy recovery                       | kg   | 0     |
| To landfill                           | kg   | 0     |

### Transport to waste processing (C2)

| Type    | Capacity utilisation (incl. return) % | Type of vehicle | Distance km | Fuel/Energy consumption | Unit  | Value (l/t) |
|---------|---------------------------------------|-----------------|-------------|-------------------------|-------|-------------|
| Truck   | 0 %                                   | .               | 0           | 0                       | l/tkm | 0           |
| Railway | .                                     | .               | .           | .                       | .     | .           |
| Boat    | .                                     | .               | .           | .                       | .     | .           |
| Other   | .                                     | .               | .           | .                       | .     | .           |

### Benefits and loads beyond the system boundaries (D)

## LCA: Results

### System boundaries (X=included, MND=module not declared, MNR=module not relevant)

| Product stage |           |               |           | Construction installation stage  | User stage |             |        |             |               |                        |                       |                             | End of life stage |                  |          |                                     | Beyond the system boundaries |
|---------------|-----------|---------------|-----------|----------------------------------|------------|-------------|--------|-------------|---------------|------------------------|-----------------------|-----------------------------|-------------------|------------------|----------|-------------------------------------|------------------------------|
| Raw materials | Transport | Manufacturing | Transport | Construction/ Installation stage | Use        | Maintenance | Repair | Replacement | Refurbishment | Operational energy use | Operational water use | De-construction/ demolition | Transport         | Waste processing | Disposal | Reuse-Recovery- Recycling-potential |                              |
| A1            | A2        | A3            | A4        | A5                               | B1         | B2          | B3     | B4          | B5            | B6                     | B7                    | C1                          | C2                | C3               | C4       | D                                   |                              |
| X             | X         | X             | X         | MND                              | MND        | MND         | MND    | MND         | MND           | MND                    | MND                   | MND                         | MND               | MND              | MND      | MND                                 |                              |

### Environmental impact

| Parameter | Unit                                  | A1        | A2        | A3        | A4        | A5 | C1 | C2 |
|-----------|---------------------------------------|-----------|-----------|-----------|-----------|----|----|----|
| GWP       | kg CO <sub>2</sub> -eqv               | 1,67E-001 | 9,83E-003 | 1,72E-004 | 3,69E-003 |    |    |    |
| ODP       | kg CFC11 -eqv                         | 4,36E-009 | 0,00E+000 | 2,10E-011 | 0,00E+000 |    |    |    |
| POCP      | kg C <sub>2</sub> H <sub>4</sub> -eqv | 2,80E-004 | 2,10E-005 | 1,28E-006 | 1,00E-005 |    |    |    |
| AP        | kg SO <sub>2</sub> -eqv               | 1,08E-004 | 1,90E-005 | 6,30E-007 | 2,00E-006 |    |    |    |
| EP        | kg PO <sub>4</sub> <sup>3-</sup> -eqv | 4,52E-005 | 4,00E-006 | 5,42E-008 | 2,00E-006 |    |    |    |
| ADPM      | kg Sb -eqv                            | 2,55E-007 | 0,00E+000 | 4,00E-012 | 0,00E+000 |    |    |    |
| ADPE      | MJ                                    | 9,67E-001 | 1,30E-001 | 1,49E-003 | 4,84E-002 |    |    |    |

**GWP** Global warming potential; **ODP** Depletion potential of the stratospheric ozone layer; **POCP** Formation potential of tropospheric photochemical oxidants; **AP** Acidification potential of land and water; **EP** Eutrophication potential; **ADPM** Abiotic depletion potential for non fossil resources; **ADPE** Abiotic depletion potential for fossil resources

### Resource use

| Parameter | Unit           | A1        | A2        | A3        | A4        | A5 | C1 | C2 |
|-----------|----------------|-----------|-----------|-----------|-----------|----|----|----|
| RPEE      | MJ             | 1,69E-001 | 1,74E-004 | 2,49E-006 | 8,30E-005 |    |    |    |
| RPEM      | MJ             | 3,02E-001 | 5,90E-005 | 4,76E-005 | 0,00E+000 |    |    |    |
| TRPE      | MJ             | 4,71E-001 | 2,34E-004 | 5,01E-005 | 8,30E-005 |    |    |    |
| NRPEE     | MJ             | 9,42E-001 | 1,29E-001 | 1,72E-003 | 4,82E-002 |    |    |    |
| NRPEM     | MJ             | 0,00E+000 | 0,00E+000 | 0,00E+000 | 0,00E+000 |    |    |    |
| TNRPE     | MJ             | 9,42E-001 | 1,29E-001 | 1,72E-003 | 4,82E-002 |    |    |    |
| SM        | kg             | 3,69E-002 | 0,00E+000 | 0,00E+000 | 0,00E+000 |    |    |    |
| RSF       | MJ             | 0,00E+000 | 0,00E+000 | 0,00E+000 | 0,00E+000 |    |    |    |
| NRSF      | MJ             | 3,02E-001 | 0,00E+000 | 0,00E+000 | 0,00E+000 |    |    |    |
| W         | m <sup>3</sup> | 2,93E-001 | 1,20E-003 | 1,23E-005 | 4,31E-004 |    |    |    |

**RPEE** Renewable primary energy resources used as energy carrier; **RPEM** Renewable primary energy resources used as raw materials; **TRPE** Total use of renewable primary energy resources; **NRPEE** Non renewable primary energy resources used as energy carrier; **NRPEM** Non renewable primary energy resources used as materials; **TNRPE** Total use of virgin, non-renewable resources with energy content; **SM** Use of secondary materials; **RSF** Use of renewable secondary fuels; **NRSF** Use of non renewable secondary fuels; **W** Use of net fresh water

### End of life - Waste

| Parameter | Unit | A1        | A2        | A3        | A4        | A5 | C1 | C2 |
|-----------|------|-----------|-----------|-----------|-----------|----|----|----|
| HW        | kg   | 5,99E-006 | 0,00E+000 | 8,41E-009 | 0,00E+000 |    |    |    |
| NHW       | kg   | 1,50E-002 | 2,70E-005 | 2,50E-004 | 9,00E-006 |    |    |    |
| RW        | kg   | 0,00E+000 | 0,00E+000 | 0,00E+000 | 0,00E+000 |    |    |    |

**HW** Hazardous waste disposed; **NHW** Non hazardous waste disposed, **RW** Radioactive waste disposed

### End of life - Output flow

| Parameter | Unit | A1        | A2        | A3        | A4        | A5 | C1 | C2 |
|-----------|------|-----------|-----------|-----------|-----------|----|----|----|
| CR        | kg   | 0,00E+000 | 0,00E+000 | 5,00E-003 | 0,00E+000 |    |    |    |
| MR        | kg   | 3,43E-007 | 0,00E+000 | 0,00E+000 | 0,00E+000 |    |    |    |
| MER       | kg   | 0,00E+000 | 0,00E+000 | 0,00E+000 | 0,00E+000 |    |    |    |
| EEE       | MJ   | 0,00E+000 | 0,00E+000 | 0,00E+000 | 0,00E+000 |    |    |    |
| ETE       | MJ   | 0,00E+000 | 0,00E+000 | 0,00E+000 | 0,00E+000 |    |    |    |

**CR** Components for reuse; **MR** Materials for recycling; **MER** Materials for energy recovery; **EEE** Exported electric energy; **ETE** Exported thermal energy



## Additional Norwegian requirements

### Electricity

The following data from ecoinvent v3 (June 2012) for Norwegian production mix included import, low voltage is used; Energy/Electricity country mix/Low voltage/Market: Electricity, low voltage {NO}| market for | Alloc Def, U. Production of transmission lines, in addition to direct emissions and loss in grid are included. Characterisation factors stated in EN 15804:2012+A1:2013 are used. This gives following greenhouse gas emissions: 24 g CO<sub>2</sub>-eqv/kWh

### Hazardous substances

None of the following substances have been added to the product: Substances on the REACH Candidate list of substances of very high concern (checked 17.10.2014) substances on the Norwegian Priority list (checked 17.10.2014) and substances that lead to the product being classified as hazardous waste. The chemical content of the product complies with regulatory levels as given in the Norwegian Product Regulations

### Indoor air

The product meets the requirements for low pollutant (M1) by EN 15251: 2007 Appendix E. The product has no impact on the indoor environment.

## Bibliography




NS-EN ISO 14025:2010 Environmental labels and declarations - Type III environmental declarations - Principles and procedures

NS-EN ISO 14044:2006 Environmental management - Life cycle assessment - Requirements and guidelines

NS-EN 15804:2012+A1:2013 Sustainability of construction works - Environmental product declaration - Core rules for the product category of construction products

ISO 21930:2007 Sustainability in building construction - Environmental declaration of building products

Product Category Rules for Environmental Product Declarations: Institut Bauen und Umwelt e.V. (IBU): Requirements on the EPD for Mineral factory-made mortar. --- Vold, M and Edvarlsen, T, 2013: Weber EPD Generator Background information, Østfoldforskning AS, Fredrikstad, Norge, Nov 2013

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|--|---|--|---|
|  | <b>epd-norge.no</b><br>The Norwegian EPD Foundation | <b>Program holder and publisher</b><br>The Norwegian EPD Foundation<br>P.O.Box 5250 Majorstuen<br>0303 Oslo Norway | Phone: +47 23 08 80 00<br>email: post@epd-norge.no<br>web: www.epd-norge.no                                       |
|  |   | <b>Owner of the declaration</b><br>Saint-Gobain Byggevarer as<br>P.O. Box 216 Alnabru<br>0614 Oslo, Norway         | Phone: +47 22 88 77 00<br>Fax: +47 22 64 54 54<br>email: info(at)weber-norge.no<br>web: www.weber-norge.no        |
|  | <b>Østfoldforskning</b>                             | <b>Author of the Life Cycle Assessment</b><br>Østfoldforskning AS<br>Stadion 4<br>1671 Kråkerøy, Norway            | Phone: +47 69 35 11 00<br>Fax: +47 69 34 24 94<br>email: post@ostfoldforskning.no<br>web: www.ostfoldforskning.no |