



Environmental Product Declaration

**SILA Select® Siberian Larch sawn
or moulded cladding**



This environmental product declaration has been produced for Russwood SILA Select® Siberian Larch sawn or moulded cladding in accordance with ISO 14025 and EN 15804:2012+A2:2019/AC:2021.

Programme: The International EPD® System, www.environdec.com

Programme Operator: EPD International AB

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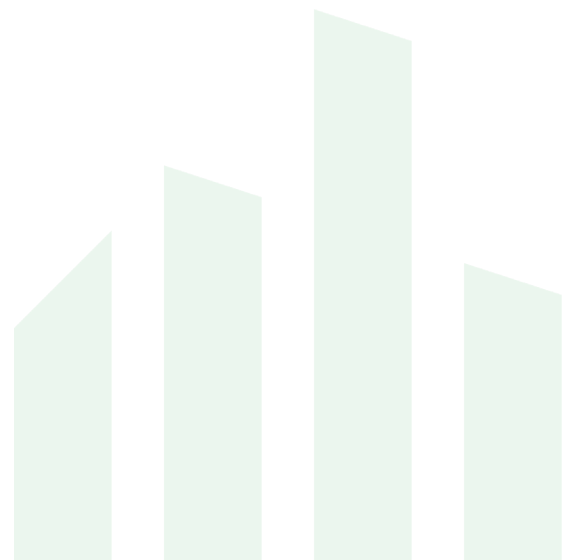
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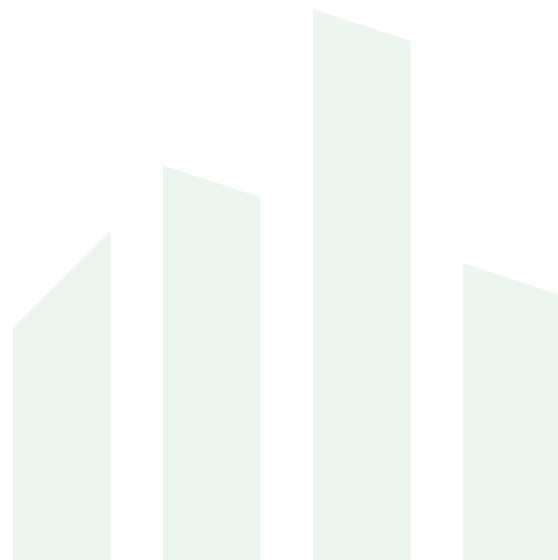
General information

| | |
|-------------------|---|
| Programme: | The International EPD® System |
| Address: | EPD International AB Box 210 60 SE-100 31 Stockholm Sweden |
| Website: | www.environdec.com |
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| |
|---|
| CEN standard EN 15804 serves as the Core Product Category Rules (PCR) |
| C-PCR-006 (TO PCR 2019:14) Wood and Wood-based Products for use in Construction (EN 16485:2014) UN CPC Code: 31101 Wood, sawn or chipped lengthwise, sliced or peeled, of a thickness exceeding 6 mm of coniferous wood |
| PCR review was conducted by: The Technical Committee of the International EPD® System. https://www.environdec.com/about-us/the-international-epd-system-about-the-system . The review panel may be contacted via the Secretariat www.environdec.com/contact . |
| Independent third-party verification of the declaration and data, according to ISO 14025:2006: <input type="checkbox"/> EPD process certification <input checked="" type="checkbox"/> EPD verification |
| Third party verifier: Dr. Hüdai Kara, Metsims Sustainability Consulting [www.metsims.com] Approved by: The International EPD® System |
| Procedure for follow-up of data during EPD validity involves third party verifier: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |

The EPD owner has the sole ownership, liability, and responsibility for the EPD.

EPDs within the same product category but registered in different EPD programmes, or not compliant with EN 15804, may not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same version number) or be based on fully-aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have equivalent system boundaries and descriptions of data; apply equivalent data quality requirements, methods of data collection, and allocation methods; apply identical cut-off rules and impact assessment methods (including the same version of characterisation factors); have equivalent content declarations; and be valid at the time of comparison. For further information about comparability, see EN 15804 and ISO 14025.



Company information

Owner of the EPD: Russwood Ltd

Contact: Gareth Davies

Description of the organisation: Russwood are a leading UK supplier of high-quality, sustainable timber flooring, cladding, decking & interior products. The company has been in the timber industry for over 30 years, and operates from its site in the Scottish Highlands to supply to projects all over the UK. Russwood specialises in high grade materials, including natively grown and imported timber species. The Newtonmore based site has an extensive range of machining and coating equipment allowing for the production of a wide range of profiles, specialised surface textures, finishes, and coatings. (www.russwood.co.uk)

Product-related or management system-related certifications: ISO 9001, ISO 14001, PEFC+FSC registered.

Name and location of production site: Russwood Ltd, Station Sawmill, Newtonmore, Scotland, UK, PH20 1AR.

Product information

Product name: SILA Select® Siberian larch (Larix siberica) Sawn Cladding, Moulded Cladding

Product identification: Russwood's SILA Select® Siberian larch, Sawn Cladding, Moulded Cladding

Product description: SILA Select® Siberian larch, with its excellent durability properties, attractive figuring and versatility is the cladding of choice for architects, contractors and self-builders seeking a superior cladding product. We select from the best available grades before re-grading in house to our exacting standards, ensuring the highest quality product.

Siberia larch heartwood timber cladding board.

Approximate density of 590 kg/m³.

Moisture content 16-18%.

Classified as durability class 2 under EN 350

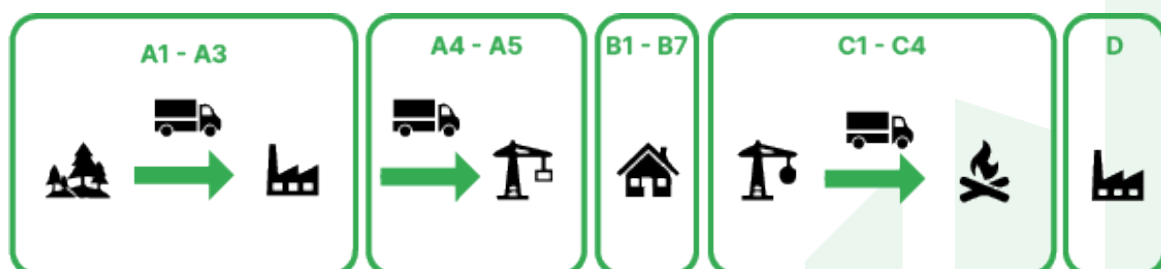
UN CPC code: 31101 Wood, sawn or chipped lengthwise, sliced or peeled, of a thickness exceeding 6 mm of coniferous wood.

Other codes for product classification: N/A

LCA information

Declared unit: 1 m³

System diagram: No excluded processes



Reference service life: 60 years

Time representativeness: 2021

Database(s) and LCA software used: Ecoinvent 3.8 with Simapro 9.3.0.3

Description of system boundaries: Cradle to grave and module D (A + B + C + D);

Geographical area covered: UK

More information: LCA was performed in 2022 by Dr Andrew Norton of Renuables Ltd (www.renuables.co.uk). for the purposes of business to consumer (B2C) and business to business (B2B) communication. This EPD is based upon an underlying LCA of the Russwood timber product manufacturing process, with operational data obtained for 2021.

The declared unit is one cubic metre of timber, representing an average production Siberian larch, with an average density of 590 kg/m³ at an average moisture content of 17%.

The underlying LCA is based upon the following information and assumptions:

Modules A1-A3: Timber grown, processed and treated in Scotland. The primary energy grid mix used by the sawmill is UK standard grid mix. Space heating of the sawmill site uses sawmill waste.

Modules A4-A5: Assumptions are transport to building site, truck 200km. Installation using 8 kg of stainless steel screws. No timber waste on site assumed. Waste packaging assumed sent to landfill, assumed 10 km distance.

Modules B1-B7: No maintenance, energy use, or water use is assumed during product lifetime. All modules therefore have nil entries and are not included in the tables for clarity, although all modules are included in this EPD.

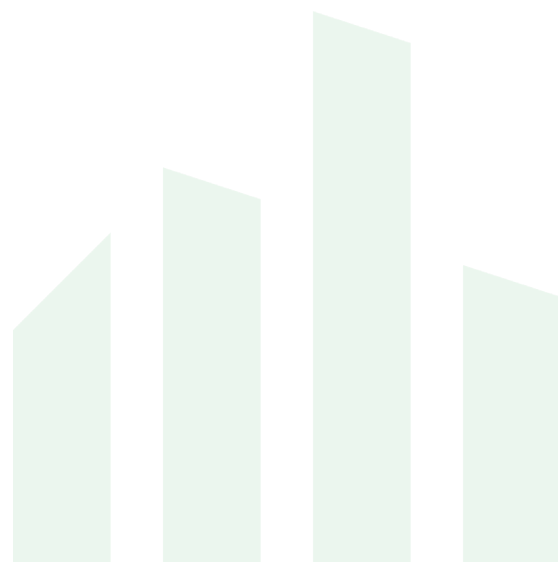
Modules C1-C4: Manual deconstruction is assumed, with wastes transported 10 km. Preparation of inert waste for disposal assumed in C3 with oxidation assumed in module C4 with stored biogenic carbon released back to the atmosphere to meet the requirements of EN15804:2012+A2:2019/AC:2021.

Module D: Incineration of wood, substituting for gas use in a heating plant.

For characterisation factors see Version 2.0 of the default list dated 29/03/2022, which adopts the core environmental impact indicators of EN 15804:2012+A2:2019/AC:2021.
[<https://www.environdec.com/resources/indicators>]

Cut-off criteria were based upon input flows being less than 1% of the total individually, subject to the sum of all flows being less than 5% of the total, and subject to verification that the impacts associated with such flows were not of a magnitude to affect the reported data significantly (less than 5% in total).

Biogenic carbon content of wood is calculated in line with the EN 16449:2014 standard.



Modules declared, geographical scope, share of specific data (in GWP-GHG indicator) and data variation

| | Product stage | | | Construction process stage | | Use stage | | | | | | | End of life stage | | | | Resource recovery stage |
|-----------------------------|---|-----------|---------------|----------------------------|---------------------------|-----------|-------------|--------|-------------|---------------|------------------------|-----------------------|----------------------------|-----------|------------------|----------|---------------------------|
| | Raw material supply | Transport | Manufacturing | Transport | Construction installation | Use | Maintenance | Repair | Replacement | Refurbishment | Operational energy use | Operational water use | De-construction demolition | Transport | Waste processing | Disposal | Reuse-Recovery-Recycling- |
| Module | A1 | A2 | A3 | A4 | A5 | B1 | B2 | B3 | B4 | B5 | B6 | B7 | C1 | C2 | C3 | C4 | D |
| Modules declared | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Geography | UK | UK | UK | UK | UK | UK | UK | UK | UK | UK | UK | UK | UK | UK | UK | UK | UK |
| Specific data used | >90% | | | | | - | - | - | - | - | - | - | - | - | - | - | - |
| Variation – products | Less than 10% between sawn and moulded cladding | | | | | - | - | - | - | - | - | - | - | - | - | - | - |
| Variation – sites | N/A | | | | | - | - | - | - | - | - | - | - | - | - | - | - |

Content information (per m³)

| Product components | Weight, KG | Renewable material, weight - % | Moisture content % |
|--|-------------|--------------------------------|---|
| Accoya | 590 | 100 | 17 |
| TOTAL | 590 | 100 | 17 |
| Packaging materials | Weight, kg | % of product weight | |
| Polyethylene | 1.70 | 0.31 | |
| Polyester | 0.25 | 0.05 | |
| TOTAL | 1.95 | 0.35 | |
| Dangerous substances from the candidate list of SVHC for Authorisation | EC No. | CAS No. | Weight -% per functional or declared unit |
| N/A | N/A | N/A | N/A |

Environmental Information

This EPD contains information about environmental impact, use of resources and waste production in the form of quantitative indicators. The following abbreviations have been used in the tables which quantify environmental performance:

| Indicator | Abbreviation |
|--|--------------|
| Global warming potential | GWP |
| Depletion potential of the stratospheric ozone layer | ODP |
| Acidification potential | AP |
| Eutrophication potential | EP |
| Formation potential of tropospheric ozone | POCP |
| Abiotic depletion potential – Elements | ADPE |
| Abiotic depletion potential – Fossil resources | ADPF |
| Water scarcity potential | WSP |
| Primary energy resources – Renewable (use as energy carrier) | PERE |
| Primary energy resources – Renewable (use raw materials) | PERM |
| Primary energy resources – Renewable (total) | PERT |
| Primary energy resources – Non-renewable (use as energy carrier) | PENRE |
| Primary energy resources – Non-renewable (use raw materials) | PENRM |
| Primary energy resources – Non-renewable (total) | PENRT |
| Secondary material | SM |
| Renewable secondary fuels | RSF |
| Non-renewable secondary fuels | NRSF |
| Net use of fresh water | NUFW |
| Hazardous waste disposed | HWD |
| Non-hazardous waste disposed | NHWD |
| Radioactive waste disposed | RWD |
| Components for re-use | CFR |
| Material for recycling | MFR |
| Materials for energy recovery | MFER |
| Exported energy, electricity | EE-E |
| Exported energy, thermal | EE-T |

Potential environmental impact – mandatory indicators according to EN 15804 (results per m³)

| Indicator | Unit | Tot.A1-A3 | A4 | A5 | B2 | C2 | C3 | C4 | D |
|-----------------------|------------------------|-----------|----------|----------|----------|----------|----------|----------|-----------|
| GWP-fossil | kg CO ₂ eq. | 2.33E+02 | 6.58E+00 | 4.24E+01 | 0.00E+00 | 6.58E-01 | 3.98E+00 | 0.00E+00 | -9.91E+02 |
| GWP-biogenic | kg CO ₂ eq. | -8.96E+02 | 3.91E-03 | 1.45E+00 | 0.00E+00 | 3.91E-04 | 5.05E-03 | 9.25E+02 | -3.62E-01 |
| GWP-luluc | kg CO ₂ eq. | 2.55E+00 | 2.22E-03 | 1.02E-01 | 0.00E+00 | 2.22E-04 | 1.23E-03 | 0.00E+00 | -2.74E-01 |
| GWP - total | kg CO ₂ eq. | -6.60E+02 | 6.59E+00 | 4.39E+01 | 0.00E+00 | 6.59E-01 | 3.98E+00 | 9.25E+02 | -9.92E+02 |
| GWP-GHG | kg CO ₂ eq. | 2.36E+02 | 6.58E+00 | 4.25E+01 | 0.00E+00 | 6.58E-01 | 3.98E+00 | 0.00E+00 | -9.92E+02 |
| ODP | kg CFC 11 eq. | 3.86E-05 | 1.61E-06 | 2.28E-06 | 0.00E+00 | 1.61E-07 | 1.63E-06 | 0.00E+00 | -1.13E-04 |
| AP | mol H+ eq. | 2.24E+00 | 2.11E-02 | 2.57E-01 | 0.00E+00 | 2.11E-03 | 3.76E-02 | 0.00E+00 | -1.97E+00 |
| EP- freshwater | kg P- eq. | 1.69E-01 | 1.21E-03 | 2.57E-02 | 0.00E+00 | 1.21E-04 | 2.02E-03 | 0.00E+00 | -2.20E-02 |
| EP- marine | kg N eq. | 7.00E-01 | 4.73E-03 | 5.03E-02 | 0.00E+00 | 4.73E-04 | 1.30E-02 | 0.00E+00 | -2.10E-01 |
| EP-terrestrial | mol N eq. | 7.52E+00 | 5.16E-02 | 5.10E-01 | 0.00E+00 | 5.16E-03 | 1.43E-01 | 0.00E+00 | -2.16E+00 |
| POCP | kg NMVOC eq. | 2.58E+00 | 2.01E-02 | 1.54E-01 | 0.00E+00 | 2.01E-03 | 4.14E-02 | 0.00E+00 | -1.19E+00 |
| ADP- minerals&metals* | kg Sb eq. | 3.34E-03 | 1.08E-04 | 2.08E-03 | 0.00E+00 | 1.08E-05 | 3.79E-05 | 0.00E+00 | -3.30E-04 |
| ADP-fossil* | MJ | 3.53E+03 | 1.06E+02 | 4.26E+02 | 0.00E+00 | 1.06E+01 | 1.11E+02 | 0.00E+00 | -1.38E+04 |
| WDP | m ³ | 3.56E+01 | 3.68E-01 | 1.18E+01 | 0.00E+00 | 3.68E-02 | 4.98E+00 | 0.00E+00 | -2.32E+01 |

* Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.



Use of resources

| Indicator | Unit | Tot.A1-A3 | A4 | A5 | B2 | C2 | C3 | C4 | D |
|-----------|----------------|-----------|----------|----------|----------|----------|----------|----------|-----------|
| PERE | MJ | 1.83E+04 | 1.42E+00 | 1.09E+02 | 0.00E+00 | 1.42E-01 | 9.50E-01 | 0.00E+00 | -1.41E+02 |
| PERM | MJ | 1.19E+04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| PERT | MJ | 3.12E+04 | 1.69E+00 | 1.21E+02 | 0.00E+00 | 1.69E-01 | 1.15E+00 | 0.00E+00 | -1.41E+02 |
| PENRE | MJ | 3.69E+03 | 1.04E+02 | 5.48E+02 | 0.00E+00 | 1.04E+01 | 1.09E+02 | 0.00E+00 | -1.56E+04 |
| PENRM | MJ. | 5.46E+01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| PENRT | MJ | 3.69E+03 | 1.04E+02 | 5.48E+02 | 0.00E+00 | 1.04E+01 | 1.09E+02 | 0.00E+00 | -1.56E+04 |
| SM | kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| RSF | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| NRSF | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| FW | m ³ | 1.34E+00 | 9.91E-03 | 2.52E-01 | 0.00E+00 | 9.91E-04 | 1.17E-01 | 0.00E+00 | 0.00E+00 |

Waste production and output flows

Waste production

| Indicator | Unit | Tot.A1-A3 | A4 | A5 | B2 | C2 | C3 | C4 | D |
|-----------|------|-----------|----------|----------|----------|----------|----------|----------|-----------|
| HWD | kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | -1.52E-02 |
| NHWD | kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | -8.28E+00 |
| RWD | kg | 8.68E-04 | 3.67E-06 | 5.85E-05 | 0.00E+00 | 3.67E-07 | 2.15E-06 | 0.00E+00 | -5.68E-03 |

Output flows

| Indicator | Unit | Tot.A1-A3 | A4 | A5 | B2 | C2 | C3 | C4 | D |
|-----------|------|-----------|----------|----------|----------|----------|----------|----------|----------|
| CFR | kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| MFR | kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| MFER | kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| EE-E | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| EE-T | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.06E+04 |

Information on biogenic carbon content

| BIOTENIC CARBON CONTENT | kgC | kgCO ₂ e |
|--------------------------------------|-----|---------------------|
| Biogenic carbon content in product | 252 | 925 |
| Biogenic carbon content in packaging | 0 | 0 |

Note: 1kg biogenic carbon is equivalent to 44/12 kg CO₂

Additional information

Biogenic Carbon

Biogenic carbon stored in the wood is declared in module A1, where this is reported as under the entry for climate change – biogenic. This includes both emissions of biogenic carbon due to processing and the atmospheric carbon stored in the wood, which is reported as a negative flow.

According to EN15804:2012+A2:2019/A2:2021 the reporting of biogenic carbon should be treated as follows:

‘The degradation of a product’s biogenic carbon content in a solid waste disposal site, declared as GWP-biogenic, shall be calculated without time limit. Any remaining biogenic carbon is treated as an emission of biogenic CO₂ from the technosphere to nature.’

The emission of biogenic carbon is therefore declared in module C4 of the EPD in the entry for climate change – biogenic. This entry shows the total biogenic carbon stored in the product as carbon dioxide equivalents, where it is reported as a positive flow.

The use of materials containing biogenic carbon in long-life products can be used as a climate change mitigation strategy. The benefit of the storage of atmospheric carbon in such products is greater as the lifetime of the product is extended. However, the time effect of storage of atmospheric carbon is not included in any standards describing the methodology for LCA calculations to be used for EPDs. The different methods of calculating the temporal aspects of carbon storage are reviewed by Tellnes et al. (2017).

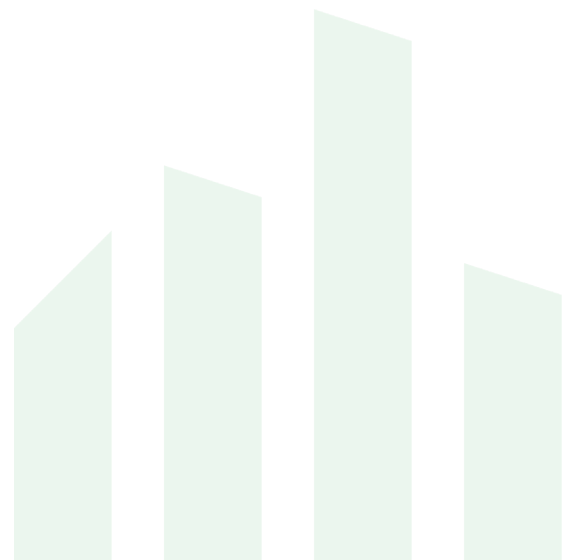
The IPCC uses a stocks and flows approach to reporting stored biogenic carbon, where the inflows and outflows of biogenic carbon are reported for each year and the biogenic carbon stocks determined accordingly. Annual inputs of biogenic carbon into the built environment carbon pool can be determined from statistical data, but the quantities of biogenic carbon exiting the pool (as carbon dioxide) are generally not known and have to be calculated using a decay function. The default decay function is exponential decay with recommended half-lives, other methods can be used.

Information related to Sector EPD

N/A

Differences versus previous versions

Rebranded 09/06/2023.



References

General Programme Instructions of the International EPD® System. Version 3.01.

PCR 2019:14 Construction products, Version 1.2

C-PCR-006 (TO PCR 2019:14) Wood and Wood-based Products for use in Construction (EN 16485:2014)

EN 15804:2012 + A2:2019/AC:2021 Sustainability of construction works - Environmental product declarations -Core rules for the product category of construction products.

EN 15942:2012 Sustainability of construction works - Environmental product declarations -Communication format business-to-business.

EN 16449:2014 Wood and wood-based products. Calculation of the biogenic carbon content of wood and conversion to carbon dioxide.

EN 16485:2014 Round and sawn timber. Environmental product declarations. Product category rules for wood and wood-based products for use in construction.

ISO 14025:2010 Environmental labels and declarations. Type III environmental declarations. Principles and procedures.

ISO 14044:2006 Environmental management. Life Cycle Assessment. Requirements and guidelines.

