

ENVIRONMENTAL PRODUCT DECLARATION



Programme :
The International EPD®
System

Programme Operator :
EPD International AB

Licensee:
EPD Türkiye

**EPD Registration
Number:**
EPD-IES-0017740

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2029-12-11

Geographical Scope :
Global

In accordance with ISO 14025 and EN 15804:2012+A2:2019/AC:2021 for:

Dyopa Plus+ Matt Emulsion Interior Paint

from DYO BOYA FABRİKALARI SAN. VE TİC. A.Ş.



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How to Read This EPD?

An Environmental Product Declaration (EPD) is an ISO Type III Environmental Declaration based on ISO 14025 standard. An EPD transparently reports the environmental performance of products or services from a lifecycle perspective. The preparation of an EPD includes different stages, from acquiring raw materials to the end of life of the final product/service. EPDs are based on international standards and consider the entire value chain. Additionally, EPD is a third-party verified document. This EPD includes several sections described below.

1. General and Program Information

The first part of an EPD has information about the name of the manufacturer and product/service and other general information such as the validity and expiration dates of the document, the name of the program operator, geographical scope, etc. The second page states the standards followed and gives information about the program operator, third-party verifier, etc. The followed Product Category Rule (PCR) is indicated on the second page.

2. Company and Product/Service Information

Information about the company and the investigated product is given in this section. It summarizes the characteristics of the product provided by the manufacturer. It also includes information about the product such as product composition and packaging.

3. LCA Information

LCA information is one of the most important parts of the EPD as it describes the functional/ declared unit, time representativeness of the study, database(s) and LCA software, along with system boundaries.

The table presented in this part has columns for each stage in the life cycle. The considered stages are marked 'X' whereas the ones that are not declared are labeled as 'ND'. Not all EPDs consider the full life cycle assessment for a product's entire life stages. The 'System Boundary' page is also the place where one can find detailed information about the stages and the assumptions made.

4. LCA Results

The results of the Life Cycle Assessment analysis are presented in table format. The first column in each table indicates the name of the impact category and their measurement units are presented in the second column. These tables show an amount at each life cycle stage to see the impact of different indicators on different stages. The first impact in the table is global warming potential (GWP), which shows how much CO₂ is released at each stage. Other impacts include eutrophication potential, acidification potential, ozone layer depletion, land use related impacts, etc. The second table provides results for resource use and the third table is about the waste produced during the production. The fourth and final table shows the results for the GWP-GHG indicator, which is almost equivalent to the GWP-Total indicator mentioned previously. The only difference is that this indicator excludes the biogenic carbon content by following a certain methodology.

Programme Information

The International EPD® System: EPD International AB Box 210 60 SE-100 31 Stockholm, Sweden, info@environdec.com

PCR 2019:14 Construction products, version 1.3.3., Construction EN 15804:2012+A2:2019/AC:2021 Sustainability of Construction Works

Technical Committee of the International EPD® System. Review chair: Claudia A. Peña, University of Concepción, Chile.

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:

EPD process certification

EPD verification

Independent third-party verification of the declaration and data, according to ISO 14025:2006, via EPD verification by individual verifier

Third Party Verifier:

Approved by: The International EPD® System Technical Committee supported by the Secretariat

Procedure for follow-up of data during EPD validity involves third party verifier:

Yes No

Life Cycle Assessment (LCA)

LCA Practitioner: Orhan Atacan MSc MBA, Metsims Sustainability Consulting

EPDs within the same product category but registered in different EPD programmes 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 cutoff rules and impact assessment methods (including the same version of characterisation factors); have equivalent content declarations; and be valid at the time of comparison.

The EPD owner has the sole ownership, liability, and responsibility for the EPD. EPDs within the same product category but from different programmes may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804.

About the Company

Owner of the EPD: DYO BOYA FABRİKALARI SAN. VE TİC. A.Ş.

Address: D.O.S.B. 2.Kısım Fırat Cad. No:11 Dilovası / Kocaeli

Dyo Boya started its operation in 1927 with “Durmuş Yaşar Müessesesi” in a paint shop and developed over the years into a paint workshop that began paint production in 1941. The company became a pioneer of the sector with Turkey’s first paint factory established by Durmuş Yaşar and his sons Selçuk Yaşar and Selman Yaşar in Izmir in 1954. The company has grown from its small-scale origins to a top-ranked company, with significant market share and high volume in paint production. A further milestone was reached with the establishment of the Dyo Boya Fabrikaları in the Bornova region of Izmir in 1953. The Company continues its activities under the brands Dyo, Dewilux, Casati, Dyotherm, and Klimatherm within Yaşar Group’s coatings business line, offering services with 1.200 different products, 3.500 packaging options, and 60.000 color varieties in the sector it leads.

The Company, working under the motto “DYO adds value, protects and enriches,” operates to optimally manage every process where it touches the consumer with its responsible manufacturer identity. DYO Boya continues production in its main sectors, including decorative paint, furniture paint, industrial paints, defense industry paints, coil coatings, automotive repair paints, marine paints, powder coatings, protective coatings, thermal insulation systems, and unsaturated polyester resins. DYO is the only domestic company engaged in production in 11 different sub-segments.

A laboratory for R&D was commissioned by Dyo Boya in 1967 to develop new, customized products. This work was bolstered with the opening of new R&D Centres in Çiğli Plant (2009) and in Dilovası Plant (2017), that paved the way for the company becoming a sector leader for innovative manufacturing. In addition to developing projects with it’s own resources in the fields of innovative product development, brand positioning and improvement of product designs within the scope of R&D studies, DYO also undertakes joint studies with universities and other industrial organizations.

DYO prioritizes sustainability in all production processes without compromising its responsible manufacturer identity. With this perspective, the company has

focused on the production and development of water-based and environmentally friendly products instead of solvent-based products. It continues to have the noise and emission confirmation measurements carried out by authorized institutions at regular intervals. It transfers wastes originating from production to different waste collection points according to their type.

Having the TS EN ISO 14001 Environmental Management System and TS ISO 45001 Occupational Health and Safety Management System certificates, DYO Boya works to create a healthy and productive work environment for its employees. Among the works carried out in 2021, reducing odor emission, classification, labeling and packaging of chemical substances in accordance with the CLP Regulation/SEA Regulation took priority. In addition, efforts have been continued to implement the SEVESO II Directive and to fulfill the legislative obligations regarding the transport of dangerous goods. In parallel with the EU legislation, activities have been carried out regarding the implementation of the legislation on biocidal products, the registration, evaluation, authorization and restriction of chemicals (KKDİK), the domestic equivalent of REACH.

DYO Boya continues to work on waste reduction with the Zero Waste Management System it established under the Zero Waste Regulation. The company has minimized natural resource consumption by checking and repairing pallets that come with raw materials and using them for in-plant transfers. In addition, natural resources were saved by separating the recyclable wastes and re-introducing the recyclable wastes into the economy.

DYO proactively looks for ways to surpass international manufacturing standards, and the company is constantly reviewing its quality enhancement measures, in line with the EFQM Model of Excellence and National Quality Movement. DYO was also awarded Turkey’s Award of Excellence, based on the EFQM evaluation criteria, and was commended on its high performance, as well as its continuous progress and development. DYO has ISO 9001, ISO 14001, ISO 50001 standards certifications. The company looks to continue to grow its customer satisfaction and loyalty, by focusing on the provision of innovative products of superior quality and prioritising the strength of the product distribution network.



DYO BOYA FABRİKALARI SANAYİ VE TİCARET A.Ş.

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About the Product

Product Name

Dyopa Plus+ Matt Emulsion Interior Paint

Description

Decorative, matt, economic interior topcoat wall paint based on PVA emulsion.

Properties

It attaches perfectly on all types of surfaces, dries quickly and does not crack and flake.

Application Area

It is used on all types of interior surfaces of buildings.

Application Method

After the surface is cleared out of dirt, grease, old loose or flaking materials, Dyobinder is applied onto whole surface. If necessary, non-uniform surfaces is smoothed with Dyorit Wall Putty Interior. It is applied two coats by brush or roller with diluting 25% of water by volume.

Coverage Rate

10-12 m²/L dependent on the substrate. (for one coat)

Storage

It has a shelf life of 3 years if stored unopened in cool, frost-free conditions.

Available Packages

2,5 L / 7,5 L / 15 L

UN CPC Code

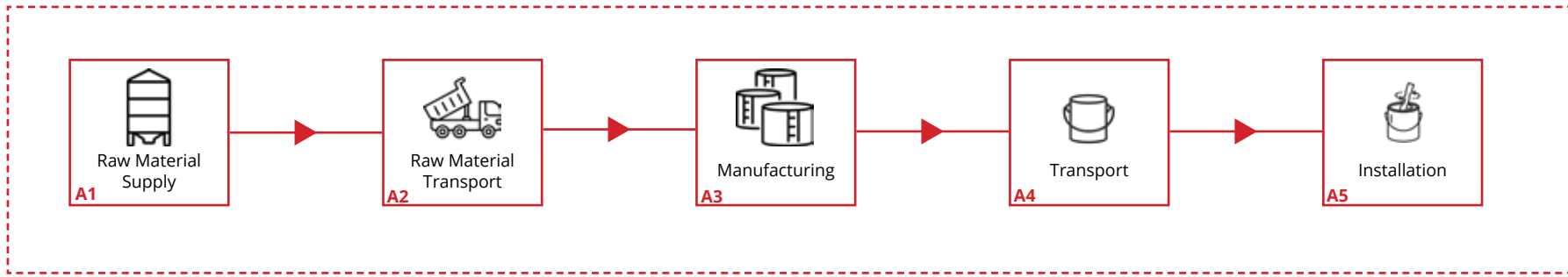
35110, Paints and varnishes and related products

Technical Properties

| Parameter | Value | Standard |
|-------------------------------------|-------------|---|
| Solid, % (Weight) | 65 - 70 | TS 1752 / ASTM D2369 |
| Viscosity (KU, 25 °C) | 123 - 127 | TS 5809 / ASTM D562 |
| Density (g/cm ³ , 25 °C) | 1,59 - 1,63 | TS EN ISO 2811-1 / ASTM D1475 |
| pH (25 °C) | 8,20 - 8,60 | ISO 19396-1 |
| Coverage (m ² /L) | 10 - 12 | Recommendation for use (declaration) |
| VOC (g/L) | < 30 | ISO 11890-2 / Directive 2004/42/CE Annex.II.A-a |



System Boundary



----- System Boundary

A1 - Raw Material Supply

Production starts with raw materials, transported locally and from other parts of the world. Raw material supply includes extraction/preparation and pretreatment processes before production.

A2 - Raw Material Transport

Raw material transport is relevant for delivery of raw materials and other materials to the plant and the transport of materials within the plant. Transport within the factory is included in the LCA model. Transport of raw materials to production sites is taken as the weight average values for transport from raw materials supplier.

| Transport Mode | Type |
|----------------|---|
| Road | Vehicle: Lorry Size Class: >32 metric ton Emission Standard: EURO5 Fuel Type: Diesel |
| Sea | Vehicle: Container Ship DWT (Load Capacity): 43000 tonnes Fuel Type: Heavy Fuel Oil |



A3 - Manufacturing

Production stages start with dispersion of raw materials followed by storage tank, tinting, filling into the package for final delivery. Electric energy and natural gas are consumed during the manufacturing of products. The below outlines the main steps in the production of paints.



Electric, natural gas and diesel are consumed during the manufacturing. Information on the electricity used is as follows.

| Information | Description |
|------------------|--|
| Electricity Data | Türkiye electricity grid mix from Ecoinvent,Medium Voltage |
| Type of dataset | Cradle to gate |
| Type of dataset | 0,578 kg CO2 eq./kWh |

A4 - Product Transport

Product transport from manufacturer to customer is considered in product in this stage. Average distance and transportation mode are assumed according to sales locations. Depending the customer location, product is transported via trucks, and other supplies come through seaway.

| Transport Mode | Type |
|----------------|---|
| Road | Vehicle: Lorry Size Class: >32 metric ton Emission Standard: EURO5 Fuel Type: Diesel |
| Sea | Vehicle: Container Ship DWT (Load Capacity): 43000 tonnes Fuel Type: Heavy Fuel Oil |

A5 - Installation

During the usage phase, the paint is diluted with 10-15% water. Additionally, the disposal of the packaging is considered at this stage. The paint buckets are assumed to be completely disposed of as hazardous waste. However, 80% of the steel handles and 50% of the secondary or tertiary plastic packaging are assumed to be collected for recycling. It is assumed that 80% of the collected steel handles and 50% of the secondary or tertiary plastic packaging will be recovered and that 80% of this is recycled for the steel handles and 28% for the secondary or tertiary plastic packaging. Packaging waste generated during the construction phase is assumed to be incinerated on-site, thereby eliminating the need for transportation to an external disposal facility and resulting in a transportation distance of zero kilometers for this scenario.

LCA Information

Functional Unit/Declared Unit:

The declared unit is the production of 1 kg of paint product with packaging. The conversion factor is 0,136 kg/m².

Time Representativeness:

2023 (12 months)

Database(s) and LCA Software:

Ecoinvent 3.9.1 and SimaPro 9.5

System Boundaries:

Cradle to gate with options, modules A4, A5 modules (A1–A3 + A4 + A5). Human activities such as employee transportation and infrastructure of the production site are excluded. The results of the LCA with the indicators as per EPD requirement are given in the following tables for product manufacture (A1, A2, A3), construction process stage (A4-A5). According to EN 15804+A2:2019 standard, if the product or material is physically integrated with other products during installation then they cannot be physically separated at the end of life stage. For this reason, modules C1-C4 and Module D are excluded.

| | Product Stage | | | Construction Process Stage | | Use Stage | | | | | | End of Life Stage | | | Benefits and Loads | | |
|----------------------|---------------------|-----------|---------------|-------------------------------------|----------|-----------|-------------|--------|-------------|---------------|------------------------|-----------------------|-----------------|-----------|--------------------|----------|------------------------------------|
| | Raw Material Supply | Transport | Manufacturing | Transport from the gate to the site | Assembly | Use | Maintenance | Repair | Replacement | Refurbishment | Operational Energy Use | Operational Water Use | De-construction | Transport | Waste Processing | Disposal | Reuse-Recycling-Recovery Potential |
| 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 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Geography | GLO | | TR | GLO | | | | | | | | | | | | | |
| Specific Data Used | 19,5 % | | | - | | | | | | | | | | | | | |
| Variation - Products | 0 % | | | - | | | | | | | | | | | | | |
| Variation - Sites | 0 % | | | - | | | | | | | | | | | | | |

X: Declared, MND: Module Not Declared

Geographical Scope

The geographical scope of this EPD is global.

Allocation

Source of raw material, water consumption, energy consumption and raw material transportation were weighted according to 2023 production figures. In addition, hazardous and non-hazardous waste amounts were also allocated from the 2023 total waste generation.

Cut-Off Criteria

1% cut-off is applied in LCA. Data for elementary flows to and from the product system contributing to a minimum of 99% of the declared environmental impacts have been included.

LCA Modelling, Calculation And Data Quality

The results of the LCA with the indicators as per EPD requirement are given in the LCA result tables. All energy calculations were obtained using Cumulative Energy Demand (LHV) methodology, while fresh water use is calculated with selected inventory flows in SimaPro according to the PCR. There are no co-product allocations within the LCA study underlying this EPD. For LCA modelling and calculation, ecoinvent database (v3.9.1) and SimaPro (v9.5) LCA software were used. Characterization factors of EN 15804 reference package based on EF 3.1 are utilized. Impact of infrastructure and capital goods are excluded from the analysis.

REACH Regulation

The products don't contain raw materials which is a substance of very high concern (SVHC) and are subject to authorization under the REACH Regulation. For details, please contact the DYO.

Product Composition

| Component | Weight, % | Post-consumer material, weight-% | Biogenic material, weight-% and kg C/kg |
|------------------|-----------|----------------------------------|---|
| Fillers | 50-60 | 0 | 0 |
| Solvents / Water | 20-40 | 0 | 0 |
| Binders | 10-30 | 0 | 0 |
| Pigments | 1-10 | 0 | 0 |
| Additive | 1-10 | 0 | 0 |

Packaging

| Component | Weight, kg | Weight-% (versus the product) | Biogenic material, weight-% and kg C/kg |
|--------------|------------|-------------------------------|---|
| PP Bucket | 0,028 | 2,8% | 0 |
| Steel Handle | 0,003 | 0,3% | 0 |
| Sticker | 0,001 | ~0,1% | 0 |
| Nylon | 0,000 | <0,1% | 0 |

* Due to the inclusion of proprietary materials and confidential substances in the recipe, mass declaration has been provided as a reasonable range. The declared range comprehensively accounts for 100% of the material content in a single unit of the product.



LCA Results

The estimated impact results are only relative statements, which do not indicate the endpoints of the impact categories, exceeding threshold values, safety margins and/or risks.

| CORE ENVIRONMENTAL IMPACTS PER DECLARED UNIT | | | | | |
|--|--|------------------------|----------|----------|----------|
| Mandatory indicators | Unit | A1-A3 | A4 | A5 | |
| Global Warming Potential | Total | kg CO ₂ eq. | 1,01E+00 | 1,76E-01 | 7,69E-02 |
| | Fossil | kg CO ₂ eq. | 1,01E+00 | 1,75E-01 | 7,69E-02 |
| | Biogenic | kg CO ₂ eq. | 8,86E-04 | 3,17E-05 | 5,25E-07 |
| | Luluc | kg CO ₂ eq. | 3,89E-03 | 5,86E-05 | 2,07E-07 |
| ODP | kg CFC-11 eq. | 2,28E-08 | 3,48E-09 | 1,09E-11 | |
| AP | mol H+ eq. | 4,84E-03 | 4,08E-04 | 9,89E-06 | |
| EP - Freshwater | kg P eq. | 3,31E-04 | 1,18E-05 | 1,06E-07 | |
| EP - Marine | kg N eq. | 9,53E-04 | 9,84E-05 | 4,83E-06 | |
| EP - Terrestrial | mol N eq. | 9,67E-03 | 1,07E-03 | 5,07E-05 | |
| POCP | kg NMVOC | 4,40E-03 | 6,36E-04 | 1,26E-05 | |
| **ADPE | kg Sb eq. | 8,53E-06 | 5,68E-07 | 1,64E-09 | |
| **ADPF | MJ | 5,18E+00 | 2,04E-01 | 1,53E-03 | |
| **WDP | m ³ depriv. | 4,19E-01 | 1,02E-02 | 4,42E-04 | |
| <i>Additional environmental impact indicators per declared unit (Optional)</i> | | | | | |
| PM | disease inc. | 5,02E-08 | 1,29E-08 | 5,23E-11 | |
| *IR | kBq U-235 eq. | 8,18E-02 | 3,18E-03 | 8,80E-06 | |
| **HTP - C | CTUh | 3,85E-09 | 1,24E-09 | 1,09E-11 | |
| **HTP - NC | CTUh | 1,18E-08 | 1,54E-09 | 1,09E-10 | |
| **SQP | Pt | 5,88E+00 | 1,48E+00 | 2,52E-03 | |
| Legend | A1: Raw Material Supply, A2: Transport, A3: Manufacturing, A1-A3: Sum of A1, A2, and A3, A4: Transport to Site, A5: Installation, B7: Operational Water Usage, C1: De-Construction, C2: Waste Transport, C3: Waste Processing, C4: Disposal, D: Benefits and Loads Beyond the System Boundary. | | | | |
| Acronyms | GWP-total: Climate change, GWP-fossil: Climate change- fossil, GWP-biogenic: Climate change - biogenic, GWP-luluc: Climate change - land use and transformation, ODP: Ozone layer depletion, AP: Acidification terrestrial and freshwater, EP-freshwater: Eutrophication freshwater, EPmarine: Eutrophication marine, EP-terrestrial: Eutrophication terrestrial, POCP: Photochemical oxidation, ADPE: Abiotic depletion - elements, ADPF: Abiotic depletion - fossil resources, WDP: Water scarcity, PM: Respiratory inorganics - particulate matter, IR: Ionising radiation HTP-c: Cancer human health effects, HTP-nc: Non-cancer human health effects, SQP: Land use related impacts, soil quality | | | | |
| *Disclaimer 1 | This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents. occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil from radon and from some construction materials is also not measured by this indicator. | | | | |
| **Disclaimer 2 | The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator. | | | | |

ADDITIONAL MANDATORY IMPACT CATEGORY INDICATORS PER DECLARED UNIT

| Mandatory indicators | Unit | A1-A3 | A4 | A5 |
|----------------------|------------------------|----------|----------|----------|
| GWP - GHG | kg CO ₂ eq. | 1,01E+00 | 1,76E-01 | 7,69E-02 |

GWP-GHG = Global Warming Potential total excl. biogenic carbon following IPCC AR5 methodology. The indicator includes all greenhouse gases included in GWP-total but excludes biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. The GWP-GHG indicator is identical to GWP-total except that the characterisation factor (CF) for biogenic CO₂ is set to zero.

RESOURCE USE INDICATORS PER DECLARED UNIT

| | | | | |
|-------|----------------|----------|----------|-----------|
| PERE | MJ | 1,29E+00 | 4,23E-02 | 1,84E-04 |
| PERM | MJ | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| PERT | MJ | 1,29E+00 | 4,23E-02 | 1,84E-04 |
| PENRE | MJ | 4,21E+00 | 2,04E-01 | 9,69E-01 |
| PENRM | MJ | 9,67E-01 | 0,00E+00 | -9,67E-01 |
| PENRT | MJ | 5,18E+00 | 2,04E-01 | 1,53E-03 |
| SM | kg | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| RSF | MJ | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| NRSF | MJ | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| FW | m ³ | 9,69E-03 | 3,63E-04 | 1,88E-05 |

PERE: Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM: Use of renewable primary energy resources used as raw materials; PERT: Total use of renewable primary energy resources; PENRE: Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM: Use of non-renewable primary energy resources used as raw materials; PENRT: Total use of non-renewable primary energy re-sources; SM: Use of secondary material; RSF: Use of renewable secondary fuels; NRSF: Use of non-renewable secondary fuels; FW: Use of net fresh water

RESOURCE USE INDICATORS PER DECLARED UNIT

| | | | | |
|-----------------|----|----------|----------|----------|
| HWD | kg | 7,18E-03 | 6,15E-05 | 2,94E-02 |
| NHWD | kg | 3,31E-02 | 1,18E-01 | 1,20E-03 |
| RWD | kg | 2,08E-05 | 7,91E-07 | 2,20E-09 |
| CRU | kg | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| MFR | kg | 0,00E+00 | 0,00E+00 | 1,49E-03 |
| MER | kg | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| EE (Electrical) | MJ | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| EE (Thermal) | MJ | 0,00E+00 | 0,00E+00 | 0,00E+00 |

HWD: Hazardous waste disposed, NHWD: Non-hazardous waste disposed, RWD: Radioactive waste disposed, CRU: Components for reuse, MFR: Material for recycling, MER: Materials for energy recovery, EE (Electrical): Exported energy electrical, EE (Thermal): Exported energy, thermal.

References

GPI / General Programme Instructions of the International EPD® System. Version 5.0. EN ISO 9001/ Quality Management Systems - Requirements EN ISO 14001/ Environmental Management Systems - Requirements

EN 15804: 2012+A2:2019 / Sustainability of construction works - Environmental Product Declarations - Core rules for the product category of construction products

ISO 14025 / DIN EN ISO 14025:2009-11: Environmental labels and declarations - Type III environmental declarations - Principles and procedures

PCR for Construction Products and Construction Services / Prepared by IVL Swedish Environmental Research Institute, Swedish environmental Protection Agency, SP Trä, Swedish Wood Preservation Institute, Swedisol, SCDA, Svenskt Limträ AB, SSAB, The International EPD System, 2019:14 Version 1.3.3

ISO 14040/44 / DIN EN ISO 14040: 2006-10 / Environmental management - Life cycle assessment - Principles and framework (ISO14040:2006) and Requirements and guidelines (ISO 14044:2006)

ISO 9001 / Quality Management System

ISO 14001 / Environmental Management System

ISO 11890-2 / Directive 2004/42/CE of the european parliament and of the council / Annex.II.A-a / Maximum VOC content limit values for paints and varnishes

ISO 19396-1 / Paints and Varnishes

ISO 50001 /Energy Management System

TS 1752 : Paints and Varnishes - Determination of Volatile and Non - Tolatile Matter

TS 5809 : Paints-Determination of Viscosity-Using the Stormer Viscometer

TS EN ISO 2811-1 : Paint and varnishes- Determination of density Part 1: Pyknometer method

The International EPD® System / The International EPD® System is a programme for type III environmental declarations, maintaining a system to verify and register EPD@s as well as keeping a library of EPD@s and PCRs in accordance with ISO 14025. www.environdec.com

Ecoinvent / Ecoinvent Centre, www.ecoinvent.org

SimaPro / SimaPro LCA Software, Pré Consultants, the Netherlands, www.pre-sustainability.com

Metsims / www.metsims.com

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