

ENVIRONMENTAL PRODUCT DECLARATION

In accordance with ISO14025 and EN15804:2012 + A2:2019 for

Supreme Advanced Emulsion

Programme:	The International EPD® System www.environdec.com
Programme operator:	EPD International AB Stockholm, SWEDEN
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Geographical scope:	Middle East



THE INTERNATIONAL EPD® SYSTEM



TRANSFORMING THE WORLD THROUGH COLOURS.

PROGRAMME INFORMATION

Programme

The International EPD® System

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Product Category Rules (PCR): 2019:14 Version 1.1. 2020-09-14 Construction Products
EN 15804:2012 + A2:2019 Sustainability of Construction Works

Independent third-party verification of the declaration and data, according to ISO 14025:2006

EPD process certification

EPD verification 

Third party verifier: Prof. Ing. Vladimír Kočí, Ph.D., MBA

Approved by: The International EPD® System

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

Yes

No 

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.

COMPANY PROFILE

Since its foundation in 1942, Asian Paints has come a long way to become India's leading and Asia's third largest paint company, with a turnover of INR 205.16 billion. We operate in 16 countries and has 26 manufacturing facilities in the world, servicing consumers in over 60 countries.

The company has come a long way since its small beginnings in 1942. It was set up as a partnership firm by four friends who were willing to take on the world's biggest, most famous paint companies operating in India at that time. Over the course of 25 years, Asian Paints became a corporate force and India's leading paints company. Driven by its strong consumer-focus and innovative spirit, the company has been the market leader in paints since 1967. Today, it is double the size of any other paint company in India. Asian Paints manufactures a wide range of paints for decorative and industrial use.

Asian Paints Berger has a strong manufacturing base in the Middle East, with dedicated plants in Dubai, Sohar, and Bahrain. These fully automated units create our range of Middle East specific products. They are equipped with aseptic processing areas, computerised dosing stations to create finely calibrated formulations, R&D centres that incubate innovative paint technologies, and automated loading bays to respond to orders in an agile fashion.

Our team thrives on a culture of inclusivity, and we lay emphasis on collaboration. Our folks have a strong sense of ownership and revel in the open and interactive work culture. Innovation and invention are of prime importance in any organisation and in our industry, doubly so. Performance and agility are highly valued at Asian Paints Berger. Diversity is cherished and nourished, as we believe our people's unique perspectives can add strength and creativity to the Asian Paints Berger offering.

Continuous learning is the key to the growth of the individual and the organisation. Training forms an important part of the experience at Asian Paints Berger – leadership qualities are reinforced, and competencies are upgraded. We also regularly recruit new and emerging talents from top institutes.

The group has a strong presence in five regions of the world, including Middle East, South Asia, South East Asia and South Pacific, through its five corporate brands – Asian Paints Berger, Asian Paints, SCIB Paints, Apco Coatings, Taubmans, and Kadisco.



COMPANY PROFILE

Driven by Research

Asian Paints Berger's success lies in its unrelenting R & D and its association with international professional bodies. We access the latest worldwide trends through our network of Technology Centres around the globe. As a result of these persistent efforts, Asian Paints Berger's product range is designed to be weatherproof, acting as an effective means of protection against the various destructive and corrosive elements of nature.

Our R&D plays many roles:

- It supports manufacturing in process cycle time reduction and enhances productivity.
- Solves environmental issues by minimising waste generation and through recycling.
- Supports marketing with technical tools/USPs to sell new products.
- Assists the Materials department by discovering raw material alternatives, so that they can negotiate better with vendors or, have the flexibility to find new suppliers.

Certified Quality & Regulatory Approvals

Asian Paints Berger is strongly committed to quality, and our Operations in the Middle-East are ISO 9001, ISO 14001 & ISO 45001 certified.

Besides being backed by various International third party certifications, our products has regulatory approvals such as DM-GBES, ESMA-ECAS & ADQCC product conformity.



PRODUCT INFORMATION

Product name: Supreme Advanced Emulsion

UN CPC code: 35110

Geographical scope: Middle East

A premium product formulated using 100% Pure Acrylic polymer and containing titanium dioxide and other high grade light fast alkali resisting pigments. It is odourless and environment friendly. Supreme Advanced Emulsion has outstanding performance with respect to removal of common stains. It shows excellent resistance to microbial growth. Supreme Advanced Emulsion does not allow colonial growth of bacteria, thus coated surface remains hygienic.

Technical Data

Sheen Variants: Matt & Silk
Colours: White and other range of colours
Volume Solids (%): 40% ± 2%

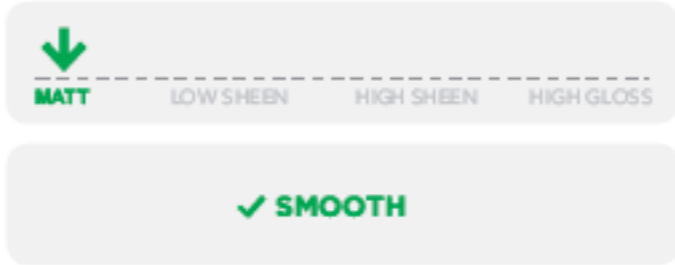
Recommended Areas of Application

Area of Use: Interior
Substrate: Concrete, Plaster, Masonry, Gypsum

Washability



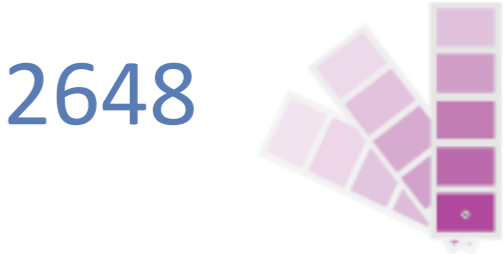
Finish



Refer to sheen levels in technical details



Colours Available



SYSTEM BOUNDARY

Upstream	Core		Downstream													Other Environmental Information
			Transport to Site	Construction / Installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational Energy Use	Operational Water Use	Deconstruction / Demolition	Transport to Disposal Site	Waste Processing	Disposal	
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
X	X	X	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Description of the system boundary (X = Included in LCA, ND=Not Declared)

This EPD’s system boundary has been defined as cradle to gate with options, comprising modules A1-A3, Besides, A4: Transport stage was added as optional. Once applied, these products become an integral part of the surface that can not be separated at their end of life stage, therefore C (End of Life Stages) and D modules were not declared.

A1: Raw Material Supply

Production starts with raw materials. Raw material stage includes raw material extraction/preparation and pre-treatment processes before production.

A2: Transportation

Transport is relevant for delivery of raw materials and other materials to the plant and the transport of materials within the plant. Transport of raw materials to production site is taken as the weight average values for transport from supplier for the year of 2020.

A3:Manufacturing

Manufacturing prosses comprises of mixing the chemicals using electric energy to form the paint. Then, the final products are quality checked and packaged for delivery.

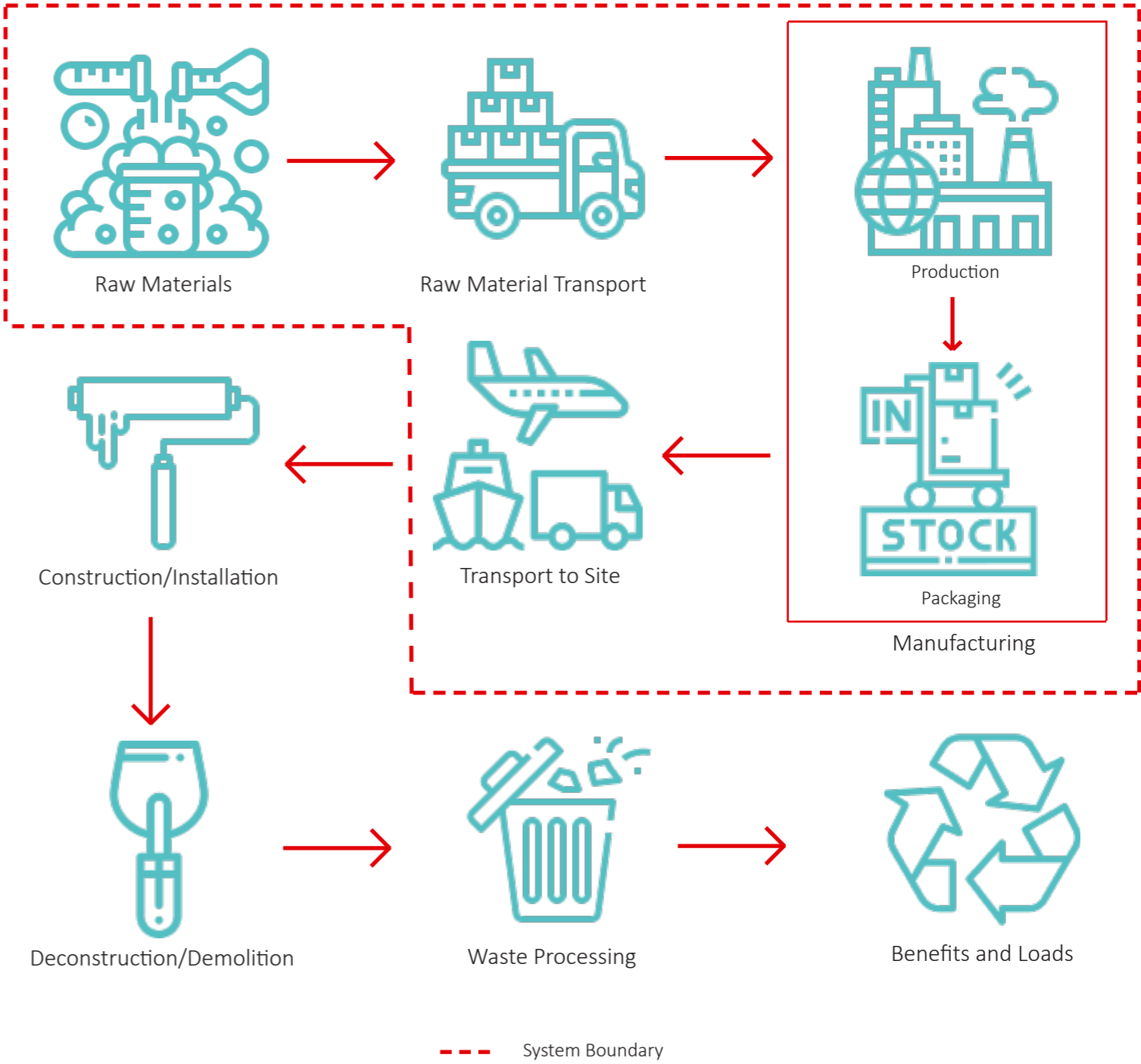
A4: Transport to Site

Transport of final product to site is taken as the weight average values for transportation for the year of 2020.

LCA INFORMATION

Declared Unit	1 m² of surface painted with Supreme Advanced paint (98% opacity)
Time Representativeness	Average data for the year of 2020
Database(s) and LCA Software Used	Ecoinvent 3.5 SimaPro 9.0

System Boundary of the LCA Study



MORE INFORMATION

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.

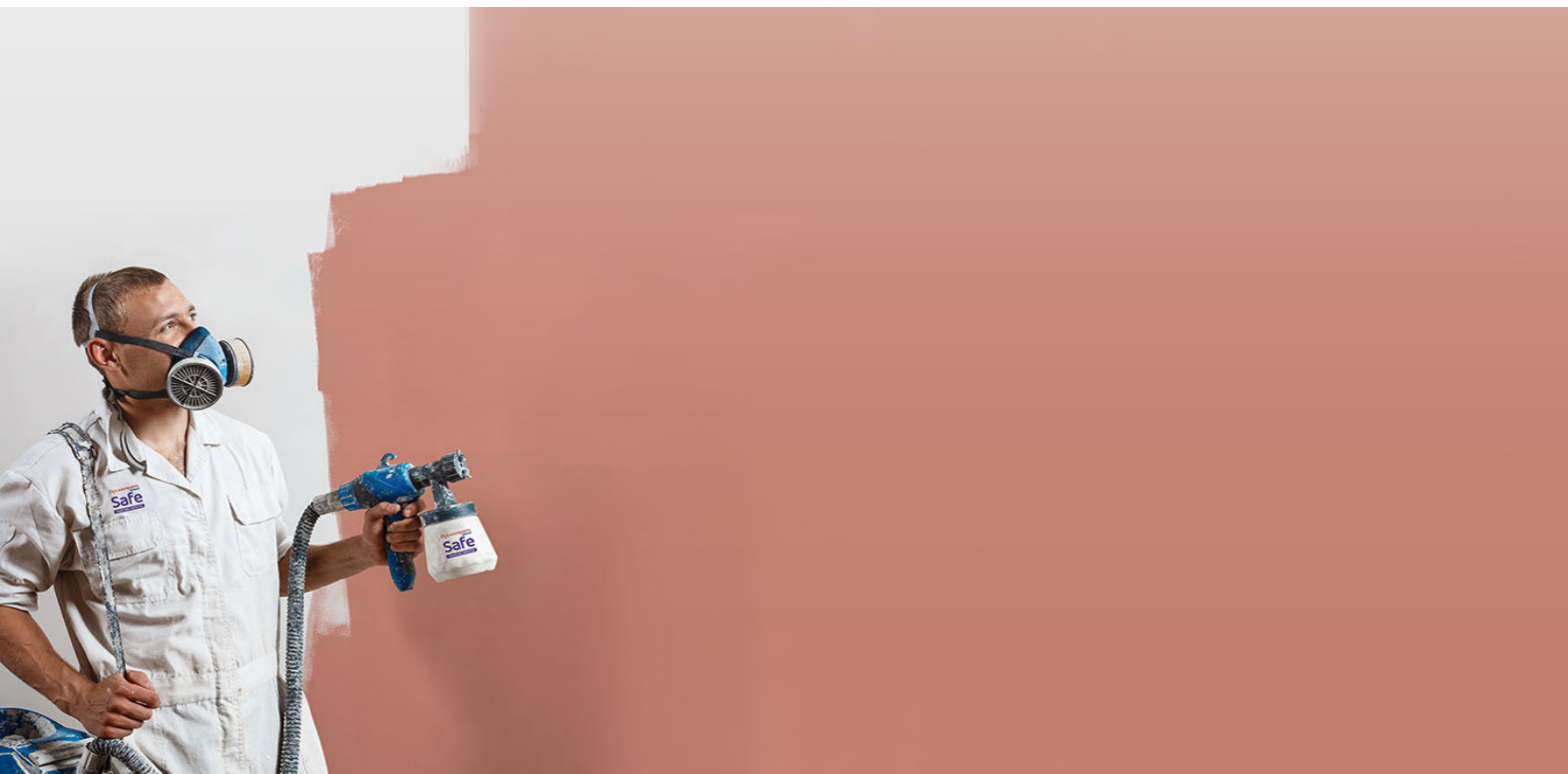
There are no co-products in the production. Hence, there is no need for co-product allocation.

Energy consumption and transport datasets were allocated based on the average production figures for the year of 2020, and weighted average of environmental impacts for the paint product were presented.

Accordingly, hazardous and non-hazardous waste amounts were also allocated based on the average waste arisings for the period of 2020.

All the waste resulting from the main production and related processes is managed as per Waste Management Plan of Asian Paints Berger in accordance with related laws and regulations.

No substances included in the Candidate List of Substances of Very High Concern for authorisation under the REACH Regulations are present in the paint manufactured by Asian Paints Berger either above the threshold for registration with the European Chemicals Agency or above 0.1% (wt/wt).



LCA RESULTS

LCA RESULTS

Environmental Impacts for 1 m² of surface painted with Supreme Advanced Emulsion paint (98% opacity)						
Impact Category	Unit	A1	A2	A3	A1-A3	A4
GWP - Fossil	kg CO ₂ eq	994E-3	8.47E-3	3.42E-3	1.01E+0	1.46E-3
GWP - Biogenic	kg CO ₂ eq	3.68E-3	2.56E-6	4.45E-6	3.69E-3	305E-9
GWP - Luluc	kg CO ₂ eq	559E-6	2.57E-6	85.0E-9	562E-6	429E-9
GWP - Total	kg CO ₂ eq	998E-3	8.48E-3	3.42E-3	1.01E+0	1.46E-3
ODP	kg CFC-11 eq	72.2E-9	1.87E-9	160E-12	74.2E-9	334E-12
AP	mol H+ eq	5.80E-3	60.6E-6	5.23E-6	5.86E-3	6.00E-6
EP - Freshwater (P)	kg P eq	308E-6	699E-9	77.6E-9	309E-6	115E-9
EP - Freshwater (PO ₄)	kg PO ₄ eq	944E-6	2.14E-6	238E-9	946E-6	353E-9
EP - Marine	kg N eq	882E-6	16.0E-6	1.36E-6	900E-6	1.75E-6
EP - Terrestrial	mol N eq	8.95E-3	177E-6	14.7E-6	9.14E-3	19.2E-6
POCP	kg NMVOC	3.05E-3	50.7E-6	5.55E-6	3.10E-3	5.84E-6
ADPE	kg Sb eq	4.30E-6	20.1E-9	888E-12	4.32E-6	4.31E-9
ADPF	MJ	12.7E+0	128E-3	70.3E-3	12.9E+0	22.2E-3
WDP	m³ depriv.	616E-3	844E-6	427E-6	617E-3	151E-6
PM	disease inc.	52.0E-9	668E-12	37.1E-12	52.7E-9	103E-12
IR	kBq U-235 eq	47.5E-3	613E-6	11.3E-6	48.1E-3	105E-6
ETP - FW	CTUe	23.9E+0	87.7E-3	6.79E-3	24.0E+0	15.9E-3
HTTP - C	CTUh	1.02E-9	2.63E-12	253E-15	1.03E-9	462E-15
HTTP - NC	CTUh	26.7E-9	95.2E-12	7.82E-12	26.9E-9	18.2E-12
SQP	Pt	3.12E+0	71.4E-3	2.57E-3	3.20E+0	14.9E-3
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, EP-marine: 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, ETP-FW: Ecotoxicity freshwater, HTP-c: Cancer human health effects, HTP-nc: Non-cancer human health effects, SQP: Land use related impacts, soil quality.					
Legend	A1: Raw Material, A2: Raw Material Transport, A3: Manufacturing, A1-A3: Sum of A1, A2 and A3, A4: Transport					
Disclaimer: EP-freshwater indicator has also been calculated as “kg P eq” as required in the characterization model (EUTREND model, Struijs et al., 2009b, as implemented in ReCiPe; http://eplca.jrc.ec.europa.eu/LCDN/developerEF.xhtml) in addition to “kg PO4 eq” as stated in the standard.						



LCA RESULTS

Environmental Impacts for 1 m² of surface painted with Supreme Advanced Emulsion paint (98% opacity)						
Impact Category	Unit	A1	A2	A3	A1-A3	A4
PERE	MJ	650E-3	1.40E-3	235E-6	651E-3	219E-6
PERM	MJ	0	0	0	0	0
PERT	MJ	650E-3	1.40E-3	235E-6	651E-3	219E-6
PENRE	MJ	12.7E+0	128E-3	70.3E-3	12.9E+0	22.2E-3
PENRM	MJ	0	0	0	0	0
PENRT	MJ	12.7E+0	128E-3	70.3E-3	12.9E+0	22.2E-3
SM	kg	0	0	0	0	0
RSF	MJ	0	0	0	0	0
NRSF	MJ	0	0	0	0	0
FW	m³	8.70E-3	20.3E-6	11.3E-6	8.73E-3	3.76E-6
Environmental Impacts for 1 m² of surface painted with Supreme Advanced Emulsion paint (98% opacity)						
Impact Category	Unit	A1	A2	A3	A1-A3	A4
HWD	kg	0	0	1.66E-3	1.66E-3	0
NHWD	kg	0	0	854E-6	854E-6	0
RWD	kg	0	0	0	0	0
CRU	kg	0	0	0	0	0
MFR	kg	0	0	0	0	0
MER	kg	0	0	0	0	0
EE (Electrical)	MJ	0	0	0	0	0
EE (Thermal)	MJ	0	0	0	0	0
Acronyms	PERE: Use of renewable primary energy excluding resources used as raw materials, PERM: Use of renewable primary energy resources used as raw materials, PERT: Total use of renewable primary energy, PENRE: Use of non-renewable primary energy excluding 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, SM: Secondary material, RSF: Renewable secondary fuels, NRSF: Non-renewable secondary fuels, FW: Net use of fresh water, 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.					
Legend	A1: Raw Material, A2: Raw Material Transport, A3: Manufacturing, A1-A3: Sum of A1, A2 and A3, A4: Transport					

Result per funtional unit		
Biogenic Carbon Content	Unit	A1-A3
Biogenic carbon content in product	kg C	0
Biogenic carbon content in packaging	kg C	0

REFERENCES

/GPI/ General Programme Instructions of the International EPD® System. Version 3.0.

/ISO 14020:2000/ Environmental labels and declarations — General principles

/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

/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)






/PCR for Construction Products and CPC 54 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 1.1 DATE 2019-12-20

/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

VERIFICATION & REGISTRATION

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