Environmental Product Declaration

according to ISO 14025 and EN 15804

This declaration is for:
VITEX with VAIRO

Provided by:
VITEX S.A.

program operator
Stichting MRPI®
publisher
Stichting MRPI®
www.mrpi.nl

MRPI® registration
1.1.00272.2022
date of first issue
11-02-2022
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11-02-2027

COMPANY INFORMATION

Imeros Topos
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www.vitex.gr

PRODUCT

VITEX with VAIRO

DECLARED UNIT/FUNCTIONAL UNIT

to protect and decorate 1 m² of substrate for 50 years at a specified quality level (minimum 98% opacity)

DESCRIPTION OF PRODUCT

Antiviral-Antibacterial eggshell indoor water-based wall paint based on VAIRO Healthcare Technology

VISUAL PRODUCT

MRPI® REGISTRATION

1.1.00272.2022

DATE OF ISSUE

11-02-2022

EXPIRY DATE

11-02-2027

MORE INFORMATION

http://www.vitex.gr/product/vitex-with-vairo/

SCOPE OF DECLARATION

This MRPI®-EPD certificate is verified by **ing. Kamiel Jansen, Aveco de Bondt.**
The LCA study has been done by **Natalia Chebaeva, Ecomatters.**
The certificate is based on an LCA-dossier according to ISO14025 and EN15804+A2. It is verified according to the 'MRPI®-EPD verification protocol November 2020.v4.0'. EPDs of construction products may not be comparable if they do not comply with EN15804+A2. Declaration of SVHC that are listed on the 'Candidate List of Substances of Very High Concern for authorisation' when content exceeds the limits for registration with ECHA.

PROGRAM OPERATOR

Stichting MRPI®
Kingsfordweg 151
1043GR
Amsterdam

ir. J-P den Hollander, Managing director MRPI®

DEMONSTRATION OF VERIFICATION
CEN standard EN15804 serves as the core PCR[a]
Independent verification of the declaration and data, according to EN ISO 14025:2010: internal: external: X
Third party verifier: Jansen ing. Kamiel Jansen, Aveco de Bondt
[a] PCR = Product Category Rules

DETAILED PRODUCT DESCRIPTION

VITEX with VAIRO is an eggshell antiviral - antibacterial emulsion wall paint for interior use. Due to its innovative technology, the dry paint film has defense against virus transmission and inhibits the bacteria growth as well on it. The antiviral and antibacterial activity tested according to ISO 21702, ISO 22196, and OECD guidance for efficacy of biocide treated article (ENV-JM-MONO (2018)20) with microbial reduction by 99 - 99,99%. Walls painted with VITEX with VAIRO® offer defense against E.Coli, St.Aureus, Pseudomonas Aeruginosa, Enterococcus Hirae, Klebsiella Pneumoniae, influenza virus H1N1, Human Corona virus OC43, Human Corona virus 229E, Human Corona virus SARS-CoV2, virus phi6, virus MS2 which are used as surrogates for many enveloped and not enveloped viruses, in several conditions. Moreover, designed with surface protection technology the paint film has resistance to the absorption of common household stains making easier to remove them even after a long period of time (CRGI Report No M2020353-3). Near zero VOC content. It is certified with Indoor Air Comfort GOLD, the world's most rigorous indoor emission rating system. It has been tested for its antifungal properties in the paint film, according to EN 15457.

Production process:

Production process includes measurement of ingredients, preparation and pigment dispersion, let-down, quality control and canning.

Technical Characteristics:

Density: 1,34 ± 0,02 kg / L (ISO 2811) for the white; 1,31 kg / L for the EPD representative paint
Gloss: 5-15 units @ 85° (ISO 2813)
Quality: Q1 (according to the durability scheme of the PEF CR for Decorative paints v.1: estimated durabiltiy 15 years, 3,33 reapplicatio+A9n for the 50 years reference service life)

Typical use:

Interior new surfaces made of concrete, plaster, brick, gypsum boards or old painted surfaces. Ideal for areas such as:

- Children's rooms, Schools, Nurseries
- Medical Practices, Hospitals, Maternity Clinics, Aged Care Facilities
- Hotels, Restaurants, Fitness Centers, Shopping Malls
- Food Storehouses

Application method:

Dilute up to 10% with water and stir well before use. Apply the first coat by brush, roller or airless spray gun. Recoat after 3-4 hours.

Pack size:

White: 750ml, 3L, 10L
Bases: 1L, 3L, 10L

COMPONENT (> 1%)	[kg / %]
Light fast pigments	Confidential
Solvent: water	Confidential
Filler	Confidential
Binder, by polymerization in water	Confidential

(*) > 1% of total mass

SCOPE AND TYPE

The type of this EPD is Cradle-to-Grave. All steps from the extraction of natural resources to re-application and the final disposal of the product are included in the environmental performance. This EPD is an average EPD representative for VITEX with VAIRO products produced in Greece and sold in Europe. The paint is produced in Aspropyrgos Attiki, Greece and the application market is for customers within the European region. Likewise, for the end-of-life, the fate of the paint product is described within a European context.

The software GaBi 10.5.0.78 is used to perform the LCA. Background processes sourced from Ecoinvent v3.6 (2019) and the Raw materials LCI database for the European coatings and printing ink industries (2016).

PRODUCT STAGE			CONSTRUCTION PROCESS STAGE		USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARIES
Raw material supply	Transport	Manufacturing	Transport gate to site	Assembly	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	X	X	x	x	x	X	x	x	x	X	x	X	X

X = Modules Assessed

ND = Not Declared

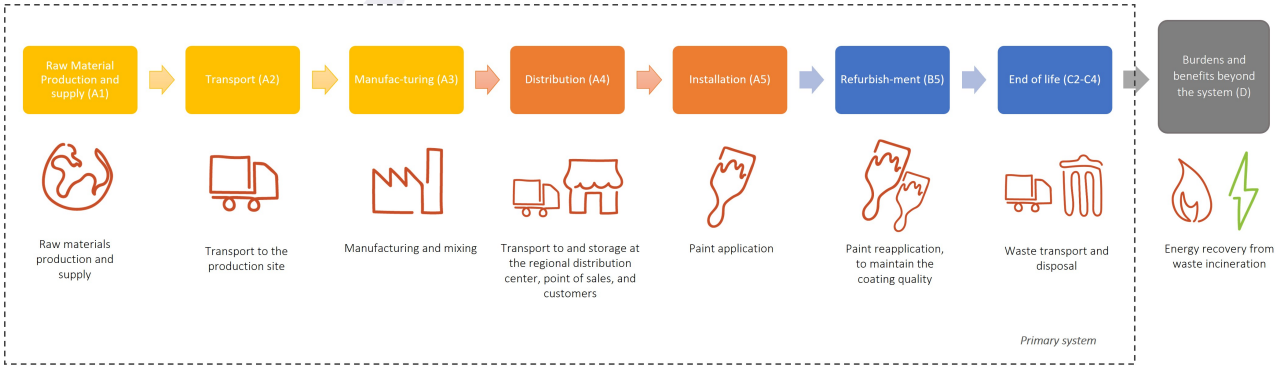

Figure: LCA process diagram according to EN 15804(7.2.1)

REPRESENTATIVENESS

The EPD is representative for the four paints belonging to VITEX with VAIRO:

1. VITEX with VAIRO white
2. VITEX with VAIRO base white
3. VITEX with VAIRO base medium
4. VITEX with VAIRO base transparent

This EPD is representative for the products manufactured in Greece and sold in Europe. The paint is produced at one production site: Imeros Topos, 19300 Aspropyrgos Attiki, Greece.

ENVIRONMENTAL IMPACT per functional unit or declared unit (core indicators A2)

	UNIT	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-total	kg CO2 eq.	2.42 E-1	2.65 E-1	4.47 E-2	0.00	0.00	0.00	0.00	1.30 E+0	0.00	0.00	0.00	7.98 E-4	0.00	5.58 E-3	-1.17 E-2
GWP-fossil	kg CO2 eq.	2.53 E-1	2.60 E-1	3.33 E-2	0.00	0.00	0.00	0.00	1.29 E+0	0.00	0.00	0.00	7.98 E-4	0.00	5.57 E-3	-1.15 E-2
GWP-biogenic	kg CO2 eq.	-1.09 E-2	5.05 E-3	1.14 E-2	0.00	0.00	0.00	0.00	1.28 E-2	0.00	0.00	0.00	3.98 E-7	0.00	4.06 E-6	-1.87 E-4
GWP-luluc	kg CO2 eq.	3.00 E-5	1.17 E-4	8.50 E-5	0.00	0.00	0.00	0.00	5.42 E-4	0.00	0.00	0.00	3.54 E-7	0.00	2.43 E-7	-1.39 E-5
ODP	kg CFC11 eq.	1.66 E-8	4.73 E-8	1.60 E-9	0.00	0.00	0.00	0.00	1.54 E-7	0.00	0.00	0.00	1.77 E-10	0.00	1.53 E-10	-1.34 E-9
AP	mol H+ eq.	1.50 E-3	1.06 E-3	1.04 E-4	0.00	0.00	0.00	0.00	6.24 E-3	0.00	0.00	0.00	3.91 E-6	0.00	4.22 E-6	-3.77 E-5
EP-freshwater	kg PO4 eq.	2.17 E-5	4.05 E-5	5.17 E-6	0.00	0.00	0.00	0.00	1.58 E-4	0.00	0.00	0.00	6.86 E-8	0.00	7.92 E-8	-5.85 E-6
EP-marine	kg N eq.	4.68 E-4	2.56 E-4	5.36 E-5	0.00	0.00	0.00	0.00	1.82 E-3	0.00	0.00	0.00	1.30 E-6	0.00	1.44 E-6	-7.08 E-6
EP-terrestrial	mol N eq.	2.38 E-3	2.71 E-3	1.98 E-4	0.00	0.00	0.00	0.00	1.24 E-2	0.00	0.00	0.00	1.42 E-5	0.00	1.57 E-5	-6.89 E-5
POCP	kg NMVOC eq.	1.03 E-3	9.24 E-4	1.36 E-4	0.00	0.00	0.00	0.00	4.89 E-3	0.00	0.00	0.00	4.07 E-6	0.00	5.72 E-6	-1.87 E-5
ADP-minerals & metals	kg Sb eq.	7.69 E-7	1.79 E-5	1.45 E-7	0.00	0.00	0.00	0.00	4.40 E-5	0.00	0.00	0.00	2.88 E-8	0.00	5.28 E-9	-1.48 E-8
ADP-fossil	MJ, net calorific value	5.23 E+0	3.67 E+0	3.86 E-1	0.00	0.00	0.00	0.00	2.17 E+1	0.00	0.00	0.00	1.21 E-2	0.00	1.19 E-2	-2.32 E-1
WDP	m3 world eq. deprived	4.37 E+0	3.05 E-2	2.50 E-2	0.00	0.00	0.00	0.00	1.03 E+1	0.00	0.00	0.00	6.11 E-5	0.00	5.24 E-4	-4.52 E-3

GWP-total = Global Warming Potential total
GWP-fossil = Global Warming Potential fossil fuels
GWP-biogenic = Global Warming Potential biogenic
GWP-luluc = Global Warming Potential land use and land use change
ODP = Depletion potential of the stratospheric ozone layer
AP = Acidification Potential, Accumulated Exceedence
EP-freshwater = Eutrophication Potential, fraction of nutrients reaching freshwater end compartment
EP-marine = Eutrophication Potential, fraction of nutrients reaching marine end compartment
EP-terrestrial = Eutrophication Potential, Accumulated Exceedence
POCP = Formation potential of tropospheric ozone photochemical oxidants
ADP-minerals&metals = Abiotic Depletion Potential for non fossil resources [2]
ADP-fossil = Abiotic Depletion for fossil resources potential [2]
WDP = Water (user) deprivation potential, deprivation-weighted water consumption [2]

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.

ENVIRONMENTAL IMPACT per functional unit or declared unit (additional indicators A2)

	UNIT	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PM	Disease incidence	1.54 E-8	1.31 E-8	1.27 E-9	0.00	0.00	0.00	0.00	6.98 E-8	0.00	0.00	0.00	5.05 E-11	0.00	8.07 E-11	-1.05 E-10
IRP	kBq U235 eq.	1.01 E-2	1.78 E-2	1.89 E-3	0.00	0.00	0.00	0.00	6.97 E-2	0.00	0.00	0.00	6.35 E-5	0.00	5.62 E-5	-3.32 E-3
ETP-fw	CTUe	1.08 E+1	5.30 E+0	6.38 E-1	0.00	0.00	0.00	0.00	4.39 E+1	0.00	0.00	0.00	1.05 E-2	0.00	2.06 E+0	-7.65 E-2
HTP-c	CTUh	3.22 E-10	2.13 E-10	3.31 E-11	0.00	0.00	0.00	0.00	1.33 E-9	0.00	0.00	0.00	3.15 E-13	0.00	6.12 E-13	-2.00 E-12
HTP-nc	CTUh	1.98 E-8	4.16 E-9	4.28 E-10	0.00	0.00	0.00	0.00	5.70 E-8	0.00	0.00	0.00	9.84 E-12	0.00	8.21 E-12	-6.68 E-11
SQP	---	1.33 E+0	1.49 E+0	2.43 E-1	0.00	0.00	0.00	0.00	7.23 E+0	0.00	0.00	0.00	7.10 E-3	0.00	2.77 E-2	-2.91 E-2

PM = Potential incidence of disease due to PM emissions
IRP = Potential Human exposure efficiency relative to U235 [1]
ETP-fw = Potential Comparative Toxic Unit for ecosystems [2]
HTP-c = Potential Comparative Toxic Unit for humans [2]
HTP-nc = Potential Comparative Toxic Unit for humans, non-cancer [2]
SQP = Potential soil quality index [2]

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.

RESOURCE USE per functional unit or declared unit (A1 / A2)

	UNIT	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ	2.32 E-1	7.99 E-2	4.11 E-2	0.00	0.00	0.00	0.00	8.24 E-1	0.00	0.00	0.00	1.86 E-4	0.00	1.89 E-4	-1.97 E-2
PERM	MJ	8.61 E-3	5.81 E-3	8.95 E-4	0.00	0.00	0.00	0.00	3.58 E-2	0.00	0.00	0.00	1.78 E-5	0.00	1.29 E-5	-1.38 E-3
PERT	MJ	2.41 E-1	8.57 E-2	4.20 E-2	0.00	0.00	0.00	0.00	8.60 E-1	0.00	0.00	0.00	2.04 E-4	0.00	2.02 E-4	-2.11 E-2
PENRE	MJ	5.23 E+0	3.67 E+0	3.87 E-1	0.00	0.00	0.00	0.00	2.17 E+1	0.00	0.00	0.00	1.21 E-2	0.00	1.19 E-2	-2.32 E-1
PENRM	MJ	6.16 E-7	0.00	0.00	0.00	0.00	0.00	0.00	1.44 E-6	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PENRT	MJ	5.23 E+0	3.67 E+0	3.87 E-1	0.00	0.00	0.00	0.00	2.17 E+1	0.00	0.00	0.00	1.21 E-2	0.00	1.19 E-2	-2.32 E-1
SM	MJ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RSF	MJ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NRSF	MJ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FW	m3	1.02 E-1	7.10 E-4	5.82 E-4	0.00	0.00	0.00	0.00	2.40 E-1	0.00	0.00	0.00	1.42 E-6	0.00	1.22 E-5	-1.05 E-4

PERE = Use of renewable energy excluding renewable primary energy resources
PERM = Use of renewable energy resources used as raw materials
PERT = Total use of renewable primary energy resources
PENRE = Use of non-renewable primary energy resources excluding non-renewable 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 resources
SM = Use of secondary materials
RSF = Use of renewable secondary fuels
NRSF = Use of non renewable secondary fuels
FW = Use of net fresh water

OUTPUT FLOWS AND WASTE CATEGORIES per functional unit or declared unit (A1 / A2)

	UNIT	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
HWD	kg	1.31 E-4	0.00	0.00	0.00	0.00	0.00	0.00	3.05 E-4	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NHWD	kg	4.71 E-3	8.13 E-3	2.55 E-2	0.00	0.00	0.00	0.00	1.99 E-1	0.00	0.00	0.00	0.00	0.00	4.67 E-2	0.00
RWD	kg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CRU	kg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MFR	kg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MER	kg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EEE	MJ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ETE	MJ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

HWD = Hazardous Waste Disposed
NHWD = Non Hazardous Waste Disposed
RWD = Radioactive Waste Disposed
CRU = Components for reuse
MFR = Materials for recycling
MER = Materials for energy recovery
EEE = Exported Electrical Energy
ETE = Exported Thermal Energy

BIOGENIC CARBON CONTENT per functional unit or declared unit (A1 / A2)

	UNIT	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
BCCpr	kg C	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BCCpa	kg C	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

BCCpr = Biogenic carbon content in product
BCCpa = Biogenic carbon content in packaging

CALCULATION RULES

Data quality and data collection period

Data quality requirements follow EN15804+A2:2019, data is checked for plausibility with mass balances in the foreground processes. Used datasets are complete according to the system boundary, and are as current as possible. Data collection period is of reference year 2021, based on 1 year averaged data. Data gaps such as i.e. transport data, end of life scenarios, were covered with data generic values for transport as described in the Product Environmental Footprint Category Rules - Decorative Paints document version 1.0 published by CEPE and reviewed in April 2018. Processes used in the background modelling are referring to the widely used databases of recent release (Ecoinvent 3.6, 2019; CEPE, 2016) and are consistent with the foreground modelling in system limits and allocation procedures. The technological and geographical coverage reflects the physical reality as far as possible taking into account the technology mix, location, and representativeness of technologies, input materials, and input energies for the region. Data quality is assessed as fair and adequate to the goal and scope of the study.

Cut-off criteria and allocation procedures

No cut-offs were intentionally applied to inputs and outputs within the system boundaries in the models. Coproduct and system allocation in the foreground system is according to the EN15804+A2. Cut-off and allocation procedures in the background processes are according to the respective methodologies and estimated to be methodologically consistent with the foreground system.

Parameter	Unit	Value
Coverage test data, CR 98%	m2/L	15,60
Paint density	kg/L	1.31
VOC content (ISO 11890-2: 2020)	g/L	1
Durability	years	15
Quality level	-	Q1

SCENARIOS AND ADDITIONAL TECHNICAL INFORMATION

Product stage is reported in one module A1-A3. This life cycle stage includes the extraction and processing of raw materials for the product and the packaging, their transportation to the production site by road, and the manufacturing process. The latter includes all processes linked to the production, such as storing, mixing, packing, and internal transportation, covering material and energy consumption, waste treatment and emissions. Data regarding paint production was provided for each paint variation (formulation) and for the production site for the shared processes. Data on packaging, transportation distances and transportation modes are derived from the default scenarios of the product environmental footprint category rules (PEF CR) for decorative paints v.1 (2018). Electricity consumption was modelled based on the primary data on the amount and source of the electricity, with the use of Ecoinvent 3.6 database for modelling of the background processes.

Product's distribution to the building site (A4) includes transportation as well as storage and wastage of the products along the distribution leg (formally A4-A5, classified within the study to A4). The distribution leg includes two intermediate points between the production site and the final user: regional distribution centre (RDC) and point of sales (PoS). Transport and storage data are based on the scenarios developed within the PEF CR for Decorative Paints (v1).

Transport parameters	Raw materials	Packaging transport	Transport to the RDC	Transport to the PoS	Transport to customer	Transport to the waste disposal
Vehicle type used for transport	[1]	[1]	[1]	[1]	[2]	[1]
Distance, km	460	250	250	250	60	80
Capacity, t	7.5-16	7.5-16	7.5-16	7.5-16	N/A	7.5-16
Average load factor, t	3.29	3.29	3.29	3.29	N/A	3.29
Bulk density of transported products, kg/m3	1427	1427	1427	1427	N/A	1427

[1] = Articulated lorry;
[2] = Passenger car with internal combustion engine.

Waste treatment and end of life parameters	unit	Hazardous waste	Non-hazardous waste	Wet paint waste	Dried paint film
Share sent to incineration with energy recovery	w/w	0.45	0.45	0.45	0
Share sent to landfilling	w/w	0.55	0.55	0.55	1
VOC emissions to air	% of VOC content	NA	NA	100%, emissions to air	NA
Biocides leaching	% of biocidal content	NA	NA	100%, emissions to fresh water	100%, emissions to fresh water
Energy recovery from incineration, electricity	MJ/kg of incinerated waste	17.1	1.01	1.01	NA
Energy recovery from incineration, heat	MJ/kg of incinerated waste	1.27	2.16	2.16	NA

Stage A5 refers to the paint application and follows the scenario of application developed in the PEF CR for decorative paints v1, including auxiliary materials composition. The stage includes use of auxiliary materials, use of water and water heating, waste water treatment processes, and other waste treatment.

Application paramter	Unit	Value
Auxiliary materials	kg/m2 of painted surface	1.12E-2
Tap water	kg/m2 of painted surface	0.37
Energy for water heating	MJ/m2 of painted surface	0.03
Waste water treatment	kg/m2 of painted surface	0.37
Unused paint disposed	kg/m2 of painted surface	0,0104
Other non-hazardous waste generated	kg/m2 of painted surface	0,0152
Direct emissions to air, VOC	kg/m2 of painted surface	1.23E-4

Parameter	Unit	Value
Reference service life	years	50
Refurbishment process	-	Paint is reapplied following the initial life cycle
Refurbishment cycle	Number per RSL	2,33
Energy input during refurbishment	kWh	all inputs as follows from the initial application
Material input for refurbishment	kg	all inputs as follows from the initial application
Waste material	kg	all outputs as follows from the initial application

Electricity generation on site

VITEX supports development of renewable energy in Greece. The manufacturing facilities are equipped with the 10000 m² roof solar park that supplies electricity to the grid. In the period under evaluation, 763,25 kWh is supplied to the electricity grid, which potentially could have covered 49,5% of the total yearly electricity demand of the company.

VOC emissions

The VOC impact of the considered VITEX products is near zero, which is confirmed by the available test reports by EUROFINS regarding VOC content and VOC emissions (for the paints of the worst performing case scenario). Eurofins Indoor Air Comfort Gold Certificates are achieved.

LEED attestation

LEED v4 and LEED v4.1 attestations were performed by EUROFINS, regarding the compliance of the products with the US Green Building requirements (EQ Credit).

DECLARATION OF SVHC

None of the substances contained in the product are listed in the “Candidate List of Substances of Very High Concern for authorisation” or they do not exceed the threshold with the European Chemicals Agency

REFERENCES

Dahlgren, L. at al, (2016) Raw materials LCI database for the European coatings and printing ink industries. Documentation of methodology v. 3.0. Commissioned by CEPE. IVL Swedish Environmental Research Institute Ltd.

EN13300 - Paints and varnishes. Water-borne coating materials and coating systems for interior walls and ceilings. Classification

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

ISO 11998 - Paints and varnishes. Determination of wet-scrub resistance and cleanability of coatings.

ISO 14040:2006 Environmental management — Life cycle assessment — Principles and framework

ISO 14044:2006 Environmental management — Life cycle assessment — Requirements and guidelines

ISO 6504-3:2019 Paints and varnishes — Determination of hiding power — Part 3: Determination of hiding power of paints for masonry, concrete and interior use

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REMARKS

None