



ENVIRONMENTAL PRODUCT DECLARATION

EPD of multiple products, based on a representative product, in accordance with ISO 14025 and EN 15804:2012+A2:2019/AC:2021 for:

Mapecoat ACT Satin



An EPD should provide current information and may be updated if conditions change. The stated validity is, therefore, subject to the continued registration and publication at www.environdec.com."

Programme: The International EPD® System; www.environdec.com	Programme operator: EPD International AB	EPD registration number: S-P-01104	Publication date: 2018-02-06	Valid until: 2029-02-08	Revision date: 2024-02-09	Geographical scope: Global
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1. COMPANY DESCRIPTION / GOAL & SCOPE

Founded in 1937 in Milan, Italy, Mapei produces adhesives and complementary products for laying all types of floor, wall and coating materials, and also specializes in other chemical products used in the building industry, such as waterproofing products, specialty mortars, admixtures for concrete, cement additives, products for underground constructions and for the restoration of concrete and historical buildings. There are currently 102 subsidiaries in the Mapei Group, with a total of 90 production facilities located around the world in 35 different countries and in 5 different continents. Mapei also has 32 central laboratories. Most locations are ISO 9001 and ISO 14001 or EMAS-certified.

Mapei invests 12% in its company's total work-force and 5% of its turnover in Research & Development; in particular, 70% of its R&D efforts are directed to develop eco-sustainable and environmentally friendly products, which give important contribution to all major green rating systems for eco-sustainable buildings such as LEED and BREEAM. Furthermore, Mapei has developed a sales and technical service network with offices all over the world and offers an efficient Technical Assistance Service that is valued by architects, engineers, contractors and owners.

The goal of the study is to provide necessary data and documentation to produce an EPD according to the requirements of PCR Environdec (Version 1.3.2, 2023-12-08) under EN 15804:2012+A2:2019/AC:2021 and to have more comprehension about the environmental impacts related to **Mapecoat ACT Satin** manufactured in Mapei SpA located in Mediglia (MI), including packaging of the finished products.

Target audiences of the study are customers and other parties with an interest in the environmental impacts of **Mapecoat ACT Satin**. This analysis shall not support comparative assertions intended to be disclosed to the public.



2. PRODUCT DESCRIPTION

Mapecoat ACT Satin is an acrylic-based enamel paint for interiors with special biological protection agents with a broad spectrum of action, able to counteract the deposit and proliferation of moulds, viruses and bacteria on surfaces, even when frequently washed and disinfected. It gives the surface a smooth and satin finish. It stands out for its excellent resistance to washing and a very low dirt pick-up, making the surfaces easy to clean. These characteristics, together with the ease of application, make Mapecoat ACT Satin suitable for the protection and decoration of all environments where it is necessary to guarantee a high level of hygiene and prolonged resistance to cleaning operations, such as for example medical-health environments as well as facilities subject to HACCP protocol.

Mapecoat ACT Satin is available in 4 and 14 liters plastic bucket

For more information see the TDS (Technical Data Sheet) on Mapei SpA website (www.mapei.com).

3. CONTENT DECLARATION

The main components and ancillary materials of the products included in this EPD are the following:

Table 1: Composition referred to 1 kg of product packaged in 14 and 4 lt plastic bucket.

Materials	Percentage (%) by mass	Post-consumer recycled material weight-%	Biogenic Material, weight-% and kgC/product or DU
Water	<10%	0	0 resp. 0
Polymeric dispersion	<70%	0	0 resp. 0
Pigments	<25%	0	0 resp. 0
Packaging Materials	Weight-% (versus the product)		Weight biogenic carbon, kg C/product or DU
PP	4-6%		0
Iron	0-0,3%		0
Wood	1%		0,005

The product does not contain a concentration higher than 0,1% (by unit weight) of either carcinogenic substances or substances of very high concern (SVHC) on the REACH Candidate List published by the European Chemicals Agency.

4. DECLARED UNIT AND REFERENCE SERVICE LIFE

The declared unit is 1 kg of finished product packaging included.

Due to the selected system boundary, the reference service life of the products is not specified.

5. SYSTEM BOUNDARIES AND ADDITIONAL TECHNICAL INFORMATION

The approach is “cradle to gate” (A1–A3) with modules C1–C4 and module D and optional modules (A1–A3 + A4–A5 + C + D):

- A1, A2, A3 (Product stage): extraction and processing of raw materials and packaging (A1), transportation up to the factory gate (A2), manufacturing of the finished product (A3)
- A4–A5 (Construction process stage): transport of the finished product to final customers and installation into the building.
- C1, C2, C3, C4 (End of Life stage): with a collection rate of 100% as C&D waste, tra transports are carried out by lorry over 100 km (C2). A recycling ratio (C3) of 70% is considered in accordance with the European Directive 2008/98/CE. The remaining 30% is landfilled (C4).
- D (Resource recovery stage): contains credit from the recycling of the product in module C3 and the credit from the incineration of a fraction of packaging waste. The product can be collected and recycled for use in substitution of virgin raw aggregates.

Table 2: System boundaries

	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-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	MND	MND	MND	MND	MND	MND	MND	X	X	X	X	X
Geography	IT	IT, EU	IT	EU	EU	-	-	-	-	-	-	-	EU	EU	EU	EU	EU
Specific data	> 90%					-	-	-	-	-	-	-	-	-	-	-	-
Variation – products	< 10%					-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	0%					-	-	-	-	-	-	-	-	-	-	-	-

MND: Module Not Declare

A brief description of production process is the following:

The production process starts from raw materials, that are purchased from external and intercompany suppliers and stored in the plant. Bulk raw materials are stored in specific silos and added automatically in the production mixer, according to the formula of the product. Other raw materials, supplied in bags, big bags or tanks, are stored in the warehouse and added automatically or manually in the mixer. The production is a discontinuous process, in which all the components are mechanically mixed in batches. The semi-finished product is then packaged, put on wooden pallets and stored in the finished products warehouse. The quality of final products is controlled before the sale.

Figure 1: Application process detail



Table 3: Transport to the building site (A4)

Scenario information	Value	Unit
Means of transport: truck-trailer euro 5, gross weight 34-40 t, payload capacity 27 t		
Litres of fuel (diesel for truck)	1,89E-005	l/100km
Transport distance - truck	1E003	km
Capacity utilisation (including empty runs) - truck	0,85	%
Gross density of products transported	1200	kg/m ³
Capacity utilisation volume factor	0,85	%

Table 4: Installation into the building site (A5)

Scenario information	Value	Unit
Ancillary materials for installation	0	kg
Water use	0,0001	m ³
Other resources use	0	kg/m ²
Electricity and other energy consumption for the installation	0,07	kWh
Waste materials on building site before waste processing, generated by the product's installation (specified by type)	0,0449(PP) 0,0117(wood) 0,0102(iron)	kg
Output materials (specified by type) as result of waste processing at the building site e.g. of collection for recycling, for energy recovery, disposal (specified by route)	0,0402(recycling) 0,00225(landfill) 0,0108(incineration)	kg

Table 5: End of Life (C1-C4) per DU

Scenario information	Value	Unit
Collected separately	0	kg
Collected with mixed construction waste	1,01 kg	kg
Reuse	0	kg
Recycling	0,689 kg	kg
Energy recovery	0	kg
Landfill	0,295 kg	kg
Transport to waste treatment	100	km

6. CUT-OFF RULES AND ALLOCATION

Criteria for the exclusion of inputs and outputs (cut-off rules) in the LCA, information modules and any additional information are intended to support an efficient calculation procedure. They are not applied in order to hide data. Cut-off criteria, where applied, are described in Table 3.

Input flows are covered for the whole formula.

Table 3: Cut-off criteria

Process excluded from study	Cut-off criteria	Quantified contribution from process
A3: production (auxiliary materials)	Less than 10^{-5} kg/kg of finished product	Sensitivity study demonstrates a relative contribution lower than 0,5%

For the allocation procedure and principles consider the following table (Table 4):

Table 4: Allocation procedure and principles

Module	Allocation Principle
A1	All data are referred to 1 kg of product A1: electricity is allocated to the specific production line
A3	All data are referred to 1 kg of packaged product A3-wastes: all data are allocated to the whole production plant

7. ENVIRONMENTAL PERFORMANCE AND INTERPRETATION



GWP

Climate change

GWPTotal - Global Warming Potential refers to the emission/presence of GHGs (greenhouse gases) in the atmosphere (mainly CO₂, N₂O, CH₄) which contribute to the increase in the temperature of the planet. GWP-total considers:

- GWP-fossil
- GWP-biogenic
- GWP-luluc (land use and land use change)



ODP

Ozone Depletion

Ozone Depletion Potential refers to the degradation of the stratospheric layer of the ozone involved in blocking the UV component of sunrays. Depletion is due to particularly reactive components that originate from chlorofluorocarbon (CFC) or (CFM).



AP

Acidification

Acidification Potential refers to the emission of specific acidifying substances (i.e. NO_x, SO_x) in the air. These substances decrease the pH of the rainfall with predictable damages to the ecosystem.



EP

Eutrophication

Eutrophication Potential refers to the nutrient enrichment, which determines unbalance in ecosystems and causes the death of the fauna and decreased biodiversity in flora. It considers:

- EP-freshwater: aquatic freshwater
- EP-marine: aquatic marine
- EP-terrestrial



POCP

Photochemical ozone formation

The Photochemical Ozone Creation Potential is the ozone formation in low atmosphere. This is quite common in the cities where a great amount of pollutants (like VOC and NO_x) are emitted every day (industrial emissions and vehicles). It is mainly diffused during the summertime.



ADP

minerals&metals

Depletion of abiotic resources – minerals and metals

Abiotic Depletion Potential elements refers to the depletion of the mineral resources.



ADP-fossil

Depletion of abiotic resources – fossil fuel

Abiotic Depletion Potential fossil fuel refers to the depletion of the fossil fuel resources.



WDP

Water use

It expresses the potential deprivation of water, that consists in not having the water needs satisfied.

The following tables show the environmental impacts for the products considered according to the requirements of EN15804:2012+A2:2019/AC:2021.

The results are referred to the declared unit (see § 4). The additional environmental indicators are not declared. 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.

Mapecoat ACT Satin (1 kg of product in 14 and 4 lt plastic bucket)

Table 5: Mapecoat ACT Satin: Potential environmental impact – mandatory indicators according to EN 15804 referred to 1 kg of product in 14 and 4 lt plastic bucket.

	14 lt bucket								4 lt bucket
	A1-A3	A4	A5	C1	C2	C3	C4	D	A-C
GWP-total [kg CO2 eq.]	1,76E+00	6,24E-02	3,79E-02	1,58E-03	7,72E-03	2,54E-03	7,36E-03	-1,57E-02	ND*
GWP-fossil [kg CO2 eq.]	1,75E+00	6,27E-02	2,48E-02	1,57E-03	7,76E-03	2,55E-03	4,37E-03	-1,56E-02	ND*
GWP-biogenic [kg CO2 eq.]	6,31E-03	-9,21E-04	1,30E-02	1,37E-05	-1,14E-04	-2,64E-05	2,97E-03	-4,01E-05	ND*
GWP-luluc [kg CO2 eq.]	3,29E-03	5,78E-04	6,88E-06	1,71E-07	7,15E-05	1,95E-05	1,38E-05	-7,02E-06	ND*
ODP [kg CFC-11 eq.]	7,65E-07	8,13E-15	4,87E-14	2,90E-14	1,00E-15	4,34E-15	1,13E-14	-6,52E-14	ND*
AP [Mole of H+ eq.]	1,11E-02	2,02E-04	1,79E-05	3,35E-06	9,77E-06	1,35E-05	3,15E-05	-1,92E-05	ND*
EP freshwater [kg P eq.]	3,98E-05	2,28E-07	1,49E-08	5,88E-09	2,82E-08	8,84E-09	8,93E-09	-1,73E-08	ND*
EP marine [kg N eq.]	1,03E-03	9,13E-05	6,08E-06	8,02E-07	3,29E-06	6,22E-06	8,13E-06	-7,20E-06	ND*
EP terrestrial [Mole of N eq.]	1,01E-02	1,03E-03	6,82E-05	8,38E-06	3,96E-05	6,87E-05	8,94E-05	-7,86E-05	ND*
POCP [kg NMVOC eq.]	5,33E-03	1,82E-04	1,59E-05	2,14E-06	8,39E-06	1,69E-05	2,45E-05	-1,86E-05	ND*
ADP-element [kg Sb eq.]	9,26E-03	4,14E-09	4,53E-10	2,43E-10	5,12E-10	2,78E-09	2,05E-10	-7,09E-10	ND*
ADP-fossil [MJ]	4,04E+01	8,51E-01	7,10E-02	3,30E-02	1,05E-01	5,11E-02	5,90E-02	-2,70E-01	ND*
WDP [m ³ world equiv.]	3,10E-01	7,55E-04	7,54E-03	3,45E-04	9,32E-05	5,05E-04	4,87E-04	-6,78E-04	ND*

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; **EP_{FRESHWATER}**: Eutrophication Potential, freshwater; **EP_{MARINE}**: Eutrophication Potential, marine; **EP_{TERRESTRIAL}**: Eutrophication Potential, terrestrial; **POCP**: Formation potential of tropospheric ozone; **ADP_{MINERALS&METALS}**: Abiotic Depletion Potential for non-fossil resources; **ADP_{FOSSIL}**: Abiotic Depletion Potential for fossil resources; **WDP**: Water Deprivation Potential.

*ND (Not Declared) = Variation not declared because <10% according to PCR current version § 2.2.2.1

Table 6: Mapecoat ACT Satin: Potential environmental impact – additional mandatory and voluntary indicators referred to 1 kg of product in 14 and 4 lt plastic bucket

	14 lt bucket								4 lt bucket
	A1-A3	A4	A5	C1	C2	C3	C4	D	A-C
GWP-GHG [kg CO2 eq.]	1,76E+00	6,35E-02	2,49E-02	1,59E-03	7,85E-03	2,58E-03	4,40E-03	-1,57E-02	ND*

GWP-GHG: This indicator accounts for all greenhouse gases except biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. As such, the indicator is identical to GWP-total except that the CF for biogenic CO₂ is set to zero. This new indicator cannot be compared with the GWP-GHG of the EPD according to the old PCR 1.2 (and earlier versions).

*ND (Not Declared) = Variation not declared because <10% according to PCR current version § 2.2.2.1

Table 7: Mapecoat ACT Satin: Use of resources referred to 1 kg of product in 14 and 4 lt plastic bucket.

	14 lt bucket								4 lt bucket
	A1-A3	A4	A5	C1	C2	C3	C4	D	A-C
PERE [MJ]	1,46E+00	6,19E-02	2,56E-01	1,97E-02	7,65E-03	4,75E-03	9,63E-03	-4,28E-02	ND*
PERM [MJ]	2,22E-01	0,00E+00	-2,22E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND*
PERT [MJ]	1,68E+00	6,19E-02	3,35E-02	1,97E-02	7,65E-03	4,75E-03	9,63E-03	-4,28E-02	ND*
PENRE [MJ]	3,82E+01	8,54E-01	2,14E+00	3,30E-02	1,06E-01	5,12E-02	5,91E-02	-2,70E-01	ND*
PENRM [MJ]	2,07E+00	0,00E+00	-2,07E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND*
PENRT [MJ]	4,02E+01	8,54E-01	7,10E-02	3,30E-02	1,06E-01	5,12E-02	5,91E-02	-2,70E-01	ND*
SM [kg]	5,00E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND*
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	ND*
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	ND*
FW [m3]	7,22E-03	6,78E-05	1,89E-04	1,59E-05	8,38E-06	1,46E-05	1,49E-05	-4,98E-05	ND*

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 (primary energy and primary energy resources used as raw materials); **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 resources (primary energy and primary energy resources used as raw materials); **SM:** Use of secondary material; **RSF:** Use of renewable secondary fuels; **NRSF:** Use of non-renewable secondary fuels; **FW:** Net use of fresh water.

*ND (Not Declared) = Variation not declared because <10% according to PCR current version § 2.2.2.1

Table 8: Mapecoat ACT Satin: Waste production and output flows referred to 1 kg of product in 14 and 4 lt plastic bucket.

	14 lt bucket								4 lt bucket
	A1-A3	A4	A5	C1	C2	C3	C4	D	A-C
HWD [kg]	8,02E-03	2,64E-12	-3,53E-12	-2,58E-12	3,27E-13	-1,33E-13	1,29E-12	-3,61E-11	ND*
NHWD [kg]	1,89E-02	1,30E-04	8,18E-03	2,42E-05	1,61E-05	1,35E-05	2,96E-01	-1,45E-02	ND*
RWD [kg]	7,04E-04	1,60E-06	8,52E-06	5,23E-06	1,97E-07	6,87E-07	6,74E-07	-9,88E-06	ND*
CRU [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	ND*
MFR [kg]	8,53E-03	0,00E+00	3,73E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	19%
MER [kg]	0,00E+00	0,00E+00	1,71E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	17%
EEE [MJ]	0,00E+00	0,00E+00	3,18E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	13%
EET [MJ]	0,00E+00	0,00E+00	3,73E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	20%

HWD: Hazardous waste disposed; **NHWD:** Non-Hazardous waste disposed; **RWD:** Radioactive waste disposed; **CRU:** Components of reuse; **MFR:** Materials for recycling; **MER:** Materials for energy recovery; **EEE:** Exported electrical energy; **EET:** Exported thermal energy

*ND (Not Declared) = Variation not declared because <10% according to PCR current version § 2.2.2.1

Table 9: Mapecoat ACT Satin: Information on biogenic carbon content at the factory gate referred to 1 kg of product in 14 and 4 lt plastic bucket.

	14 lt bucket	4 lt bucket
	Quantity	Quantity
Biogenic carbon content in product [kg]	0,00E+00	ND*
Biogenic carbon content in packaging [kg]	5,03E-03	ND*

*ND (Not Declared) = Variation not declared because <10% according to PCR current version § 2.2.2.1

More details about electrical mix used in this EPD, is shown below:

	Data source	GWP-GHG	Unit
Residual electricity grid mix (IT) – 2022	AIB	0,564	kg CO ₂ -eqv/kWh

8. DATA QUALITY

Table 10: Data quality

Dataset & Geographical reference	Database (source)	Temporary reference
A1; A3		
Inorganic binder	NEPD-2205-1014-NO	2022
Filler	Sphera Database	2022
Additives	Sphera Database; ecoinvent 3.9	2022
Organic binder	Sphera Database	2022
Water	Sphera Database	2022
Residual electricity grid mix (NO)	Sphera Database	2022
Packaging components (EU)	Sphera Database; ecoinvent 3.9	2022
A2		
Truck, Euro 5, 27t payload (GLO)	Sphera Database	2022
Diesel for transport (EU)	Sphera Database	2019
A4		
Truck, Euro 6, 27t payload (GLO)	Sphera Database	2022
Diesel for transport (EU)	Sphera Database	2019
A5		
Tap water from surface water	Sphera Database	2022
Commercial waste in municipal waste incineration plant	Sphera Database	2022
Inert matter on landfill	Sphera Database	2022
Electricity grid mix (IT)	Sphera Database	2019

C1-C4		
Truck (EURO 6 - 9,3 ton payload – GLO)	Sphera Database	2022
Electricity grid mix (EU)	Sphera Database	2019
Diesel for transport (EU)	Sphera Database	2019
Construction waste dumping (EU)	Sphera Database	2022
Construction waste treatment (EU)	Sphera Database	2022

All data included in table above refer to a period between 2019 and 2022; the most relevant ones are specific from supplier, while the others (i.e. transport and minor contribution dataset), come from European and global databases. All dataset are not more than 10 years old according to EN 15804 §6.3.8.2 “Data quality requirements”.

The Quality level concerning datasets used in the EPD can be considered as “very good” or “good” according to Annex E of the EN 15804 (current version).

Primary data concern the year 2022 and represent the whole annual production.

9. ADDITIONAL INFORMATION

9.1 Biogenic carbon content

For **Mapecoat ACT Satin** the biogenic carbon content in packaging at the factory gate referred to 1 kg of product with packaging is 5,03E-03.

9.2 Recycled content

Product	Recycled material content (Pre-Consumer)
Mapecoat ACT Satin	5%

9.3 VOC

Volatile Organic Compounds (VOC) special tests and evidence have been carried out on the products, according to ISO 16000 parts 3, 6, 9 and 11 and CN/TS 16516. The paints have been evaluated in emission chambers, in order to detect their VOC emissions after 28 days storage in the ventilated chambers, to classify them with the suitable class in the French mandatory Logo Sanitaire.

Mapecoat ACT Satin meets the requirements for the emission **class A+**.

The next tables describe the limits at 28 days for the French A+ class and for the Italian protocol CAM (Criteri Ambientali Minimi)

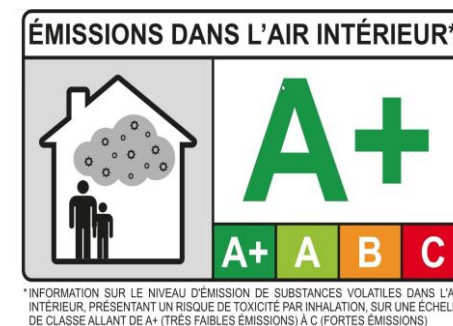


Table 11: A+ class – VOC limits

	A+ concentration (µg/m ³)
Formaldehyde	<10
Acetaldehyde	<200
Toluene	<300
Tetrachloroethylene	<250
Xylene	<200
1,2,4-Trimethylbenzene	<1000
1,4-Dichlorobenzene	<60
Ethylbenzene	<750
n-Butylacetate	<4800
2-Butoxyethanol	<1000
Styrene	<250
TVOC	<1000

Table 16: CAM protocol – VOC limits

	CAM concentration (µg/m ³)
Benzene Tricloroetilene (trielina) di-2-etilesilftalato (DEHP) Dibutilftalato (DBP)	1 (per ogni sostanza)
Formaldehyde	<10
Acetaldehyde	<200
Toluene	<300
Tetrachloroethylene	<250
Xylene	<200
1,2,4-Trimethylbenzene	<1000
1,4-Dichlorobenzene	<60
Ethylbenzene	<750
n-Butylacetate	<4800
2-Butoxyethanol	<1000
Styrene	<250
TVOC	<1000

10. DIFFERENCES VERSOUS PREVIOUS VERSIONS

The EPD has become a Multiple Products EPD according to the current PCR. There is no difference in terms of formulation and primary data.

11. VERIFICATION AND REGISTRATION

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 characterization factors); have equivalent content declarations; and be valid at the time of comparison. For further information about comparability, see EN 15804 and ISO 14025.

CEN standard EN15804 served as the Core Product Category Rules (PCR)	
PCR:	PCR 2019:14 Construction products (EN 15804:A2), Version 1.3.2, 2023-12-08, UN CPC code 54
PCR review was conducted by:	The Technical Committee of the International EPD® System. See www.environdec.com/TC for a list of members. Review chair: Lars-Gunnar Lindfors. 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 checked="" type="checkbox"/> EPD Process Certification <input type="checkbox"/> EPD Verification
Third party verifier:	Certiquality S.r.l. Number of accreditations: 0008prd rev.000
Accredited or approved by:	Accredia
Procedure for follow-up of data during EPD validity involves third-party verifier	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

12. REFERENCES

- EN 15804: SUSTAINABILITY OF CONSTRUCTION WORKS - ENVIRONMENTAL PRODUCT DECLARATIONS - CORE RULES FOR THE PRODUCT CATEGORY OF CONSTRUCTION PRODUCTS
- EUROPEAN DIRECTIVE 2008/98/EC
- EUROPEAN RESIDUAL MIXES VERSION 1.0, 2023-06-01 (AIB: ASSOCIATION OF ISSUING BODIES)
- GENERAL PROGRAMME INSTRUCTIONS OF THE INTERNATIONAL EPD® SYSTEM. VERSION 4.0
- ISO 14025 ENVIRONMENTAL LABELS AND DECLARATIONS - TYPE III ENVIRONMENTAL DECLARATIONS - PRINCIPLES AND PROCEDURES
- ISO 14044 ENVIRONMENTAL MANAGEMENT – LIFE CYCLE ASSESSMENT – REQUIREMENTS AND GUIDELINES
- PCR 2019:14 CONSTRUCTION PRODUCTS (EN 15804: A2), UN CPC CODE 54; VERSION 1.3.2
- EUROSTAT - TREATMENT OF WASTE-BY-WASTE CATEGORY, HAZARDOUSNESS AND WASTE MANAGEMENT OPERATIONS

13. CONTACT INFORMATION

EPD owner:	 Mapei SpA www.mapei.it
LCA author:	 Mapei SpA www.mapei.it ; Environmental Sustainability Office
Programme operator:	 The International EPD® System Address: EPD International AB Box 210 60 SE-100 31 Stockholm Sweden Website: www.environdec.com E-mail: info@environdec.com

HEAD OFFICE

MAPEI SpA

Via Cafiero, 22 - 20158 Milan

Tel. +39-02-37673.1

mapei.com

mapei@mapei.it

