





ENVIRONMENTAL PRODUCT DECLARATION

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

Topcem Pronto

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: | Programme operator: | EPD registration number: | Publication date: | Valid until: | Revision date: | Geographical scope: |
|---|----------------------|--------------------------|-------------------|--------------|----------------|---------------------|
| The International EPD® System; www.environdec.com | EPD International AB | S-P-00910 | 2016-09-16 | 2029-02-08 | 2024-02-09 | Global |



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 workforce 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 ecosustainable 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, 08-12-2023) under EN 15804;2012+A2;2019/AC;2021 and to have more comprehension about the environmental impacts related to Topcem Pronto manufactured in Mapei SpA located in Mediglia and Latina, including packaging of the finished products.



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





2. PRODUCT DESCRIPTION

Topcem Pronto is a pre-blended ready-to-use mortar with normal setting and controlled shrinkage based on a special hydraulic binder and graded aggregates. **Topcem Pronto** is characterized by high thermal conductivity ($\lambda = 2 \text{ W/mK}$), which makes it particularly suitable for laying heated screeds. **Topcem Pronto** is extremely easy to use: just mix with water. This prevents mistakes from being made in adding the correct amount of binder and properly graded aggregate, which could compromise the final performance characteristics of the screed when cured. **Topcem Pronto** is the ideal solution where good quality graded aggregate is hard to find or for job sites such as those in city centres where the logistics involved in mixing conventional binders can be difficult. **Topcem Pronto** is workable for the same length of time as conventional cement-based mortars but cures much faster.

Topcem Pronto is available in 25 kg bag

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

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 25 kg bag

| Materials | Percentage (%) by mass | Post-consumer recycled material weight-% | Biogenic Material,weight-% and kgC/product or DU | |
|---------------------|------------------------|--|---|--|
| Inorganic Binders | < 15% | 0 | 0 resp. 0 | |
| Organic Binders | < 0% | 0 | 0 resp. 0 | |
| Fillers | < 95% | 0 | 0 resp. 0 | |
| Additives | < 1% | 0 | 0 resp. 0 | |
| Packaging Materials | Weight-% (vers | us the product) | Weight biogenic carbon, kg C/product or DU | |
| Paper | < 0 | ,5% | 0,00136 | |
| LDPE | < (|),1% | 0 | |
| Wood | <. | 5% | 0,0086 | |

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, the 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 credits 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

| | Pro | duct sta | ige | | ruction s 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 | A 1 | A2 | А3 | A4 | A5 | B1 | B2 | В3 | В4 | B5 | В6 | В7 | C1 | C2 | C3 | C4 | D |
| Modules declared | X | X | Х | X | Х | MND | MND | MND | MND | MND | MND | MND | Х | Х | X | Х | Х |
| Geography | EU | EU | IT; EU | EU | EU | - | - | - | - | - | - | - | EU | EU | EU | EU | EU |
| Specific data | | | > 90% | | | - | - | - | - | - | - | - | - | - | - | - | - |
| Variation – products | | | 0% | | | - | - | - | - | - | - | - | - | - | - | - | - |
| Variation – sites | | | <10% | | | - | - | - | - | - | - | - | - | - | - | - | - |

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.

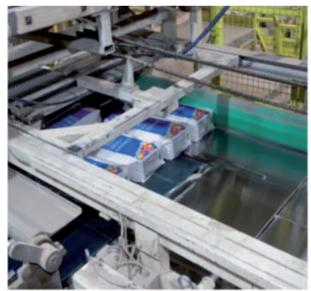








Figure 1: production process detail - © Photo Halvor Gudim





Table 3: Transport to the building site (A4)

| Scenario information | Value | Unit |
|---|--------|---------|
| Means of transport: truck-trailer euro 6, gross weight 34-40 t, payload capacity 27 t | | |
| Diesel consumption | 0.002 | l/100km |
| Transport distance | 1000 | km |
| Capacity utilisation (including empty runs) | 85 | % |
| Gross density of products transported | ~ 1300 | kg/m³ |
| Capacity utilisation volume factor | 1 | - |

Table 4: Installation into the building (A5)

| Scenario information | Value | Unit |
|--|--|-------|
| Ancillary materials for installation | 0 | kg |
| Water use | 6,80E-05 | m^3 |
| Other resources use | 0 | kg |
| Electricity grid mix (IT) | 0,00063 | MJ |
| Waste materials on building site before waste processing, generated by the product's installation (specified by type) | 0,00036 (Plastics) 0,02 (Wood) 0,00034 (Paper) 0,0102 (C&D waste) | 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) | 0,0109 (Incineration) 1,0E-05 (Landfill) 0,0127 (Recycling) | kg |
| Direct emission to ambient air, soil and water | 0 | kg |





Table 5: End of Life (C1-C4)

| Scenario information | Value | Unit |
|---|-------|------|
| Collected separately | 0 | kg |
| Collected with mixed construction waste | 1 | kg |
| Reuse | 0 | kg |
| Recycling | 0,31 | kg |
| Energy recovery | 0 | kg |
| Landfill | 0,69 | km |
| Transport to recycling | 100 | km |
| Transport to landfill | 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 6.. Input flows are covered for the whole formula.

Table 6: Cut-off criteria

| Process excluded from study | Cut-off criteria | Quantified contribution from process | | |
|--------------------------------------|--|--|--|--|
| A3: production (auxiliary materials) | LLESS THAN IU™ KO/KO OT TINISHED DYOQUCT | Sensitivity study demonstrates a relative contribution lower than 0.5% | | |

For the allocation procedure and principles consider the following table (Table 7):

Table 7: Allocation procedure and principles

| Module | Allocation Principle | | | | | |
|--------|---|--|--|--|--|--|
| Al | All data are referred to 1 kg of product | | | | | |
| AI | A1: electricity is allocated to the specific production line | | | | | |
| A 7 | All data are referred to 1 kg of packaged product | | | | | |
| A3 | A3-wastes: all data are allocated to the whole production plant | | | | | |





7. ENVIRONMENTAL PERFORMANCES 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)



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 NOx) are emitted every day (industrial emissions and vehicles). It is mainly diffused during the summertime.



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 chlorofluoromethane (CFM).



ADP minerals&metals

Depletion of abiotic resources – minerals and metals

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



ΑР

Acidification

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



ADP-fossil

Depletion of abiotic resources - fossil fuel

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



EΡ

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: acquatic freshwater
- EP-marine: acquatic marine
- EP-terrestrial



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) and are representative of the weighted average of the data of the plants covered by the following EPD. 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. We discourage the use of the outcomes from modules A1-A3 without considering the results obtained from modules C.

Topcem Pronto (1 kg of product in 25 kg bag)

Table 8: Topcem Pronto: Potential environmental impact – mandatory indicators according to EN 15804 referred to 1 kg of product in packaging.

| | A1-A3 | A4 | A5 | C1 | C2 | C3 | C4 | D |
|---------------------------------|-----------|----------|----------|----------|-----------|----------|----------|-----------|
| GWP total [kg CO2 eq.] | 1,09E-01 | 3,03E-02 | 3,24E-02 | 2,41E-03 | 7,59E-03 | 7,94E-04 | 1,03E-02 | -7,41E-03 |
| GWP fossil [kg CO2 eq.] | 1,30E-01 | 2,97E-02 | 1,08E-02 | 2,37E-03 | 7,63E-03 | 7,85E-04 | 1,03E-02 | -7,40E-03 |
| GWP biogenic [kg CO2 eq.] | -2,11E-02 | 3,62E-04 | 2,17E-02 | 3,20E-05 | -1,13E-04 | 2,98E-06 | 2,88E-05 | -6,27E-06 |
| GWP luluc [kg CO2 eq.] | 7,04E-05 | 2,74E-04 | 4,21E-06 | 3,16E-07 | 7,05E-05 | 6,01E-06 | 3,24E-05 | -3,04E-06 |
| ODP [kg CFC-11 eq.] | 3,47E-09 | 3,84E-15 | 3,85E-15 | 5,43E-14 | 6,67E-16 | 1,34E-15 | 2,65E-14 | -1,38E-14 |
| AP [Mole of H+ eq.] | 3,20E-04 | 3,64E-05 | 7,00E-06 | 3,23E-06 | 8,72E-06 | 4,17E-06 | 7,40E-05 | -7,79E-06 |
| EP freshwater [kg P eq.] | 6,44E-06 | 1,08E-07 | 4,06E-09 | 1,33E-08 | 2,78E-08 | 2,72E-09 | 2,10E-08 | -3,99E-09 |
| EP marine [kg N eq.] | 5,04E-05 | 1,21E-05 | 2,55E-06 | 1,01E-06 | 2,87E-06 | 1,91E-06 | 1,91E-05 | -2,95E-06 |
| EP terrestrial [Mole of N eq.] | 5,58E-04 | 1,46E-04 | 2,90E-05 | 1,11E-05 | 3,50E-05 | 2,11E-05 | 2,10E-04 | -3,24E-05 |
| POCP [kg NMVOC eq.] | 4,21E-04 | 3,13E-05 | 6,75E-06 | 2,63E-06 | 7,40E-06 | 5,19E-06 | 5,77E-05 | -7,73E-06 |
| ADP minerals&metals [kg Sb eq.] | 3,69E-08 | 1,96E-09 | 6,12E-11 | 4,50E-10 | 4,95E-10 | 8,55E-10 | 4,82E-10 | -2,96E-10 |
| ADP fossil [MJ] | 1,28E+00 | 4,02E-01 | 1,33E-02 | 3,63E-02 | 1,04E-01 | 1,57E-02 | 1,39E-01 | -1,21E-01 |
| WDP [m³ world equiv.] | 2,69E-02 | 3,57E-04 | 4,24E-03 | 1,02E-03 | 8,78E-05 | 1,55E-04 | 1,15E-03 | -3,76E-04 |

GWP_{TOTAL}: Global Warming Potential total; **GWP**_{FOSSIL}: Global Warming Potential fossil fuels; **GWP**_{BIOCENIC}: 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.





Table 9: Topcem Pronto: Potential environmental impact – additional mandatory and voluntary indicators referred to 1 kg of product in packaging.

| | A1-A3 | A4 | A5 | C1 | C2 | C3 | C4 | D |
|----------------------|----------|----------|----------|----------|----------|----------|----------|-----------|
| GWP-GHG [kg CO2 eq.] | 1,29E-01 | 3,00E-02 | 1,08E-02 | 2,41E-03 | 7,72E-03 | 7,93E-04 | 1,03E-02 | -7,42E-03 |

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 CO_2 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).

Table 10: Topcem Pronto: Use of resources referred to 1 kg of product in packaging.

| | A1-A3 | A4 | A5 | C1 | C2 | C3 | C4 | D |
|------------|----------|----------|-----------|----------|----------|----------|----------|-----------|
| PERE [MJ] | 7,48E-02 | 2,93E-02 | 3,39E-01 | 3,39E-02 | 7,33E-03 | 1,46E-03 | 2,26E-02 | -9,77E-03 |
| PERM [MJ] | 3,36E-01 | 0,00E+00 | -3,36E-01 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| PERT [MJ] | 4,11E-01 | 2,93E-02 | 2,80E-03 | 3,39E-02 | 7,33E-03 | 1,46E-03 | 2,26E-02 | -9,77E-03 |
| PENRE [MJ] | 9,03E-01 | 4,04E-01 | 2,55E-02 | 3,64E-02 | 1,04E-01 | 1,58E-02 | 1,39E-01 | -1,21E-01 |
| PENRM [MJ] | 1,21E-02 | 0,00E+00 | -1,21E-02 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| PENRT [MJ] | 9,15E-01 | 4,04E-01 | 1,33E-02 | 3,64E-02 | 1,04E-01 | 1,58E-02 | 1,39E-01 | -1,21E-01 |
| SM [kg] | 6,72E-03 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| RSF [MJ] | 6,01E-02 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| NRSF [MJ] | 1,21E-01 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| FW [m3] | 6,45E-04 | 3,21E-05 | 9,97E-05 | 2,69E-05 | 8,08E-06 | 4,49E-06 | 3,51E-05 | -2,01E-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 (primary energy and primary energy resources used as raw materials); **PENRE**: Use of 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.





Table 11: Topcem Pronto: Waste production and output flows referred to 1 kg of product in packaging.

| | A1-A3 | A4 | A5 | C1 | C2 | C3 | C4 | D |
|-----------|----------|----------|----------|----------|----------|-----------|----------|-----------|
| HWD [kg] | 4,33E-03 | 1,25E-12 | 3,76E-13 | 4,97E-12 | 3,84E-13 | -4,08E-14 | 3,03E-12 | -1,55E-11 |
| NHWD [kg] | 3,26E-03 | 6,16E-05 | 1,16E-02 | 4,09E-05 | 1,50E-05 | 4,14E-06 | 6,95E-01 | -6,34E-03 |
| RWD [kg] | 6,26E-06 | 7,56E-07 | 2,96E-07 | 1,55E-06 | 1,34E-07 | 2,11E-07 | 1,59E-06 | -2,83E-06 |
| 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 |
| MFR [kg] | 6,49E-03 | 0,00E+00 | 1,03E-02 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| MER [kg] | 0,00E+00 | 0,00E+00 | 8,04E-03 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| EEE [MJ] | 0,00E+00 | 0,00E+00 | 1,13E-02 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| EET [MJ] | 0,00E+00 | 0,00E+00 | 2,12E-02 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |

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

Table 11: Topcem Pronto: Information on biogenic carbon content at the factory gate referred to 1 kg of product in packaging.

| Biogenic Carbon Content | Unit | Quantity |
|--------------------------------------|------|----------|
| Biogenic carbon content in product | kg C | 0,00E+00 |
| Biogenic carbon content in packaging | kg C | 7,66E-03 |

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

| | Data source | GWP-GHG | Unit |
|--------------------------------------|-------------|---------|-----------------------------|
| Electricity residual mix (IT) - 2022 | AIB | 0,555 | kg CO ₂ -eqv/kWh |





8. DATA QUALITY

Table 13: Data quality

| Dataset & Geographical reference | Database (source) | Temporary reference |
|---|------------------------------|---------------------|
| | _ A1; A3 | |
| Inorganic binder | EPDITALY0338 EPDITALY0095 | 2021-2022 |
| Organic binder | Sphera Database | 2022 |
| Filler | Ecoinvent 3.9 | 2022 |
| Additives | Ecoinvent 3.9 | 2022 |
| Electricity grid mix (IT) | Sphera Database | 2022 |
| Packaging components (EU) | Sphera Database | 2022 |
| | A2 | |
| Truck, Euro 5, 27t payload (GLO) | Sphera Database | 2022 |
| Light train, gross tonne weight 500t / 363t payload (GLO) | Sphera Database | 2022 |
| Oceanic ship (27500 DWT – GLO) | Sphera Database | 2022 |
| Diesel for transport (RER) | Sphera Database | 2019 |
| Heavy Fuel Oil (RER) | Sphera Database | 2019 |
| Electricity grid mix (IT) | Sphera Database | 2019 |
| | A4 | |
| Truck, Euro 6, 27t payload (GLO) | Sphera Database | 2022 |
| Diesel for transport (RER) | 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 (IT) | Sphera Database | 2019 |
| Diesel for transport (RER) | 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 datasets 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 Topcem Pronto the biogenic carbon content in packaging at the factory gate referred to 1 kg of product with packaging is 7,66E-03.

9.2. Recycled content

| Product | Recycled material content (Pre-Consumer) |
|---------------|---|
| Topcem Pronto | 0,672% |

9.3. Disassembly

The finished product is potentially suitable for disassembly through selective demolition.

9.4. VOC emission

Volatile Organic Compounds (VOC) special tests and evidence have been carried out on the two products, according to ISO 16000 parts 3, 6, 9 and 11 and EN 16516. The product has been evaluated in emission chambers, in order to detect their VOC emissions after 3 and 28 days storage in the ventilated chambers, according to GEV (Gemeinschaft Emissionskontrollierte Verlegewerkstoffe, Klebstoffe und Bauprodukte e.V.) test method. The following product meets the requirements for the emission class EMICODE® EC1PLUS, as "very low emission", released by GEV

• **Topcem Pronto**: license number 9109

10. DIFFERENCES VERSOUS PREVIOUS VERSIONS

The EPD S-P-00909 is divided into two different EPDs.

Topcem Pronto maintains its older EPD number instead Mapecem Pronto is now registered with the following number: S-P-12486. There are slight differences in terms of formulation and primary data. Specifically, Topcem Pronto is produced in only two production plants (Mediglia and Latina).





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 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.

| CEN standard EN15804 served as the Core Product Category Rules (PCR) | | |
|---|---|--|
| PCR: | PCR 2019:14 Construction products (EN 15804:A2), Version 1.3.2 08-12-2023, 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: 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 | ☑ EPD Process Certification | |
| declaration and data, according to ISO 14025:2006: | ☐ 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 | ⊠ Yes □ No | |





12. REFERENCES

- PCR 2019:14 CONSTRUCTION PRODUCTS (EN 15804: A2), UN CPC CODE 54; VERSION 1.3.2.
- EN 13813 "SCREEDS AND MATERIALS FOR SCREEDS MATERIALS FOR SCREEDS PROPERTIES AND REQUIREMENTS"
- EN 15804: SUSTAINABILITY OF CONSTRUCTION WORKS ENVIRONMENTAL PRODUCT DECLARATIONS CORE RULES FOR THE PRODUCT CATEGORY OF CONSTRUCTION PRODUCTS
- 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
- AIB EUROPEAN RESIDUAL MIX 2022 ANNUAL REPORT
- 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

