



# ENVIRONMENTAL PRODUCT DECLARATION

*In accordance with ISO 14025 for*

***Ultraplan, Ultraplan Eco  
Ultraplan Maxi  
Novoplan Maxi***



Programme:  
**The International  
EPD<sup>®</sup> System;**  
[www.environdec.com](http://www.environdec.com)

Programme  
operator:  
**EPD International AB**

EPD  
registration  
number:  
**S-P-00908**

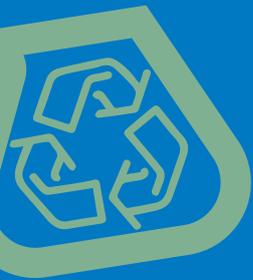
Publication  
date:  
**2016-09-12**

Valid until:  
**2023-10-30**

Geographical  
scope:  
**International**

Revision:  
**2018-10-31**





## 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, products for underground constructions and for the restoration of concrete and historical buildings.

There are currently 85 subsidiaries in the Mapei Group, with a total of 80 production facilities located around the world in 35 different countries and in 5 different continents. Mapei also has 18 central laboratories. Most locations are ISO 9001 and ISO 14001 or EMAS-certified.

Mapei's strategy of internationalization is based on two main objectives: being closer to local needs and lowering transportation costs. With the declared objective of being close to buyers and clients, Mapei's presence in the five continents enables the company to comply with the requirements of each location, and to use only locally-based managers and qualified personnel, without changing the approach of Mapei.

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 2.2, 2017-05-30) under EN 15804:2014 and to have more comprehension about the environmental impacts related to **Ultraplan**, **Ultraplan Eco**, **Ultraplan Maxi** and **Novoplan Maxi** manufactured in Mapei S.p.A. located in Robbiano di Mediglia (Italy), Latina (Italy) and Sassuolo (Italy) including packaging of the finished products.

Target audiences of the study are customers and other parties with an interest in the environmental impacts of **Ultraplan**, **Ultraplan Eco**, **Ultraplan Maxi** and **Novoplan Maxi**.

This analysis shall not support comparative assertions intended to be disclosed to the public.

## 2. PRODUCT DESCRIPTION

**Ultraplan, Ultraplan Eco, Ultraplan Maxi** and **Novoplan Maxi** are ultra-fast drying self-levelling compound, used in interior for levelling and smoothing differences in thickness from 1 to 30 mm, according to the different product used (see the specific Technical Data Sheets for technical characteristics), on new or existing substrates, preparing them for the application of all kind of floorings, where high resistance to loads and traffic is required.

The four products are powders consisting of special cements with rapid setting and hydration, with selected graded silica sand, resins and special admixtures prepared according to a formula developed in MAPEI Research laboratories.

All products are compliant with EN 13813 (“Screed material and floor screeds. Screed material. Properties and requirements”), and supplied in:

- 25 kg multiply bags for Ultraplan Maxi and Novoplan Maxi
- 23 kg multiply bags for Ultraplan and Ultraplan Eco

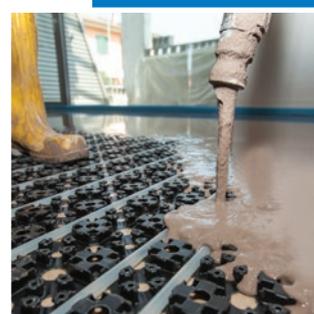
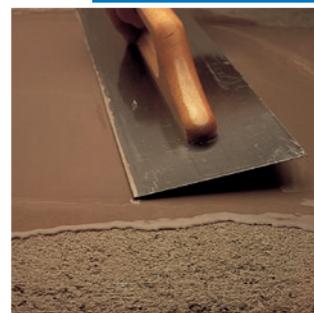
## 3. CONTENT DECLARATION

The main components and ancillary materials of **Ultraplan, Ultraplan Eco, Ultraplan Maxi** and **Novoplan Maxi** are the following:

Table 1: Composition

Materials	Percentage (%)
Inorganic Binders	15 – 30
Organic Binders	≤ 5
Fillers	60 – 80
Additives	≤ 3
Other	≤ 3

The products contain neither carcinogenic substances nor substances of very high concern (SVHC) on the REACH Candidate List published by the European Chemicals Agency in a concentration more than 0,1 % (by unit weight).



Ultraplan  
Ultraplan Eco  
Ultraplan Maxi  
Novoplan Maxi



## 4. DECLARED UNIT AND REFERENCE SERVICE LIFE

The declared unit is 1 kg of packaged finished product.

Packaging materials include:

- Wooden pallet
- MultiPLY bag (paper/PE/paper)
- LDPE used as wrapping material

The reference service life of the products, if professionally installed and properly used, is estimated to be the same as the building one.

## 5. SYSTEM BOUNDARIES AND ADDITIONAL TECHNICAL INFORMATION

The approach is “cradle to gate”. The following modules have been considered:

- A1, A2, A3 (Product stage): extraction and transport of raw materials and packaging, production process;
- A4 (Construction stage): transport of the finished product to final customers.

Table 2: System boundaries

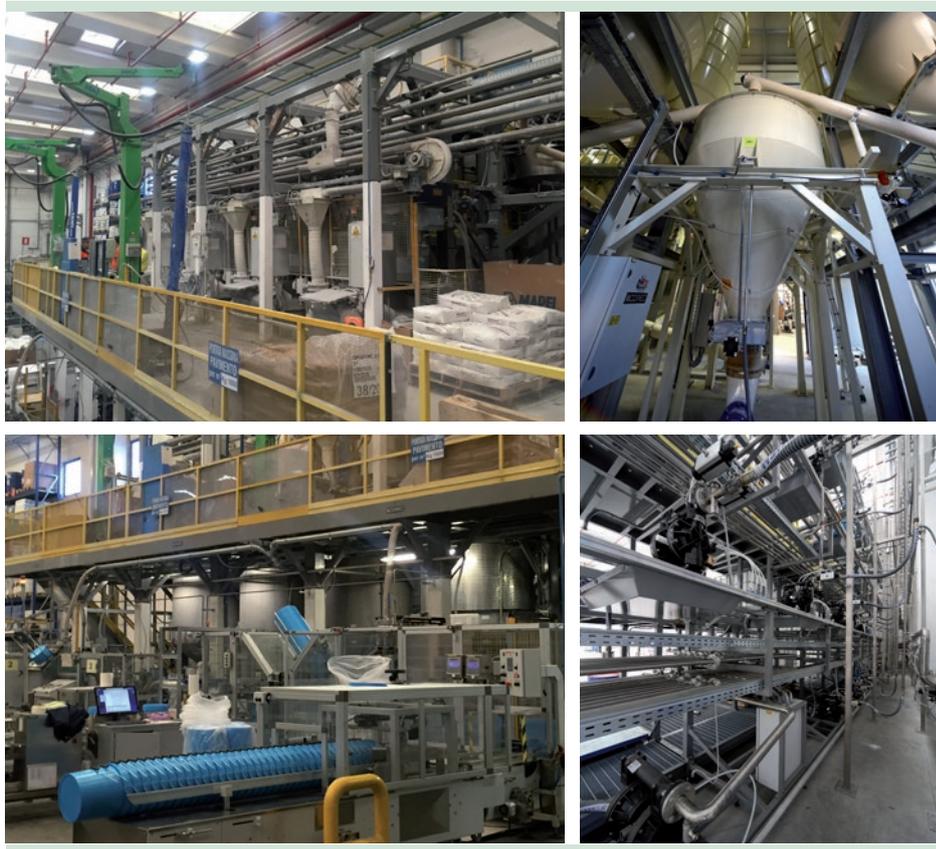
System Boundaries													
A1 – A3			A4 – A5		B1 – B7					C1 – C4			
PRODUCT STAGE			CONSTRUCTION STAGE		USE STAGE					END OF LIFE STAGE			
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	C1	C2	C3	C4
Raw Material Supply	Transport	Manufacturing	Transport	Installation Process	Use	Maintenance	Repair	Replacement	Refurbishment	Deconstruction/ Demolition	Transport	Waste Processing	Disposal
					B6	Operational Energy Use							
					B7	Operational Water Use							

included
  excluded

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 or big bags, are stored in their 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 in bags, put on wooden pallets, covered by stretched hoods and stored in the Finished Products' warehouse. The quality of final products is controlled before the sale.

Figure 1: Production process detail



Ultraplan  
Ultraplan Eco  
Ultraplan Maxi  
Novoplan Maxi

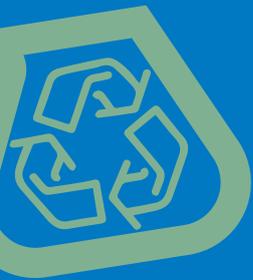


Figure 2: Mediglia Plant



Table 3: Transport to the building site (A4)

Name	Value	Unit
Means of transport: truck euro 3 with 27 tons of payload & Ocean ship with 27500 DWT		
Litres of fuel (truck)	~ 2E-03	l/DU*100km
Litres of fuel (ship)	~ 4E-04	l/DU*100km
Transport distance (weighted average)	~ 400	km
Capacity utilisation (including empty runs)	85	%
Gross density of products transported	~ 1400	kg/m <sup>3</sup>
Capacity utilisation volume factor	100	%
DU: declared unit		

## 6. CUT-OFF RULES & 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.

The following procedure is applied for the exclusion of inputs and outputs:

- All inputs and outputs to a unit process, for which data are available, are included in the calculation.
- Cut-off criteria, were applied, are described in Table 4.

Input flows are covered for the whole formula.

Table 4: 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%
A3: waste and particle emission	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 5: Allocation procedure and principles

Module	Allocation Principle
A1	All data are referred to 1 kg of product <ul style="list-style-type: none"> <li>• A1: electricity is allocated to the whole plant production</li> </ul>
A3	All data are referred to 1 kg of packaged product <ul style="list-style-type: none"> <li>• A3-wastes: all data are allocated to the whole plant production</li> </ul>

Ultraplan  
 Ultraplan Eco  
 Ultraplan Maxi  
 Novoplan Maxi



## 7. ENVIRONMENTAL PERFORMANCE & INTERPRETATION



### GWP<sub>100</sub>

Global Warming Potential refers to the emission/presence of GHGs (greenhouse gases) in the atmosphere (mainly CO<sub>2</sub>, N<sub>2</sub>O, CH<sub>4</sub>) which contribute to the increase in the temperature of the planet.



### AP

Acidification Potential refers to the emission of specific acidifying substances (i.e. NO<sub>x</sub>, SO<sub>x</sub>) in the air. These substances decrease the pH of the rainfall with predictable damages to the ecosystem.



### EP

Eutrophication Potential refers to the nutrient enrichment of flowing water, which determines unbalance in aquatic ecosystems and causes the death of the aquatic fauna.



### ODP

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 chlorofluoromethanes (CFM).



### POCP

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<sub>x</sub>) are emitted every day (industrial emissions and vehicles). It is mainly diffused during the summertime.



### ADP<sub>e</sub> (elements)

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



### ADP<sub>f</sub> (fossil fuel)

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

Following tables show environmental impacts for the products considered according to CML methodology (2001 – Jan2016). All the results are referred to the declared unit (see chapter § 4).

## Ultraplan

Table 6: **Ultraplan**: Environmental categories referred to the declared unit

Environmental category	Unit	A1 – A3	A4
 <b>GWP<sub>100</sub></b>	(kg CO <sub>2</sub> eq.)	2,76E-01	2,45E-02
 <b>ADPe (element)</b>	(kg Sb eq.)	1,85E-06	2,03E-09
 <b>ADPf (fossil)</b>	(MJ)	3,54E+00	3,33E-01
 <b>AP</b>	(kg SO <sub>2</sub> eq.)	1,03E-03	1,46E-04
 <b>EP</b>	(kg (PO <sub>4</sub> ) <sup>3-</sup> eq.)	9,03E-05	3,73E-05
 <b>ODP</b>	(kg R-11 eq.)	2,48E-09	6,68E-16
 <b>POCP</b>	(kg ethylene eq.)	8,95E-05	-6,48E-05

**GWP<sub>100</sub>**: Global Warming Potential; **ADPe**: Abiotic Depletion Potential (elements); **EP**: Eutrophication Potential; **AP**: Acidification Potential; **POCP**: Photochemical Ozone Creation Potential; **ODP**: Ozone Depletion Potential; **ADPf**: Abiotic Depletion Potential (fossil)

Ultraplan  
 Ultraplan Eco  
 Ultraplan Maxi  
 Novoplan Maxi



Table 7: **Ultraplan:** Other environmental indicators referred to the declared unit

Environmental Indicator	Unit	A1-A3	A4
RPEE	MJ	4,51E-01	1,84E-02
RPEM	MJ	-	-
TPE	MJ	4,51E-01	1,84E-02
NRPE	MJ	3,67E+00	3,34E-01
NRPM	MJ	-	-
TRPE	MJ	3,67E+00	3,34E-01
SM	kg	-	-
RSF	MJ	-	-
NRSF	MJ	-	-
W	m <sup>3</sup>	1,76E-03	4,18E-04

**RPEE** Renewable primary energy as energy carrier; **RPEM** Renewable primary energy as material utilisation; **TPE** Total use of renewable primary energy sources; **NRPE** Non-renewable primary energy as energy carrier; **NRPM** Non-renewable primary energy as material utilization; **TRPE** Total use of non-renewable primary energy sources; **SM** Use of secondary materials; **RSF** Renewable secondary fuels; **NRSF** Non-renewable secondary fuels; **W** Net use of fresh water

Table 8: **Topcem Pronto:** Waste production referred to the declared unit

Output flow	Unit	A1-A3	A4
NHW	kg	2,92E-05	-
HW	kg	9,31E-08	-
RW	kg	0,00E+00	-
Components for re-use	kg	-	-
Materials for recycling	kg	-	-
Materials for energy recovery	kg	-	-
Exported energy	MJ	-	-

**HW** Hazardous waste disposed; **NHW** Non Hazardous waste disposed; **RW** Radioactive waste disposed

## Ultraplan Eco

Table 9: **Ultraplan Eco**: Environmental categories referred to the declared unit

Environmental category	Unit	A1 – A3	A4
 <b>GWP<sub>100</sub></b>	(kg CO <sub>2</sub> eq.)	2,32E-01	2,79E-02
 <b>ADPe (element)</b>	(kg Sb eq.)	1,73E-06	2,30E-09
 <b>ADPf (fossil)</b>	(MJ)	2,75E+00	3,78E-01
 <b>AP</b>	(kg SO <sub>2</sub> eq.)	9,00E-04	1,65E-04
 <b>EP</b>	(kg (PO <sub>4</sub> ) <sup>3</sup> -eq.)	8,04E-05	4,24E-05
 <b>ODP</b>	(kg R-11 eq.)	2,22E-09	7,59E-16
 <b>POCP</b>	(kg ethylene eq.)	7,09E-05	-7,40E-05

**GWP<sub>100</sub>**: Global Warming Potential; **ADPe**: Abiotic Depletion Potential (elements); **EP**: Eutrophication Potential; **AP**: Acidification Potential; **POCP**: Photochemical Ozone Creation Potential; **ODP**: Ozone Depletion Potential; **ADPf**: Abiotic Depletion Potential (fossil)

Ultraplan  
Ultraplan Eco  
Ultraplan Maxi  
Novoplan Maxi



Table 10: **Ultraplan Eco**: Other environmental indicators referred to the declared unit

Environmental Indicator	Unit	A1-A3	A4
RPEE	MJ	4,36E-01	2,09E-02
RPEM	MJ	-	-
TPE	MJ	4,36E-01	2,09E-02
NRPE	MJ	2,86E+00	3,79E-01
NRPM	MJ	-	-
TRPE	MJ	2,86E+00	3,79E-01
SM	kg	-	-
RSF	MJ	-	-
NRSF	MJ	-	-
W	m <sup>3</sup>	1,40E-03	4,76E-04

**RPEE** Renewable primary energy as energy carrier; **RPEM** Renewable primary energy as material utilisation; **TPE** Total use of renewable primary energy sources; **NRPE** Non-renewable primary energy as energy carrier; **NRPM** Non-renewable primary energy as material utilization; **TRPE** Total use of non-renewable primary energy sources; **SM** Use of secondary materials; **RSF** Renewable secondary fuels; **NRSF** Non-renewable secondary fuels; **W** Net use of fresh water

Table 11: **Ultraplan Eco**: Waste production & other output flows referred to the declared unit

Output flow	Unit	A1-A3	A4
NHW	kg	3,51E-05	-
HW	kg	3,21E-08	-
RW	kg	0,00E+00	-
Components for re-use	kg	-	-
Materials for recycling	kg	-	-
Materials for energy recovery	kg	-	-
Exported energy	MJ	-	-

**HW** Hazardous waste disposed; **NHW** Non Hazardous waste disposed; **RW** Radioactive waste disposed

## Ultraplan Maxi

Table 12: **Ultraplan Maxi**: Environmental categories referred to the declared unit

Environmental category	Unit	A1 – A3	A4
 <b>GWP<sub>100</sub></b>	(kg CO <sub>2</sub> eq.)	2,35E-01	2,79E-02
 <b>ADPe (element)</b>	(kg Sb eq.)	1,50E-06	2,30E-09
 <b>ADPf (fossil)</b>	(MJ)	2,79E+00	3,78E-01
 <b>AP</b>	(kg SO <sub>2</sub> eq.)	8,80E-04	1,66E-04
 <b>EP</b>	(kg (PO <sub>4</sub> ) <sup>3</sup> -eq.)	8,10E-05	4,25E-05
 <b>ODP</b>	(kg R-11 eq.)	2,46E-09	7,60E-16
 <b>POCP</b>	(kg ethylene eq.)	7,29E-05	-7,41E-05

**GWP<sub>100</sub>**: Global Warming Potential; **ADPe**: Abiotic Depletion Potential (elements); **EP**: Eutrophication Potential; **AP**: Acidification Potential; **POCP**: Photochemical Ozone Creation Potential; **ODP**: Ozone Depletion Potential; **ADPf**: Abiotic Depletion Potential (fossil)

Ultraplan  
Ultraplan Eco  
Ultraplan Maxi  
Novoplan Maxi

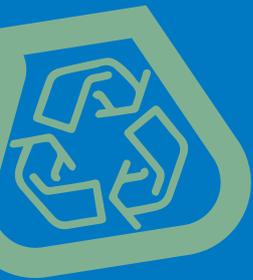


Table 13: **Ultrapan Maxi**: Other environmental indicators referred to the declared unit

Environmental Indicator	Unit	A1-A3	A4
RPEE	MJ	4,05E-01	2,09E-02
RPEM	MJ	-	-
TPE	MJ	4,05E-01	2,09E-02
NRPE	MJ	2,90E+00	3,80E-01
NRPM	MJ	-	-
TRPE	MJ	2,90E+00	3,80E-01
SM	kg	-	-
RSF	MJ	-	-
NRSF	MJ	-	-
W	m <sup>3</sup>	1,48E-03	4,76E-04

**RPEE** Renewable primary energy as energy carrier; **RPEM** Renewable primary energy as material utilisation; **TPE** Total use of renewable primary energy sources; **NRPE** Non-renewable primary energy as energy carrier; **NRPM** Non-renewable primary energy as material utilization; **TRPE** Total use of non-renewable primary energy sources; **SM** Use of secondary materials; **RSF** Renewable secondary fuels; **NRSF** Non-renewable secondary fuels; **W** Net use of fresh water

Table 14: **Ultrapan Maxi**: Waste production & other output flows referred to the declared unit

Output flow	Unit	A1-A3	A4
NHW	kg	3,76E-05	-
HW	kg	8,09E-08	-
RW	kg	0,00E+00	-
Components for re-use	kg	-	-
Materials for recycling	kg	-	-
Materials for energy recovery	kg	-	-
Exported energy	MJ	-	-

**HW** Hazardous waste disposed; **NHW** Non Hazardous waste disposed; **RW** Radioactive waste disposed

## Novoplan Maxi

Table 15: **Novoplan Maxi**: Environmental categories referred to the declared unit

Environmental category	Unit	A1 – A3	A4
 <b>GWP<sub>100</sub></b>	(kg CO <sub>2</sub> eq.)	1,53E-01	3,05E-02
 <b>ADPe (element)</b>	(kg Sb eq.)	1,06E-06	2,52E-09
 <b>ADPf (fossil)</b>	(MJ)	1,59E+00	4,14E-01
 <b>AP</b>	(kg SO <sub>2</sub> eq.)	6,06E-04	1,81E-04
 <b>EP</b>	(kg (PO <sub>4</sub> ) <sup>3</sup> -eq.)	5,74E-05	4,66E-05
 <b>ODP</b>	(kg R-11 eq.)	1,49E-09	8,32E-16
 <b>POCP</b>	(kg ethylene eq.)	3,78E-05	-8,14E-05

**GWP<sub>100</sub>**: Global Warming Potential; **ADPe**: Abiotic Depletion Potential (elements); **EP**: Eutrophication Potential; **AP**: Acidification Potential; **POCP**: Photochemical Ozone Creation Potential; **ODP**: Ozone Depletion Potential; **ADPf**: Abiotic Depletion Potential (fossil)

Ultraplan  
Ultraplan Eco  
Ultraplan Maxi  
Novoplan Maxi

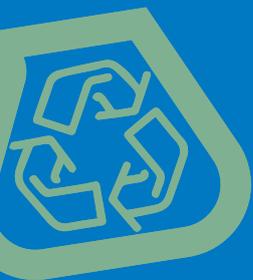


Table 16: **Novoplan Maxi**: Other environmental indicators referred to the declared unit

Environmental Indicator	Unit	A1-A3	A4
RPEE	MJ	3,79E-01	2,29E-02
RPEM	MJ	-	-
TPE	MJ	3,79E-01	2,29E-02
NRPE	MJ	1,67E+00	4,16E-01
NRPM	MJ	-	-
TRPE	MJ	1,67E+00	4,16E-01
SM	kg	-	-
RSF	MJ	-	-
NRSF	MJ	-	-
W	m <sup>3</sup>	1,02E-03	5,22E-04

**RPEE** Renewable primary energy as energy carrier; **RPEM** Renewable primary energy as material utilisation; **TPE** Total use of renewable primary energy sources; **NRPE** Non-renewable primary energy as energy carrier; **NRPM** Non-renewable primary energy as material utilization; **TRPE** Total use of non-renewable primary energy sources; **SM** Use of secondary materials; **RSF** Renewable secondary fuels; **NRSF** Non-renewable secondary fuels; **W** Net use of fresh water

Table 17: **Novoplan Maxi**: Waste production & other output flows referred to the declared unit

Output flow	Unit	A1-A3	A4
NHW	kg	4,28E-05	-
HW	kg	4,21E-08	-
RW	kg	0,00E+00	-
Components for re-use	kg	-	-
Materials for recycling	kg	-	-
Materials for energy recovery	kg	-	-
Exported energy	MJ	-	-

**HW** Hazardous waste disposed; **NHW** Non Hazardous waste disposed; **RW** Radioactive waste disposed

Tables above show absolute results for every considered environmental impact category. They clearly indicate that module **A1** gives the highest contribution for several of them, up to 99% of the total impact in the whole system boundary. In particular organic and inorganic binders, which are some of the main components in the formulations, carry a significant impact for all environmental categories. A focus on GWP<sub>100</sub> is shown in the pie charts below. Electricity consumption during the production process doesn't affect considerably the impacts.

Modules **A2** and **A4** (transport of raw materials and transport of finished product), give a negative contribution to POCP, due to nitrogen dioxide and monoxide emission factors, (for more details, see the methodology used: *HBEFA -Handbook Emission Factors for Road Transport*).

Table 18: Environmental Impact of **Ultraplan** as percentage

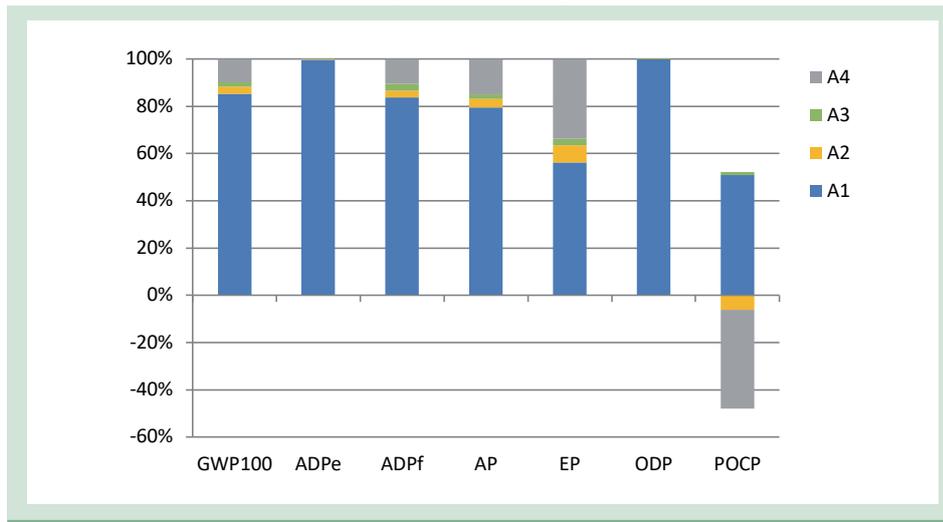
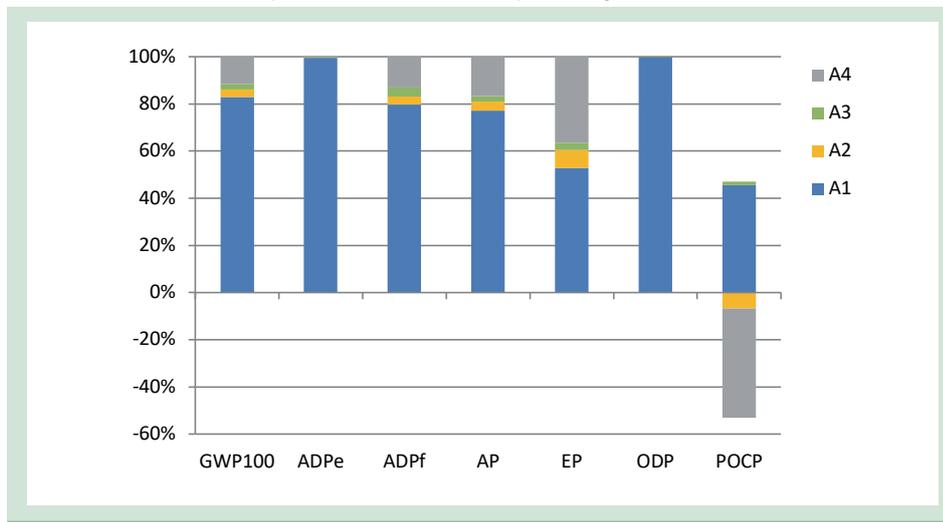


Table 19: Environmental Impact of **Ultraplan Eco** as percentage



Ultraplan  
Ultraplan Eco  
Ultraplan Maxi  
Novoplan Maxi



Table 20: Environmental Impact of **Ultraplan Maxi** as percentage

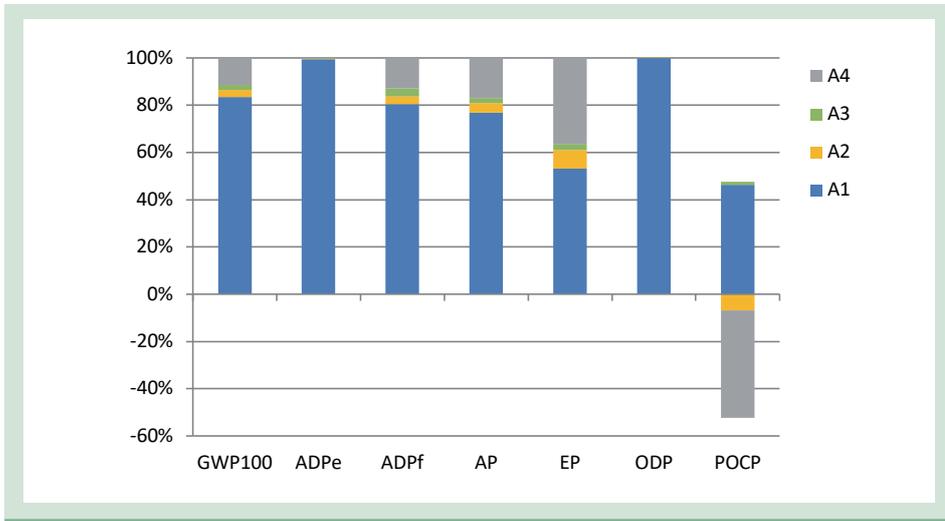
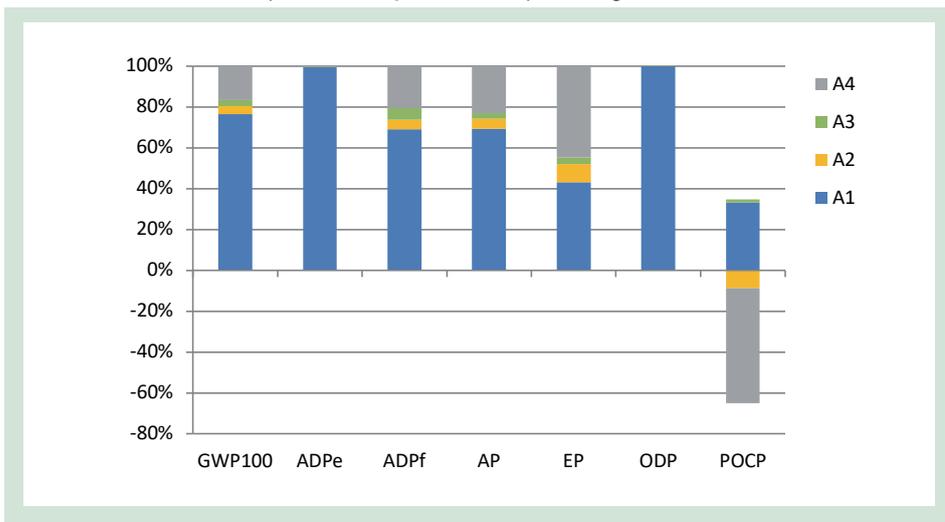
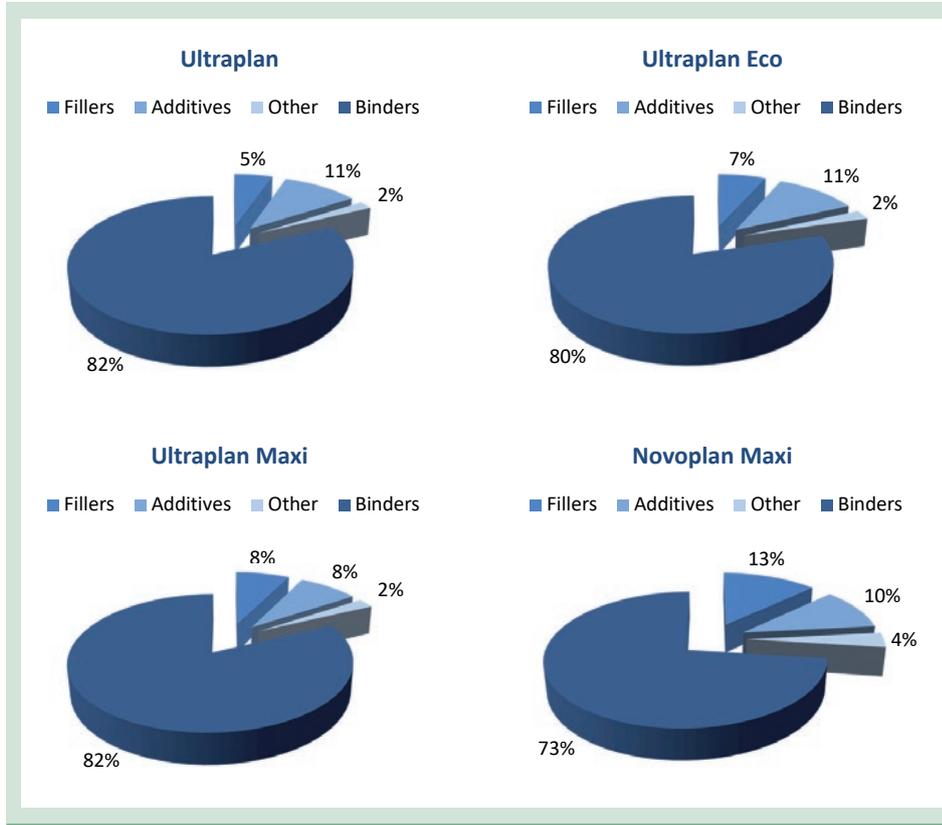


Table 21: Environmental Impact of **Novoplan Maxi** as percentage



The following graphs show the contribution of the module A1 to  $GWP_{100}$  for the products considered.

Table 20: Environmental Impact of **Ultraplan Maxi** as percentage



More details about electrical mix used in this EPD (Italian grid mix – 2014), is shown below:

	Data source	Amount	Unit
Electricity grid mix (IT) – 2014	GaBi database	0,4020	kg CO <sub>2</sub> -eqv/kWh
Electricity from photovoltaic (IT) – 2014	GaBi database	0,0641	kg CO <sub>2</sub> -eqv/kWh

Ultraplan  
Ultraplan Eco  
Ultraplan Maxi  
Novoplan Maxi



## 8. DATA QUALITY

Table 22: Data quality

Dataset & Geographical reference	Database (source)	Temporary reference
<b>A1; A3</b>		
Grey Portland Cement (IT)	S-P-00880	2016
Aluminous Cement (DE)	GaBi Database	2015
Fillers (EU)	GaBi Database	2017
Additives (EU)	GaBi Database	2012 – 2017
Electricity grid mix (IT)	GaBi Database	2014
Electricity from photovoltaic (IT)	GaBi Database	2014
Packaging components (EU)	GaBi Database, PlasticEurope	2005 – 2017
<b>A2-; A4</b>		
Truck transport (euro 3, 27t payload – GLO)	GaBi Database	2017
Light Train (Gross Ton Weight 500t - GLO)	GaBi Database	2017
Oceanic ship (27500 DWT - GLO)	GaBi Database	2017
Electricity grid mix (EU)	GaBi Database	2014
Diesel for transport (EU)	GaBi Database	2014
Heavy Fuel Oil (EU)	GaBi Database	2014

All data included in table above refer to a period between 2005 and 2017; 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 § 6.3.7 “Data quality requirements”. The only exception is represented by one raw material used for one packaging component production.

Primary data concern the year 2017 and represent the whole annual production.

## 9. REQUISITE EVIDENCE

### 9.1 VOC emissions

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 CN/TS 16516.

The self-levelling mortars have 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.

**Ultraplan**, **Ultraplan Eco**, **Ultraplan Maxi** and **Novoplan Maxi** meet the requirements for the emission class Emission Code EC1<sup>PLUS</sup>, as "very low VOC emission", released by GEV.

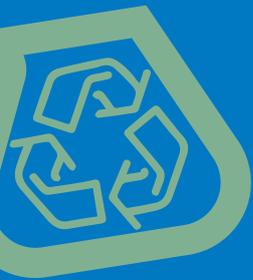
Next table describes the limits for the Emission Code EC1<sup>PLUS</sup> class.

	3 days $\mu\text{g}/\text{m}^3$	28 days $\mu\text{g}/\text{m}^3$
TVOC (C6-C16)	$\leq 750 \mu\text{g}/\text{m}^3$	$\leq 60 \mu\text{g}/\text{m}^3$
TSVOC (C16-C22)		$\leq 40 \mu\text{g}/\text{m}^3$
C1A-C1B substances	Total $\leq 10 \mu\text{g}/\text{m}^3$	Single substance $\leq 1 \mu\text{g}/\text{m}^3$
Formaldehyde/ acetaldehyde	$\leq 50 \mu\text{g}/\text{m}^3$	
Sum of formaldehyde/ acetaldehyde	$\leq 50 \text{ ppb}$	
sum of non-assessable VOCs		$\leq 40$
R value		$\leq 1$

## 10. SIGNIFICANT CHANGES FROM THE PREVIOUS VERSION

In this revision new primary data (referred to the reference year 2017) have been adopted and the last update of the CML methodology (version 4.7) has been used for calculation. Due to these updates, several environmental categories have changed more than  $\pm 10\%$  (ADPe, EP, POCP, W). In addition, GPI update to the 3.0 version has been adopted.

Ultraplan  
Ultraplan Eco  
Ultraplan Maxi  
Novoplan Maxi



## 11. VERIFICATION AND REGISTRATION

EPD of construction products may not be comparable if they do not comply with EN 15804.

Environmental product declarations within the same product category from different programs may not be comparable.

CEN standard EN15804 contenente le PCR	
PCR:	PCR 2012:01 Construction products and Construction services, Version 2.2, 2017-05-30
PCR review was conducted by:	The Technical Committee of the International EPD® System. Chair: Massimo Marino Contact via <a href="mailto:info@environdec.com">info@environdec.com</a>
Independent verification of the declaration and data, according to ISO 14025	<input checked="" type="checkbox"/> EPD Process Certification (Internal) <input type="checkbox"/> EPD Verification (external)
Third party verifier:	Certiquality S.r.l. Number of accreditation: 003H rev14
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

- GENERAL PROGRAMME INSTRUCTIONS OF THE INTERNATIONAL EPD® SYSTEM. VERSION 3.0
- PCR 2012:01; “PRODUCT GROUP CLASSIFICATION: MULTIPLE UN CPC CODES CONSTRUCTION PRODUCTS AND CONSTRUCTION SERVICES”; VERSION 2.2
- HBEFA: HANDBOOK EMISSION FACTORS FOR ROAD TRANSPORT
- EN 13813 “SCREED MATERIAL AND FLOOR SCREEDS. SCREED MATERIAL. PROPERTIES AND REQUIREMENTS”

## CONTACT INFORMATION

EPD owner:	 ADHESIVES • SEALANTS • CHEMICAL PRODUCTS FOR BUILDING  Mapei SpA <a href="http://www.mapei.it">www.mapei.it</a> ; Environmental Sustainability Office
LCA Author:	 ADHESIVES • SEALANTS • CHEMICAL PRODUCTS FOR BUILDING  Mapei SpA <a href="http://www.mapei.it">www.mapei.it</a> ; Environmental Sustainability Office
Programme operator:	 EPD International AB <a href="mailto:info@environdec.com">info@environdec.com</a>

Ultraplan  
Ultraplan Eco  
Ultraplan Maxi  
Novoplan Maxi

**SEDE**  
**MAPEI SpA**  
Via Cafiero, 22 - 20158 Milano  
Tel. +39-02-37673.1  
Fax +39-02-37673.214  
Internet: [www.mapei.com](http://www.mapei.com)  
E-mail: [mapei@mapei.it](mailto:mapei@mapei.it)

