

Environmental Product Declaration



In accordance with ISO 14025:2006 for:

ULTRACARE MULTICLEANER SPRAY

from

Mapei S.p.A.



Programme:	The International EPD® System, www.environdec.com
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An EPD may be updated or depublished if conditions change. To find the latest version of the EPD and to confirm its validity, see www.environdec.com.



Programme information

Programme:	The International EPD® System
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Accountabilities for PCR, LCA and independent, third-party verification
Product Category Rules (PCR)
PCR: <i>PCR 2011:10 DETERGENTS AND WASHING PREPARATIONS, Version 4.0.0, 2023-03-24, UN CPC code 35322</i>
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, University of Concepción, Chile. The review panel may be contacted via the Secretariat www.environdec.com/contact .
Life Cycle Assessment (LCA)
LCA accountability: <i>Corporate Environmental Sustainability, Mapei S.p.A.</i>
Third-party verification
Independent third-party verification of the declaration and data, according to ISO 14025:2006, via: <input type="checkbox"/> EPD verification by individual verifier Third-party verifier: <i><name, organisation, and signature of the third-party verifier></i> Approved by: The International EPD® System
OR
Independent third-party verification of the declaration and data, according to ISO 14025:2006, via: <input type="checkbox"/> EPD verification by accredited certification body Third-party verification: <i><name, organisation></i> is an approved certification body accountable for the third-party verification The certification body is accredited by: <i><name of accreditation body & accreditation number, where applicable></i>
OR

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

EPD verification by EPD Process Certification*

Internal auditor: *Mapei group*

Third-party verification: Certiquality S.r.l is an approved certification body accountable for third-party verification

Third-party verifier is accredited by: *Accredia, number of accreditation: 00027 rev.001*

*For EPD Process Certification, an accredited certification body certifies and reviews the management process and verifies EPDs published on a regular basis. For details about third-party verification procedure of the EPDs, see GPI.

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

Yes No

The EPD owner has the sole ownership, liability, and responsibility for the EPD.

EPDs within the same product category but registered in different EPD programmes 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 ISO 14025.

Company information

Owner of the EPD: Mapei S.p.A.

Contact: Head Office, Mapei S.p.A., Via Cafiero, 22 – 20158 Milan, Tel. +39-02-37673.1, mapei.com, mapei@mapei.it

Description of the organisation: 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 100 subsidiaries in the Mapei Group, with a total of 86 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 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.

Product-related or management system-related certifications: ISO 9001- and 14001-certificates, EMAS-registrations

Name and location of production site: Mapei S.p.A. Mediglia (Milan, Italy)

Product information

Product name: Ultracare Multicleaner Spray

Product identification: Cleaner

Product description: Ultracare Multicleaner Spray is a ready-to-use spray detergent. Its special formula guarantees a high cleanliness respecting the surfaces on which it is used. It is also characterized by a pleasant scent. Ultracare Multicleaner Spray does not need to be diluted as it is ready to use and represents the ideal solution for daily cleaning of natural stone, ceramic and quartz and marble agglomerate worktops, shower, enclosures, walls dressed with glass mosaic or ceramic tiles, glass and mirrors. Ultracare Multicleaner Spray does not require rinsing as it leaves no residue and/or halos on the surface and can be used both indoors and outdoors.

Technical specification of the product	
Application	Manually
Range of dilution	NA - Product ready to use
Density	1,00 g/cm ³
Consumption	NA

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

UN CPC code: 35322

Packaging description: the product is available in 750 ml spray bottle

Background system description:

The production process starts from raw materials, which 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, stored in the finished products warehouse. The quality of final products is controlled before the sale.

Geographical scope: Europe

LCA information

Functional unit / declared unit: 1 kg of finished product in 750 ml spray bottle

Reference service life: Due to the selected system boundary, the reference service life of the product is not specified.

Time representativeness: All the datasets used refers to a period between 2020 and 2023. Primary data concerns the year 2024, which represent the whole annual production.

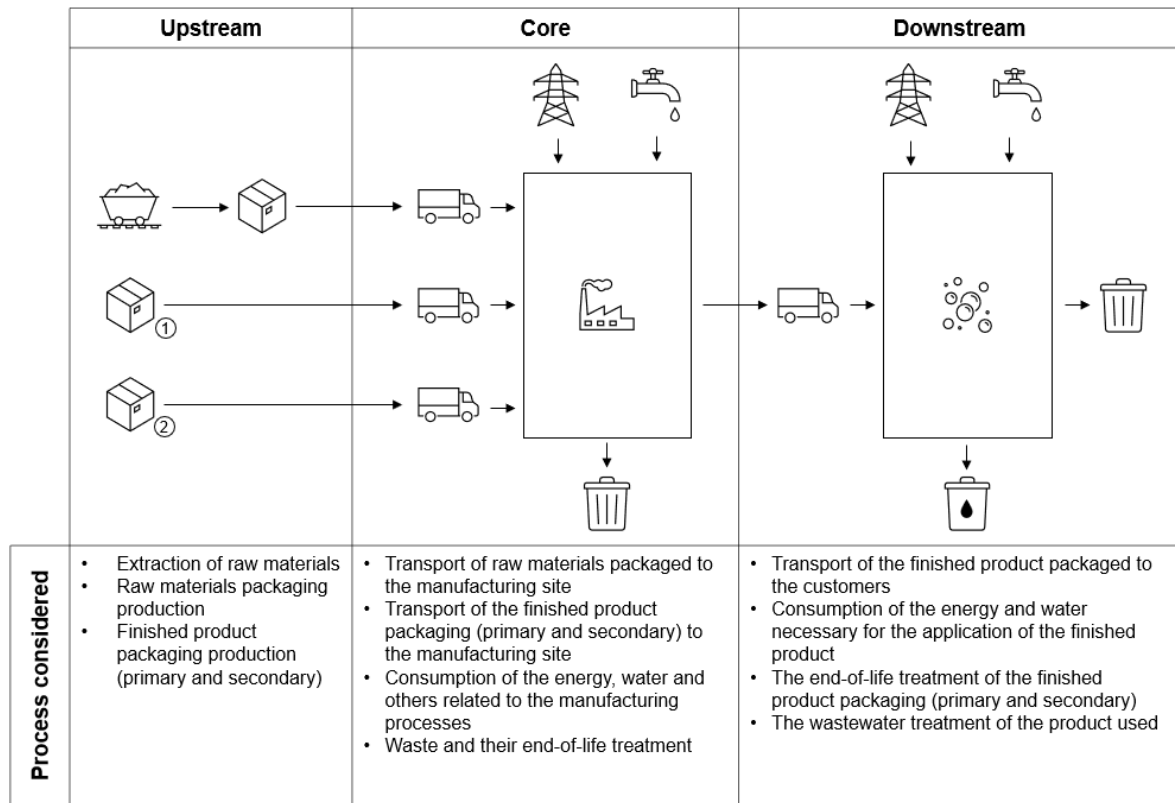
Database(s) and LCA software used:

Ecoinvent 3.10, Sphera Database 2024.2 and LCA for Expert software

For more detailed information regarding the databases and datasets used see table below:

Dataset & Geographical reference	Database (source)	Temporary reference
Upstream		
Organic Substances	Ecoinvent 3.10; Sphera Database	2023; 2023
Water production, deionized	Ecoinvent 3.10	2023
Packaging	Ecoinvent 3.10; Sphera Database	2023; 2023
Core		
Diesel mix	Sphera Database	2020
Heavy Fuel Oil	Sphera Database	2020
Residual Mix, medium voltage	Sphera Database	2022
Tap water from surface water	Sphera Database	2023
Waste Treatment	Ecoinvent 3.10	2023
Container Ship GLO	Sphera Database	2023
Truck, Euro 6 A-C, 12 - 14t gross w.	Sphera Database	2023
Downstream		
Diesel Mix	Sphera Database	2020
Electricity grid mix RER	Sphera Database	2020
Tap water from surface water	Sphera Database	2023
Waste treatment	Ecoinvent 3.10	2023
Truck, Euro 6 A-C, 12 - 14t gross w.	Sphera Database	2023

System diagram:



Description of system boundaries:

The system boundaries considered for the product are grouped in three macro modules, obtaining a “cradle to grave” approach:

- **Upstream:** this module includes the processes upstream of the manufacturing of the product (from cradle to gate). These are related to the supply chain.
- **Core:** this module includes the manufacturing processes (from gate to gate).
- **Downstream:** this module includes the processes downstream of the manufacturing of the product (from gate to grave). These generally are related to scenarios of the product since it leaves the factory gate until its end of life.

For the core and downstream the following scenario for the end of life of the packaging materials has been considered:

Packaging Material	Recycling	Incineration	Landfill
Plastic	75%	20%	5%
Wood	48%	51%	1%
Ferrous metal	100%	0%	0%
Paper/Cardboard	99%	1%	0%

This data were gathered from Eurostat – packaging waste statistics

Excluded lifecycle stages: NA

More information: all the environmental impact indicators are calculated according to EN15804, Version: EF3.1, February 2023.

Additional information:

Cut-Off and Allocation rules:

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 below:

Process excluded from study	Cut-off criteria	Quantified contribution from process
Core Module: Particulate matter air emissions	Less than 10 ⁻⁴ 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:

Module	Allocation Principle
Upstream	All data are referred to 1 kg of product
Core	All data are referred to 1 kg of packaged product Electricity is allocated to the specific production line; Wastes are allocated to the whole production plant



Content declaration

Product

Product components	kg	%	Environmental / hazardous properties
Organic substances	<0,05	<5	See table below according to regulation (EC) No 1272/2008
Water	<0,95	<95	No hazardous properties
TOTAL	<1	<100	

According to regulation (EC) No 1272/2008:

Name	CAS number	Classification	%
1-methoxy-2-propanol	107-98-2	Flam. Liq. 3,	≥2.5 - <5
1,2-benzisothiazol-3(2H)-one	2634-33-5	Skin Irrit. 2, H315	≥0.016 - <0.025
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H - isothiazol-3-one	88965-84-9	Aquatic Acute 1,H400; Aquatic Chronic 1, H410;Acute Tox. 3,H301 Skin Corr.1C, H314; Skin Sens. 1A, H317 Acute Tox. 2, H310; Acute Tox. 2, H330 Eye Dam. 1, H318; M-Chronic:100, M-Acute:100	<0.0015

Packaging

Distribution packaging:

Materials	%
Cardboard	<5

Consumer packaging:

Materials	%
HDPE	<10
PE	<0,5
PP	<5

Recycled material

Provenience of recycled materials (pre-consumer or post-consumer) in the product:

	Quantity (%)	Type (pre/post-consumer)
Product	0	-
Distribution packaging	0	-
Consumer packaging	35	post-consumer

Results of the environmental performance indicators

Impact category indicators

PARAMETER		UNIT	Upstream	Core	Downstream	TOTAL
Global warming potential (GWP)	Fossil	kg CO ₂ eq.	4,5E-01	1,9E-02	6,8E-02	5,4E-01
	Biogenic	kg CO ₂ eq.	5,9E-03	5,8E-04	1,5E-03	8,0E-03
	Land use and land transformation	kg CO ₂ eq.	5,9E-04	1,6E-04	1,5E-04	9,0E-04
	TOTAL	kg CO ₂ eq.	4,6E-01	2,0E-02	6,9E-02	5,5E-01
Ozone layer depletion (ODP)		kg CFC 11 eq.	6,1E-08	1,9E-10	1,1E-12	6,2E-08
Acidification potential (AP)		mol H ⁺ eq.	1,7E-03	3,9E-05	2,2E-05	1,8E-03
Eutrophication potential (EP)	Aquatic freshwater	kg P eq.	1,1E-04	1,2E-06	1,8E-07	1,1E-04
	Aquatic marine	kg N eq.	3,9E-04	1,0E-05	7,1E-06	4,0E-04
	Aquatic terrestrial	mol N eq.	3,6E-03	1,1E-04	9,3E-05	3,8E-03
Photochemical oxidant creation potential (POCP)		kg NMVOC eq.	1,9E-03	3,7E-05	2,0E-05	2,0E-03
Abiotic depletion potential (ADP)*	Metals and minerals	kg Sb eq.	4,0E-06	1,1E-08	1,6E-09	4,0E-06
	Fossil resources	MJ, net calorific value	1,2E+01	2,7E-01	1,5E-01	1,2E+01
Water deprivation potential (WDP)*		m ³ world eq. deprived	2,6E-01	4,6E-02	3,0E-02	3,4E-01

* Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.

Resource use indicators

PARAMETER		UNIT	Upstream	Core	Downstream	TOTAL
Primary energy resources – Renewable	Use as energy carrier	MJ, net calorific value	2,5E-01	4,1E-02	8,7E-01	1,2E+00
	Used as raw materials	MJ, net calorific value	8,5E-01	0,0E+00	-8,5E-01	6,8E-04
	TOTAL	MJ, net calorific value	1,1E+00	4,1E-02	1,7E-02	1,2E+00
Primary energy resources – Non-renewable	Use as energy carrier	MJ, net calorific value	6,2E+00	2,8E-01	5,2E+00	1,2E+01
	Used as raw materials	MJ, net calorific value	5,4E+00	-1,3E-02	-5,1E+00	2,7E-01
	TOTAL	MJ, net calorific value	1,2E+01	2,7E-01	1,5E-01	1,2E+01
Secondary material (optional)		kg	4,1E-02	0,0E+00	0,0E+00	4,1E-02
Renewable secondary fuels (optional)		MJ, net calorific value	0,0E+00	0,0E+00	0,0E+00	0,0E+00
Non-renewable secondary fuels (optional)		MJ, net calorific value	0,0E+00	0,0E+00	0,0E+00	0,0E+00
Net use of fresh water (optional)		m ³	6,4E-03	1,1E-03	7,1E-04	8,2E-03

Waste indicators (optional)

PARAMETER	UNIT	Upstream	Core	Downstream	TOTAL
Hazardous waste disposed	kg	6,7E-03	1,2E-02	8,0E-06	1,9E-02
Non-hazardous waste disposed	kg	3,6E-03	3,2E-03	1,1E-02	1,8E-02
Radioactive waste disposed	kg	1,4E-04	3,5E-07	1,1E-06	1,4E-04

Output flow indicators (optional)

PARAMETER	UNIT	Upstream	Core	Downstream	TOTAL
Components for reuse	kg	0,0E+00	0,0E+00	0,0E+00	0,0E+00
Material for recycling	kg	0,0E+00	8,0E-03	1,4E-01	1,4E-01
Materials for energy recovery	kg	0,0E+00	7,6E-05	2,4E-02	2,4E-02
Exported energy, electricity	MJ per energy carrier	0,0E+00	0,0E+00	0,0E+00	0,0E+00
Exported energy, thermal	MJ per energy carrier	0,0E+00	0,0E+00	0,0E+00	0,0E+00

Additional environmental information

Indication for the calculation of different scenario of module A4 (transport from the factory to job site):

To calculate the impact of transporting 1 kg of product from the factory gate (Sagstua) to the jobsite, use the following formula:

$$\text{Transport Impact} = EF \text{ (kg/DU)} * \text{distance (km)}$$

EF: Emission Factor; DU: Declared Unit

Indicator	Unit	EF (EURO 5)	EF (EURO 6)
GWP _{TOTAL}	(kg CO ₂ eq.)	6,08E-05	5,96E-05
GWP _{FOSSIL}	(kg CO ₂ eq.)	6,00E-05	5,89E-05
GWP _{BIOGENIC}	(kg CO ₂ eq.)	2,15E-07	2,12E-07
GWP _{LULUC}	(kg CO ₂ eq.)	5,46E-07	5,47E-07
ODP	(kg CFC 11 eq.)	7,67E-18	7,55E-18
AP	(mol H ⁺ eq.)	1,90E-07	7,15E-08
EP _{FRESHWATER}	(kg P eq.)	2,16E-10	2,12E-10
EP _{MARINE}	(kg N eq.)	8,62E-08	2,38E-08
EP _{TERRESTRIAL}	(mol N eq.)	9,69E-07	2,87E-07
POCP	(kg NMVOC eq.)	1,72E-07	6,15E-08
ADP _{MINERALS&METALS*}	(kg Sb eq.)	3,88E-12	3,82E-12
ADP _{FOSSIL*}	(MJ)	8,03E-04	7,90E-04
WDP*	(m ³ world eq.)	7,12E-07	7,01E-07

Example:

If the product is transported by truck (EURO 6) from Mediglia (production plant) to Oslo (Jobsite) for approximately 1947 km, the GWP impact will be:

$$GWP_{TOTAL} = 5,96E-05 * 1.947 \text{ km} = 1,16E-01 \text{ kg CO}_2\text{eq}$$

References

General Programme Instructions of the International EPD® System. Version 5.0.1.

PCR: *PCR 2011:10 DETERGENTS AND WASHING PREPARATIONS, Version 4.0.0, 2023-03-24, UN CPC code 35322*

ISO 14025 Environmental labels and declarations - type III environmental declarations - principles and procedures

ISO 14044 Environmental management – life cycle assessment – requirements and guidelines

European parliament and council directive 94/62/EC of 20 december 1994 on packaging and packaging waste.

