cromology
the art of professional painting

ENVIRONMENTAL
PRODUCT DECLARATION

MaxMeyer

PAINTLAC
WALL PAINT

ECO PLATFORM
EPD
VERIFIED

EPD®

THE INTERNATIONAL EPD® SYSTEM

EPD in accordance with ISO 14025:2010
and EN 15804:2012+A2:2019

Registration number:	Publication date:	Valid until:	Programme:	Programme Operator:
S-P-03254	2022/07/29	2027/07/29	The International EPD® System www.environdec.com	EPD International AB

1. **CROMOLOGY** GROUP

Cromology was founded in 2015, after a decades-long process of transformation started in the late 90's, **when Lafarge Peintures created the Specialty Materials which then became Materis Paints**. It quickly became a **global player in the emerging markets**.

Nowadays Cromology keeps that pioneering spirit of its Dutch origin from the 1700, **proving to be a solid worldwide group, leader in the south basin of Europe,** present in 50 countries with a global annual revenue of more than **600 mln/€.** The strength of the group lies in its 3700 employees – of which **100 between researchers and highly dedicated technicals – 9 production facilities and 5 R&D laboratories.**

Cromology brands are marketed in more than 50 countries all over the world, with **direct presence in 8 countries**. In each market, Cromology commercial brands are an expression of the history, professionalism and capacity for innovation. **20% of the revenue comes from new products.**

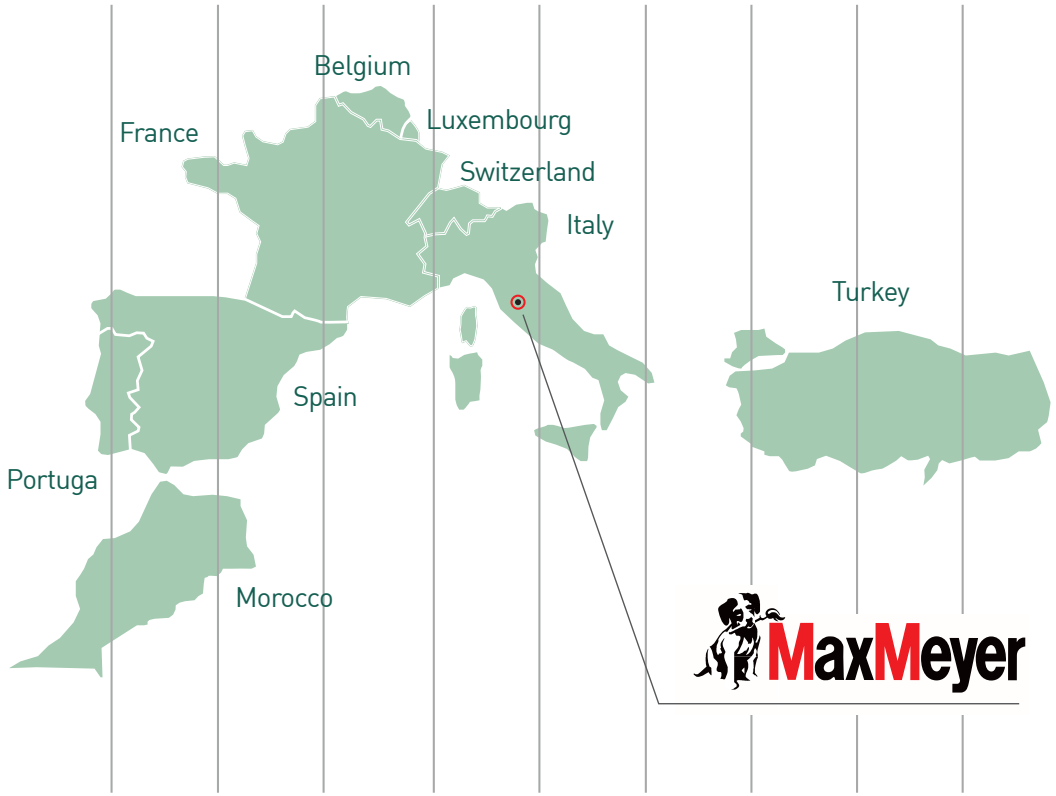
Cromology Italy believes in a multi-channel strategy diversified by brand, range of services and type of customer: from designer to professional applicator and private customer. With an offer of **7 specialized brands, Cromology holds 7% of the Italian market** having so an absolute leading position.

Headquarters are in Porcari, in the province of Lucca. The company has t**wo cutting-edge production facilities** of 80.000 mq, a **logistic hub** of 45.000 mq and can rely on 400 employees between in-house staff and sales network. With its brands and wide range of products, **Cromology wants to be a trusted partner for his customers and professionals**, aiming to reach together **professional excellence.**

3.700 employees

9 production facilities

20% of sales coming from new products



5 R&D laboratories

7 Logistic hubs

100 researchers

8 Countries with direct presence

600 mln/€ global annual revenue

50 countries where our products are sold

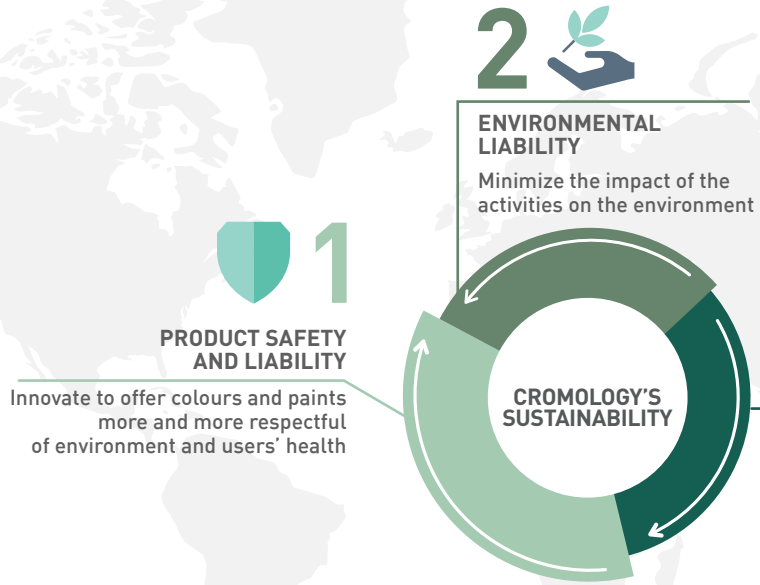
OUR COMMITMENT IN EVERY OPERATIONAL PHASE

Cromology Groups' approach to sustainability raises from our Mission: **protecting and colouring responsibly every home to improve everyone's life.**

Cromology puts RSI at the core of its strategy, at the same level of profitable growth and operational excellence. In a perspective of continuous improvement, Cromology includes its RSI targets in the development of its business as well as in the launch of new products.

Cromology's approach to RSI relates to United Nations' GDS. Cromology has identified 5 most relevant GDS for its business and relies on these to create a sustainable and responsible development in order to maximize value for clients, employees, shareholders, suppliers, civil society and local communities.

5 MOST RELEVANT GDS FOR CROMOLOGY BUSINESS



1 PRODUCT SAFETY AND LIABILITY

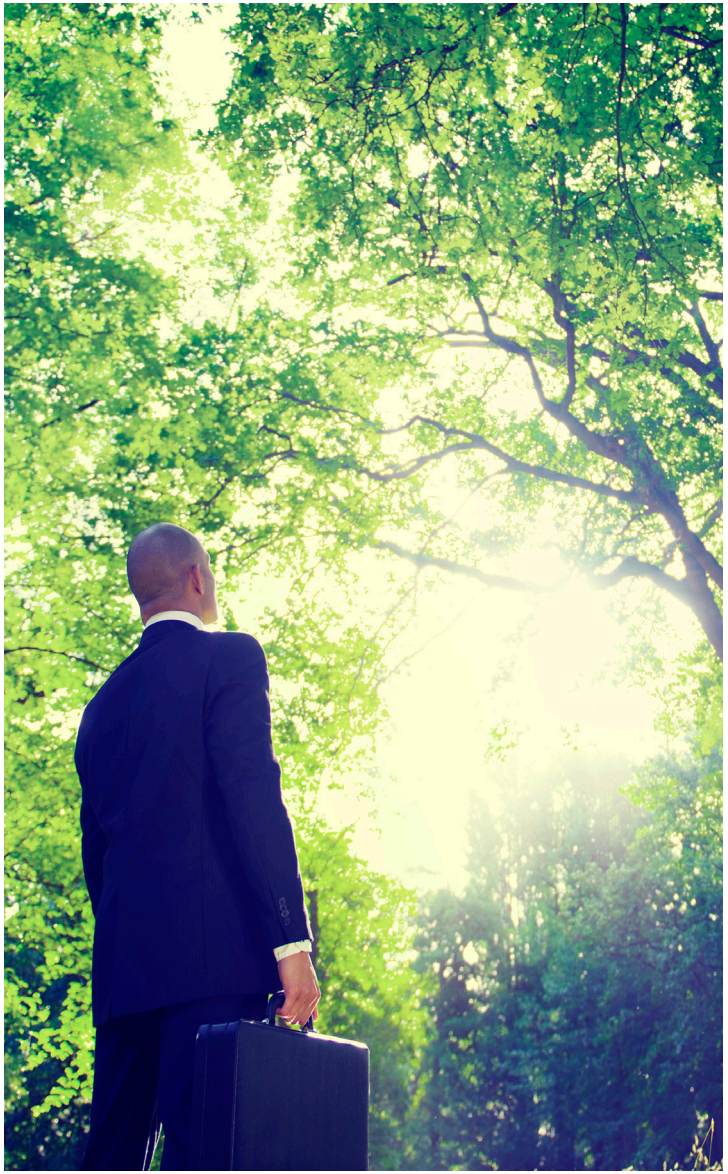
- INDOOR AIR QUALITY
- HACCP - HAZARD ANALYSIS AND CRITICAL CONTROL POINTS
- ISO 9001:2015 QUALITY MANAGEMENT SYSTEM
- UNI EN 15457 ANTI-MOULD EFFICACY
- UNI EN 15458 ANTI-ALGAE EFFICACY
- ISO 22196 ANTIBACTERIAL TEST CERTIFICATE

2 ENVIRONMENTAL RESPONSIBILITY

- ISO 14001:2015 ENVIRONMENTAL MANAGEMENT SYSTEM IN MANUFACTURING PROCESS
- ENVIRONMENTAL PRODUCT DECLARATION
- ECOLABEL
- 100% GREEN ENERGY CERTIFICATION

3 SOCIAL RESPONSIBILITY

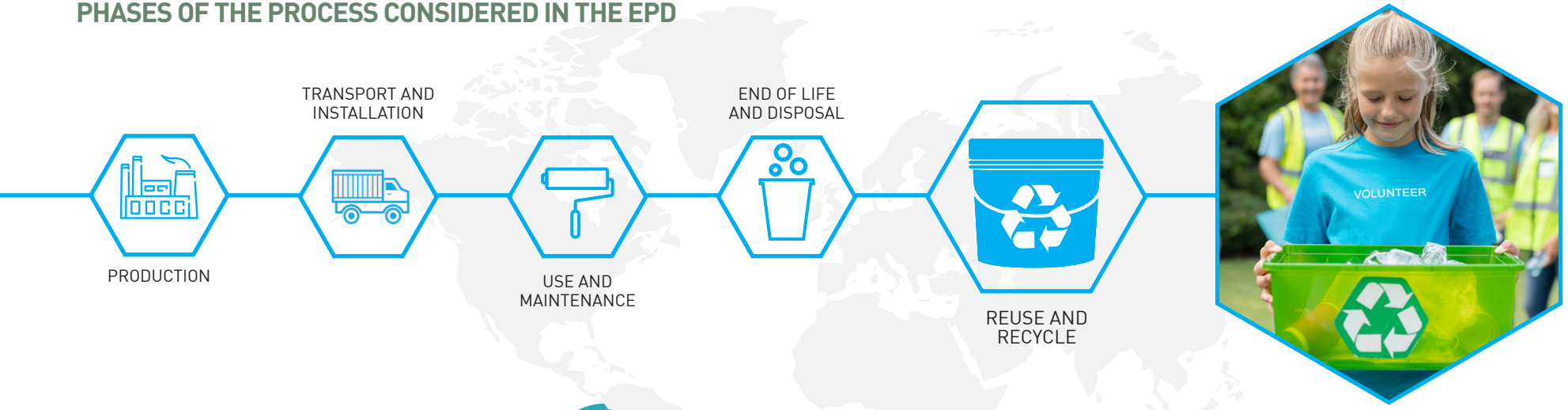
- ISO 45001:2018 OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT SYSTEM
- LEGISLATIVE DECREE NO. 231/2001 ADMINISTRATIVE LIABILITY OF COMPANIES



EPD PROGRAMME GENERAL INFORMATION

EPD programme	The International EPD® System - www.environdec.com
EPD Programme operator	EPD International AB Box 210 60, SE-100 31 Stockholm, Sweden.
Product Category Rules (PCR)	International EPD System - PCR 2019:14 - "Construction products" - Version 1.11 EN 15804:2012+A2:2019 - "Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products."
EPD developed from	Leyton Italia s.r.l
Owner of the declaration	Dr. Marco Demi Cromology Italia S.p.A.
Verified from	Guido Croce
Geographical reference	International
EPD Reg. No.	S-P-03254
Publication date	2022/07/29
Expiration date	2027/07/29
Product description	PAINTLAC Bacteriostatic Sanitising Paint
Scope	LCA analysis has been carried out according to ISO 14025, ISO 14040, ISO 14044 and EN1584 standards. Both specific data of the manufacturing process and Ecoinvent 3.6 database have been used. As calculation and evaluation methods of the impacts have been used those in the EN 15804 2012+A2:2019 standard. LCA analysis covers the phases of extraction and transport of raw material and energy; manufacturing; end of life of the material.

PHASES OF THE PROCESS CONSIDERED IN THE EPD



EPD®

THE INTERNATIONAL EPD® SYSTEM

LIFE CYCLE LCA

EPD abbreviation comes from the English term **Environmental Product Declaration** and it is a verified and registered document that communicates transparent and comparable information about the life-cycle environmental impact of products. It analyses and quantifies how much energy and natural resources are used in production and transportation, how much CO2 is emitted, what materials are used for packaging and the quantity of waste generated.

In the construction field, **EPD is a must for professional architects and designers** when they need to plan and evaluate what actions need to be taken.
As EPD must be validated by International Standards, it represents a fundamental act of transparency and liability towards the market.

Where the EPD is the final report, created on a voluntary basis, its foundation is a **lifecycle assessment (LCA)** - the factual and standardized analysis methodology of a product's or service's entire life cycle in terms of sustainability. **LCA is a technical basis for a wide range of possible actions oriented to improve products sustainability**, as it helps to understand the impact generated by a product on the environment. PCR – Product Category Rules provides the instructions for how the life-cycle assessment (LCA) should be conducted, which must also comply with EN 15084 construction products international standard. This EPD regards Max Meyer **PAINTLAC WALL PAINT.**

MISSION

The **mission of the MaxMeyer** brand is to focus on products that are sustainable, **innovative and improve the comfort** of our homes.

The products reflect **MaxMeyer's mission** statement that the home integrates with the landscape, is environmentally sustainable and a place where one should feel safe.

The MaxMeyer products:

have a **low VOC content** and are certified A+ for the emission of volatile substances in indoor air, according to Decree No. 2011-321 of 23 March 2011 (French VOC regulation).

are packed in recycled plastic or recyclable steel packaging to effectively reduce plastic consumption.

are "Comfortable' in that they **simplify the user's life**, thanks to features such as anti-drip, rapid drying, and resistance to bacteria.

The 'Respect Health, Respect the Planet' logo has been registered by the Italian Patent and Trademark Office of the Ministry of Economic Development as a trademark since 06/08/2019 (No. 302019000058242).

PAINTLAC

This Environmental Product Declaration EPD refers to Paintlac, the wall paint available in gloss, satin and matt acrylic-based finishes that is odourless, resistant to frequent washing and easy to maintain. Ideal for highly frequented environments where maximum cleanliness is required, Paintlac is suitable for use in food-intensive environments in accordance with HACCP regulation UNI 11021:2002 and high durability.

MAIN CHARACTERISTICS

- Easy to clean
- Resistant to frequent washing for a longer film life
- Odourless
- Bright, clean colours
- Ideal for high-traffic environments where maximum cleanliness is required (hospitals, educational institutions, home environments)
- Suitable for use in environments where food is present according to HACCP regulation UNI 11021:2002

HACCP

PRODUCT CHEMICAL COMPOSITION

GLOSS

Emulsions	< 60%
Additives	< 10%
Loads	< 30%
Water	< 25%

MATT

Emulsions	< 40%
Additives	< 10%
Loads	< 35%
Water	< 40%

SATINED

Emulsions	< 50%
Additives	< 10%
Loads	< 35%
Water	< 30%

PACKAGING

Type of packaging	PP [kg/kg]	Iron [kg/kg]	Paper [kg/kg]	LDPE [kg/kg]	Wood [kg/kg]
PAINTLAC GLOSS 1 L	6.72E-02	0.00E+00	2.43E-03	8.91E-03	6.07E-02
PAINTLAC GLOSS 5 L	4.74E-02	0.00E+00	4.86E-04	2.27E-03	8.10E-02
PAINTLAC GLOSS 10 L	4.17E-02	3.16E-03	2.43E-04	1.13E-03	9.20E-02

Type of packaging	PP [kg/kg]	Iron [kg/kg]	Paper [kg/kg]	LDPE [kg/kg]	Wood [kg/kg]
PAINTLAC MATT 1 L	6.54E-02	0.00E+00	2.36E-03	8.66E-03	5.91E-02
PAINTLAC MATT 5 L	4.61E-02	0.00E+00	4.72E-04	2.20E-03	7.87E-02
PAINTLAC MATT 10 L	4.06E-02	0.00E+00	2.36E-04	1.10E-03	8.94E-02

Type of packaging	PP [kg/kg]	Iron [kg/kg]	Paper [kg/kg]	LDPE [kg/kg]	Wood [kg/kg]
PAINTLAC SATINED 1 L	6.61E-02	0.00E+00	2.39E-03	8.76E-03	5.98E-02
PAINTLAC SATINED 5 L	4.67E-02	0.00E+00	4.78E-04	2.23E-03	7.97E-02
PAINTLAC SATINED 10 L	4.10E-02	3.11E-03	2.39E-04	1.12E-03	9.05E-02

TECHNICAL DATA

		PAINTLAC LUCID	PAINTLAC MATT	PAINTLAC SATINED
TECHNICAL DATA	METHOD	MAIN DATA AT 20°C & 60% R.H.	MAIN DATA AT 20°C & 60% R.H.	MAIN DATA AT 20°C & 60% R.H.
Contrast ratio	M.U. 1631	97	97	97
		Good	Good	Good
Kubelka-Munk Yield	ISO 6504-1	> 8 m2/Lt	> 8 m2/Lt	> 8 m2/Lt
Washability	ISO 11998	Class 1	Class 1	Class 1
Dirt trap	UNI 10792	< 3	< 3	< 3
ΔL		Very low	Very low	Very low

DECLARED UNIT

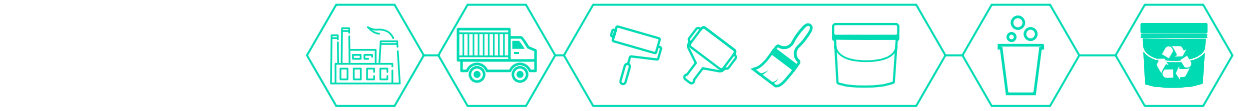
This EPD uses the concept of «**declared unit**» instead of «functional unit» according to current regulations.

REFERENCE YEAR

The data used refer to the calendar years 2019-2020. Study was conducted in 2021.

SYSTEM BOUNDARIES

This EPD is of the "cradle to gate with options" type and includes forms A1 (Raw Materials), A2 (Transport), A3 (Production), C1 (Total/Partial Demolition), C2 (Landfill/Recovery Transport), C3 (Recovery/Reuse Process), C4 (Landfill) and D (Recovery/Reuse Potential).



	PRODUCTION STAGE			CONSTRUCTION AND INSTALLATION STAGE		USE AND MAINTENANCE STAGE							END OF LIFE AND WASTE STAGE				REUSE AND RECYCLE STAGE
	Raw material supply	Transport	Manufacturing	Transport	Construction installation processing	Use	Maintenance	Repair	Replecement	Refurbishment	Operational energy use	Operational water use	De-costruction demolition	Transport	Waste processing	Disposal	Reuse - Recovery Recycling - Potential
Modules	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Modules declared	X	X	X	X	ND	ND	ND	ND	ND	ND	ND	ND	X	X	X	X	X
Geography	EU	I	I	-	-	-	-	-	-	-	-	-	EU	EU	EU	EU	EU
Specific data	>90%					-	-	-	-	-	-	-	-	-	-	-	-
Variation - products	Less than 10% for every group of products					-	-	-	-	-	-	-	-	-	-	-	-
Variation - sites	Not relevant					-	-	-	-	-	-	-	-	-	-	-	-

RESOURCE CONSUMPTION - PAINTLAC GLOSS

EN15804+A2 INDICATORS					
Impact category	Unit	A1 - A3	C1	C2 - C4	D
GWP TOTAL:	kg CO_2 eq	4,82E+00	0,00E+00	9,43E-01	0,00E+00
GWP - Fossil	kg CO_2 eq	4,78E+00	0,00E+00	3,28E-02	0,00E+00
GWP - Biogenic	kg CO_2 eq	9,69E-03	0,00E+00	9,10E-01	0,00E+00
GWP - Land use and LU change	kg CO_2 eq	2,71E-02	0,00E+00	2,69E-06	0,00E+00
ODP	kg CFC11 eq	8,48E-06	0,00E+00	2,11E-09	0,00E+00
IRP	kBq U-235 eq	4,88E-01	0,00E+00	7,08E-04	0,00E+00
POCP	kg NMVOC eq	2,73E-02	0,00E+00	2,33E-03	0,00E+00
PM	disease inc.	3,48E-07	0,00E+00	2,52E-08	0,00E+00
HTP, non-cancer	CTUh	1,30E-07	0,00E+00	3,78E-08	0,00E+00
HTP, cancer	CTUh	3,42E-08	0,00E+00	6,96E-09	0,00E+00
AP	mol H+ eq	2,40E-02	0,00E+00	8,88E-04	0,00E+00
EP, freshwater	kg P eq	2,04E-03	0,00E+00	3,82E-06	0,00E+00
EP, marine	KG N EQ	6,66E-03	0,00E+00	4,42E-04	0,00E+00
EP, terrestrial	mol N eq	6,38E-02	0,00E+00	4,80E-03	0,00E+00
ETP, freshwater TOTAL	CTUe	1,46E+02	0,00E+00	2,81E+00	0,00E+00
ETP, freshwater - organics	CTUe	6,68E+00	0,00E+00	3,74E-01	0,00E+00
ETP, freshwater - inorganics	CTUe	3,12E+01	0,00E+00	4,69E-02	0,00E+00
ETP, freshwater - metals	CTUe	1,09E+02	0,00E+00	2,39E+00	0,00E+00
LUP	Pt	2,14E+03	0,00E+00	1,50E-01	0,00E+00
WDP	m3 depriv.	1,69E+00	0,00E+00	2,27E-03	0,00E+00
RUP, fossils	MJ	6,58E+01	0,00E+00	1,41E-01	0,00E+00
RUP, minerals and metals	kg Sb eq	2,70E-05	0,00E+00	2,79E-08	0,00E+00
HTP, non-cancer - organics	CTUh	3,22E-09	0,00E+00	9,95E-10	0,00E+00
HTP, non-cancer - inorganics	CTUh	7,04E-08	0,00E+00	2,28E-08	0,00E+00
HTP, non-cancer - metals	CTUh	5,64E-08	0,00E+00	1,40E-08	0,00E+00
HTP, cancer - organics	CTUh	9,23E-09	0,00E+00	6,82E-09	0,00E+00
HTP, cancer - inorganics	CTUh	0,00E+00	0,00E+00	0,00E+00	0,00E+00
HTP, cancer - metals	CTUh	2,49E-08	0,00E+00	1,40E-10	0,00E+00

RESOURCE CONSUMPTION - PAINTLAC GLOSS

* Results in kg PO4 eq. can be obtained by multiplying results in kg P eq by a conversion factor of 3.07

Impact category	Unit	A1-A3	C1	C2-C4	D
PENRT	MJ	1,16E+02	0,00E+00	3,67E-01	0,00E+00
PENRM	MJ	1,02E+01	0,00E+00	1,02E+01	0,00E+00
PENRE	MJ	3,46E-02	0,00E+00	4,81E-06	0,00E+00
PERT	MJ	3,96E+02	0,00E+00	3,91E-03	0,00E+00
PERM	MJ	3,93E+02	0,00E+00	1,12E-03	0,00E+00
PERE	MJ	3,76E+00	0,00E+00	2,79E-03	0,00E+00
Ozone depletion	kg CFC11 eq	5,08E-06	0,00E+00	5,14E-09	0,00E+00
Net use of fresh water	m3	2,71E+00	0,00E+00	2,74E+00	0,00E+00

WASTE - PAINTLAC GLOSS

Impact category	Unit	A1-A3	C1	C2-C4	D
Hazardous waste disposed	KG	2,36E-04	0,00E+00	5,50E-03	0,00E+00
Non- hazardous waste disposed	kg	2,21E+00	0,00E+00	1,01E+00	0,00E+00
Radioactive waste disposed	kg	3,27E-04	0,00E+00	2,32E-06	0,00E+00
Components for re-use	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for recycling	kg	0,00E+00	0,00E+00	4,11E-01	0,00E+00
Materials for energy recovery	kg	0,00E+00	0,00E+00	6,52E-01	0,00E+00
Exported energy	MJ per energy carrier	0,00E+00	0,00E+00	0,00E+00	0,00E+00

IPCC INDICATOR - PAINTLAC GLOSS

Impact category	Unit	A1-A3	C1	C2-C4	D
GWP-GHG	kg CO_2 eq	7,18E+00	0,00E+00	1,29E-01	0,00E+00

RESOURCE CONSUMPTION - PAINTLAC MATT

EN15804+A2 INDICATORS					
Impact category	Unit	A1 - A3	C1	C2 - C4	D
GWP TOTAL:	kg CO_2 eq	7,47E+00	0,00E+00	9,53E-01	0,00E+00
GWP - Fossil	kg CO_2 eq	7,40E+00	0,00E+00	4,29E-02	0,00E+00
GWP - Biogenic	kg CO_2 eq	3,80E-02	0,00E+00	9,10E-01	0,00E+00
GWP - Land use and LU change	kg CO_2 eq	2,78E-02	0,00E+00	5,84E-06	0,00E+00
ODP	kg CFC11 eq	5,08E-06	0,00E+00	5,14E-09	0,00E+00
IRP	kBq U-235 eq	6,31E-01	0,00E+00	1,69E-03	0,00E+00
POCP	kg NMVOC eq	3,51E-02	0,00E+00	2,40E-03	0,00E+00
PM	disease inc.	4,52E-07	0,00E+00	2,64E-08	0,00E+00
HTP, non-cancer	CTUh	1,91E-07	0,00E+00	3,79E-08	0,00E+00
HTP, cancer	CTUh	3,54E-08	0,00E+00	6,97E-09	0,00E+00
AP	mol H+ eq	3,42E-02	0,00E+00	9,50E-04	0,00E+00
EP, freshwater	kg P eq	2,59E-03	0,00E+00	4,60E-06	0,00E+00
EP, marine	KG N EQ	8,52E-03	0,00E+00	4,62E-04	0,00E+00
EP, terrestrial	mol N eq	8,23E-02	0,00E+00	5,02E-03	0,00E+00
ETP, freshwater TOTAL	CTUe	1,83E+02	0,00E+00	2,95E+00	0,00E+00
ETP, freshwater - organics	CTUe	5,29E+00	0,00E+00	3,86E-01	0,00E+00
ETP, freshwater - inorganics	CTUe	3,17E+01	0,00E+00	8,47E-02	0,00E+00
ETP, freshwater - metals	CTUe	1,46E+02	0,00E+00	2,48E+00	0,00E+00
LUP	Pt	2,14E+03	0,00E+00	4,46E-01	0,00E+00
WDP	m3 depriv.	2,71E+00	0,00E+00	7,47E-03	0,00E+00
RUP, fossils	MJ	1,08E+02	0,00E+00	3,45E-01	0,00E+00
RUP, minerals and metals	kg Sb eq	3,31E-05	0,00E+00	5,91E-08	0,00E+00
HTP, non-cancer - organics	CTUh	4,64E-09	0,00E+00	1,00E-09	0,00E+00
HTP, non-cancer - inorganics	CTUh	1,13E-07	0,00E+00	2,28E-08	0,00E+00
HTP, non-cancer - metals	CTUh	7,42E-08	0,00E+00	1,40E-08	0,00E+00
HTP, cancer - organics	CTUh	8,91E-09	0,00E+00	6,82E-09	0,00E+00
HTP, cancer - inorganics	CTUh	0,00E+00	0,00E+00	0,00E+00	0,00E+00
HTP, cancer - metals	CTUh	2,65E-08	0,00E+00	1,43E-10	0,00E+00

RESOURCE CONSUMPTION - PAINTLAC MATT

* Results in kg PO4 eq. can be obtained by multiplying results in kg P eq by a conversion factor of 3.07

Impact category	Unit	A1-A3	C1	C2-C4	D
PENRT	MJ	1,16E+02	0,00E+00	3,67E-01	0,00E+00
PENRM	MJ	1,02E+01	0,00E+00	1,02E+01	0,00E+00
PENRE	MJ	3,46E-02	0,00E+00	4,81E-06	0,00E+00
PERT	MJ	3,96E+02	0,00E+00	3,91E-03	0,00E+00
PERM	MJ	3,93E+02	0,00E+00	1,12E-03	0,00E+00
PERE	MJ	3,76E+00	0,00E+00	2,79E-03	0,00E+00
Ozone depletion	kg CFC11 eq	5,08E-06	0,00E+00	5,14E-09	0,00E+00
Net use of fresh water	m3	2,71E+00	0,00E+00	2,74E+00	0,00E+00

WASTE - PAINTLAC MATT

Impact category	Unit	A1-A3	C1	C2-C4	D
Hazardous waste disposed	KG	2,36E-04	0,00E+00	5,50E-03	0,00E+00
Non- hazardous waste disposed	kg	2,21E+00	0,00E+00	1,01E+00	0,00E+00
Radioactive waste disposed	kg	3,27E-04	0,00E+00	2,32E-06	0,00E+00
Components for re-use	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for recycling	kg	0,00E+00	0,00E+00	4,11E-01	0,00E+00
Materials for energy recovery	kg	0,00E+00	0,00E+00	6,52E-01	0,00E+00
Exported energy	MJ per energy carrier	0,00E+00	0,00E+00	0,00E+00	0,00E+00

IPCC INDICATOR - PAINTLAC MATT

Impact category	Unit	A1-A3	C1	C2-C4	D
GWP-GHG	kg CO_2 eq	7,18E+00	0,00E+00	1,29E-01	0,00E+00

RESOURCE CONSUMPTION - PAINTLAC SATINED

EN15804+A2 INDICATORS					
Impact category	Unit	A1 - A3	C1	C2 - C4	D
GWP TOTAL:	kg CO_2 eq	6,70E+00	0,00E+00	9,53E-01	0,00E+00
GWP - Fossil	kg CO_2 eq	6,63E+00	0,00E+00	4,23E-02	0,00E+00
GWP - Biogenic	kg CO_2 eq	4,63E-02	0,00E+00	9,10E-01	0,00E+00
GWP - Land use and LU change	kg CO_2 eq	2,84E-02	0,00E+00	5,64E-06	0,00E+00
ODP	kg CFC11 eq	6,84E-06	0,00E+00	4,95E-09	0,00E+00
IRP	kBq U-235 eq	7,32E-01	0,00E+00	1,63E-03	0,00E+00
POCP	kg NMVOC eq	3,42E-02	0,00E+00	2,40E-03	0,00E+00
PM	disease inc.	4,27E-07	0,00E+00	2,63E-08	0,00E+00
HTP, non-cancer	CTUh	2,07E-07	0,00E+00	3,79E-08	0,00E+00
HTP, cancer	CTUh	3,61E-08	0,00E+00	6,97E-09	0,00E+00
AP	mol H+ eq	3,35E-02	0,00E+00	9,46E-04	0,00E+00
EP, freshwater	kg P eq	2,86E-03	0,00E+00	4,55E-06	0,00E+00
EP, marine	KG N EQ	8,41E-03	0,00E+00	4,61E-04	0,00E+00
EP, terrestrial	mol N eq	8,16E-02	0,00E+00	5,01E-03	0,00E+00
ETP, freshwater TOTAL	CTUe	1,73E+02	0,00E+00	2,94E+00	0,00E+00
ETP, freshwater - organics	CTUe	5,26E+00	0,00E+00	3,85E-01	0,00E+00
ETP, freshwater - inorganics	CTUe	3,34E+01	0,00E+00	8,23E-02	0,00E+00
ETP, freshwater - metals	CTUe	1,35E+02	0,00E+00	2,48E+00	0,00E+00
LUP	Pt	2,15E+03	0,00E+00	4,27E-01	0,00E+00
WDP	m^3 depriv.	2,52E+00	0,00E+00	7,14E-03	0,00E+00
RUP, fossils	MJ	9,45E+01	0,00E+00	3,33E-01	0,00E+00
RUP, minerals and metals	kg Sb eq	4,25E-05	0,00E+00	5,71E-08	0,00E+00
HTP, non-cancer - organics	CTUh	4,31E-09	0,00E+00	1,00E-09	0,00E+00
HTP, non-cancer - inorganics	CTUh	1,33E-07	0,00E+00	2,28E-08	0,00E+00
HTP, non-cancer - metals	CTUh	7,04E-08	0,00E+00	1,40E-08	0,00E+00
HTP, cancer - organics	CTUh	9,02E-09	0,00E+00	6,82E-09	0,00E+00
HTP, cancer - inorganics	CTUh	0,00E+00	0,00E+00	0,00E+00	0,00E+00
HTP, cancer - metals	CTUh	2,71E-08	0,00E+00	1,42E-10	0,00E+00

RESOURCE CONSUMPTION - PAINTLAC SATINED

* Results in kg PO4 eq. can be obtained by multiplying results in kg P eq by a conversion factor of 3.07

Impact category	Unit	A1-A3	C1	C2-C4	D
PENRT	MJ	1,00E+02	0,00E+00	3,53E-01	0,00E+00
PENRM	MJ	1,06E+01	0,00E+00	1,06E+01	0,00E+00
PENRE	MJ	3,47E-02	0,00E+00	4,65E-06	0,00E+00
PERT	MJ	3,97E+02	0,00E+00	3,77E-03	0,00E+00
PERM	MJ	3,93E+02	0,00E+00	1,08E-03	0,00E+00
PERE	MJ	4,28E+00	0,00E+00	2,69E-03	0,00E+00
Ozone depletion	kg CFC11 eq	6,84E-06	0,00E+00	4,95E-09	0,00E+00
Net use of fresh water	m^3	2,52E+00	0,00E+00	2,54E+00	0,00E+00

WASTE - PAINTLAC SATINED

Impact category	Unit	A1-A3	C1	C2-C4	D
Hazardous waste disposed	KG	2,41E-04	0,00E+00	5,50E-03	0,00E+00
Non- hazardous waste disposed	kg	2,31E+00	0,00E+00	9,58E-01	0,00E+00
Radioactive waste disposed	kg	3,66E-04	0,00E+00	2,23E-06	0,00E+00
Components for re-use	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for recycling	kg	0,00E+00	0,00E+00	4,11E-01	0,00E+00
Materials for energy recovery	kg	0,00E+00	0,00E+00	6,52E-01	0,00E+00
Exported energy	MJ per energy carrier	0,00E+00	0,00E+00	0,00E+00	0,00E+00

IPCC INDICATOR - PAINTLAC SATINED

Impact category	Unit	A1-A3	C1	C2-C4	D
GWP-GHG	kg CO_2 eq	6,43E+00	0,00E+00	1,29E-01	0,00E+00

GREEN PUBLIC PROCUREMENT (GPP) – BUILDING MINIMUM ENVIRONMENTAL CRITERIA (MEC)

REQUIREMENTS FOR PAINT AND VARNISH PRODUCERS

MEC are issued by the Ministry of the Environment and are established for multiple product categories. They provide «environmental considerations» linked to the different stages of the bidding (subject of the contract, technical specifications, rewarding technical features linked to the most convenient offer, execution of tasks) aimed to qualify, from the environmental point of view, both supplies and awarding through the entire product/service lifecycle.

PAINT PRODUCTS MUST MEET THESE TECHNICAL SPECIFICATIONS TO COMPLY WITH BUILDING MEC

1. EMISSION LIMITS

Paints and varnishes **producer must prove compliance with emission limits in table below providing documentary evidence** by verifying through measurements their products' emissions.

2.3 Technical specifications of the building*
2.3.5.5 Materials' emission*

EMISSION LIMIT (μm^2)

Benzene Trichloroethylene 2-ethylhexyl phthalate(DEHP) Dibutyl phthalate (DBP)	1 (for each substance)
Total VOC (22)	1500
Formaldehyde	<60
Acetaldehyde	<300
Toluene	<450
tetrachloroethylene	<350
xylene	<300
1,2,4-trimethylbenzene	<1500
1,4-dichlorobenzene	<90
Ethylbenzene	<1000
2-dibutoxyethanol	<1500
Styrene	<350

2. HAZARDOUS SUBSTANCES

Paints and varnishes producer **must show statement of compliance of the legal representative, accompanied by the Material Safety Data Sheet (MSDS)** of the product. Whether there are no hazardous substances in MSDS, the Sheet itself is the documentation that proves compliance.

2.4.1.3 Hazardous substances

In components, parts or material used must not be added intentionally:

- *additives based on cadmium, lead, chrome VI, mercury, arsenic and selenium in concentrations above 0.010% by weight.*
- *substances identified as "substance of very high concern" (SVHCs) pursuant to Article 59 of the EC Regulation No 1907/2006 in concentrations above 0.10% by weight.*
- *Substances or mixtures classified or classifiable under the following hazard statements:*
  - *carcinogenic, mutagenic or toxic for reproduction of category 1A, 1B or 2 [seguono varie sigle];(H340, H350, H350i, H360, H360F, H360D, H360FD, H360Fd, H360Df, H341, H351, H361f, H361d, H361fd, H362);*
  - *High oral, dermal, oxygen toxicity of category 1, 2 or 3 (H300, H301, H310, H311, H330, H331);*
  - *Marine hazard of category 1,2 (H400, H410, H411);*
  - *Having organ specific toxic effect of category 1 and 2 (H370, H371, H372, H373).*

3. OWNING OF AN ECOLABEL TRADEMARK OR EQUIVALENT

Paints and varnishes producer **must show documentation about the owning of an Ecolabel or equivalent trademark.** The producer can alternatively show an EPD type III.

2.4 Technical specifications of building components*
2.4.2 Specific criteria for building components*
2.4.2.11 Paints and varnishes*

Paint products must comply with ecological and performance criteria pursuant to 2014/312/UE2 decision as subsequently amended for the award of the EU Ecolabel for indoor and outdoor paints and varnishes.
Verification: the designer must require the contractor to make sure, during the equipment procurement phase, about the compliance with this criteria using products that alternatively have:
- EU Ecolabel or an equivalent trademark
- EPD type III, conforming with UNI EN 15804 and ISO 14025 which shows compliance to this criteria. This can verified in the EPD: specific information about criteria contained in the above-mentioned decisions must be present.
Documentation must be submitted to the contracting authority during implantation of Works, as indicated in the contract documents.

**for further information please see CAM dated 20 May 2017. Current referente text is Decree of October 11, 2017 "Adoption of minimum environmental criteria for the assignment of design and construction services for the new construction, renovation and maintenance of buildings and for the management of public administration sites" ("CAM Edilizia") amending previous CAM, issued in January 2017.*

ACRONYMS

ENVIRONMENTAL IMPACTS

ADP = abiotic depletion potential
AP = acidification potential
EP = eutrophierung potential
GWP = global warming potential
ODP = ozone depletion potential
POCP = Photochemical Ozone Creation Potential
WDP = water deprivation potential
IRP = ionising radiation
PM = particulate matter
HTP = human toxicity
ETP = ecotoxicity potential
LUP = land use potential
RUP = resource use potential

MATERIAL CONSUMPTION

PERT = Primary energy renewable – total
PERM = Primary energy renewable – material
PERE = Primary energy renewable - energy resources
PENRT = Total use of non renewable primary energy resources
PENRM = non renewable primary energy resources used as raw materials
PENRE = Use of non-renewable primary energy resources excluding non-renewable energy resources used as raw materials
SM = secondary material
RSF = renewable secondary fuels
NRSF = non-renewable secondary fuels
FWT = Total water consumption

PRODUZIONE RIFIUTI

HWD = hazardous waste disposed
NHWD = non-hazardous waste disposed
RWD = radioactive waste disposed
CRU = customer reusable units
MFR = Materiali per il riciclaggio;
MER = materials for recycling
EE = exported energy

VERIFICATION AND VALIDATION

ISO standard ISO 21930 and CEN standard EN 15804 serves as the core Product Category Rules (PCR)

Product Category Rules (PCR):
PCR 2019:14 Construction products, version 1.11

(PCR) review was conducted by: The Technical Commitee 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 Secretarian www.environdec.com/contact

Indipendent third-party verification of th declaration and data, according to ISO 14025:2006:
☒ External ☐ Internal
covering
☒EPD process certification ☐ EPD verification

Third-party verifer:
Guido Croce

Procedure for follow-up during EPD validity involves third party verifier.
☐ Yes ☒ No

EPD owner has the property and the responsibility of the declaration.

CPC CODE: 3511 Paints and varnishes and related products

BIBLIOGRAPHY

AIB - Association of Issuing Bodies (2020). European Residual Mixes - Results of the calculation of Residual Mixes for the calendar year 2019 (Version 1.1, 2020-09-08).
CEWEP 2012, Confederation of European Waste-to-Energy Plants. Energy Report III (December 2012).
De Ceuster, G., et al. (2009) TREMOVE: Final Report. Model code v2.7b, 2009.
European Commission, Brussels.
Ecoinvent Centre (2007) Ecoinvent data v2.0. Swiss Centre for Life Cycle Inventories, Dübendorf, Switzerland.
EMEP/EEA air pollutant emission inventory guidebook 2016; '1.A.4 non-road mobile machinery'.
IPCC, 2006. Guidelines for National Greenhouse Gas Inventories.
ISPRA 2017, Istituto Superiore per la Protezione e la Ricerca Ambientale: Rapporto Rifiuti Urbani, Edizione 2017; Rapporti 272/2017. ISBN 978-88-448-0852-5.
Keller, M. et al. (2010) Handbook emission factors for road transport v3.1, HBEFA.
INFRAS, Berne, CH.
Knörr, W. et al. (2011) Ecological Transport Information Tool for Worldwide Transports (EcoTransIT): Methodology and data update. Berlin, Hannover, Heidelberg, DE.
Ntziachristos, L., et al. (2013) EMEP/EEA air pollutant emissions inventory guidebook 2009:
Exhaust emissions from road transport. European Environment Agency, Copenhagen, DK.
Spielmann, M., et al. (2007) Transport Services. ecoinvent report No. 14., Swiss Centre for Life Cycle Inventories, Dübendorf, CH. From combustion of fuel in the engine. The dataset takes as input the infrastructure of the lorry and road network, the materials and efforts needed for maintenance of these and the fuel consumed in the vehicle for the journey. The activity ends with the transport service of 1tkm and the emissions of exhaust and non-exhaust emissions into air, water and soil.

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