

Viero

WALL FARBE



**ENVIRONMENTAL
PRODUCT
DECLARATION**

REGISTRATION:
S-P-03084

**PUBLICATION
DATE:**
2022/07/25

**VALID
UNTIL:**
2027/07/25

PROGRAMME:
The International EPD® System
www.environdec.com

PROGRAM OPERATOR:
EPD International AB



This EPD has been developed in compliance with
ISO 14025:2010 and EN 15804:2012+A2:2019

Cromology

The Cromology Group was founded in 2015, at the end of a decades-long transformation process that began in the late 1990s, when Lafarge Peintures created the Specialty Materials division that was later Materis Paints and quickly became a player on the global and emerging markets.

Today, Cromology retains that pioneering spirit of its Dutch origins in the 1700s, confirming itself as a solid, **worldwide group and a leader in Southern Europe**, with a presence in **50 countries**, and a global annual turnover of more than **600 mln/€**. The group's strength is expressed through its **3700 employees including 100 researchers and highly specialised technicians** - **9 production sites and 5 R&D laboratories**.

Cromology's brands are marketed in over 50 countries worldwide, with a direct **presence in 8 countries**. In each market, Cromology's brands are an expression of its history, professionalism and capacity for innovation.

20% of the turnover is generated by new products.

Cromology Italia believes in a **multi-channel strategy diversified by brand**, range of services and type of customer: from designers to professional applicators and private customers with an offer of **7 specialised brands**, **Cromology holds 7% of the Italian market**, an absolute leadership position.

With **headquarters in Porcari**, in the province of Lucca, the company counts on **two state-of-the-art production sites** of 80,000 square metres, a 45,000 square metre **logistics hub** and the cooperation throughout Italy of **400 collaborators**, including head office staff and a sales network.

With its own brand portfolio and a wide range of products and services, **Cromology's aim is to be a trusted partner alongside customers, professionals and private individuals, in order to achieve professional excellence together.**




3,700
collaborators


100
researchers


50
countries where the
products are marketed



8
countries with
direct presence


5
R&D
laboratories


20%
sales generated
by new products


9
production
sites


7
logistics
hubs


665 millions
annual turnover

SUSTAINABILITY

WE ARE COMMITTED TO EVERY OPERATIONAL PHASE

The Cromology Group's approach to sustainability stems from its Mission: **to responsibly protect and colour homes to improve everyone's life.**

Cromology places Corporate Social Responsibility (CSR) at the heart of its strategy, at the same level as profitable growth and operational excellence. With a view to continuous improvement, Cromology integrates its CSR objectives into business development and new product launches.

Cromology's CSR approach relates to the Sustainable Development Goals (SDGs) defined by the United Nations. Cromology has identified the 5 SDGs most relevant to its activities and on the basis of these is committed to responsible and sustainable development in order to maximise the value generated for customers, employees, shareholders, suppliers, civil society and local communities.

SUSTAINABLE DEVELOPMENT



CROMOLOGY'S SUSTAINABILITY



PRODUCT SAFETY AND LIABILITY



INDOOR AIR QUALITY



HACCP
HYGIENE-HEALTHCARE
PREVENTION PROTOCOL



ISO 9001:2015 QUALITY
MANAGEMENT SYSTEM

UNI EN 15458
ANTI-ALGAE EFFICACY

ISO 22196
BACTERIOSTATIC
CERTIFICATE

ENVIRONMENTAL RESPONSIBILITY



ISO 14001:2015
ENVIRONMENTAL
PROTECTION
IN INDUSTRIAL
PRODUCTION
PROCESSES



ENVIRONMENTAL
PRODUCT
DECLARATION



ECOLABEL

100% GREEN ENERGY
CERTIFICATION

SOCIAL RESPONSIBILITY



ISO 45001:2018
OCCUPATIONAL HEALTH
AND SAFETY MANAGEMENT
SYSTEM

DLGS 231/2001
CORPORATE
ADMINISTRATIVE LIABILITY

CSR



ENVIRONMENTAL DECLARATION

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 DRAFTED BY | Leyton Italia s.r.l |
| DECLARATION HOLDER | Dr. Marco Demi Cromology Italia S.p.A. |
| CHECKED BY | Guido Croce |
| GEOGRAPHICAL REFERENCE | International |
| EPD REGISTRATION NUMBER | S-P-03084 |
| EXPIRY DATE | 25/07/2027 |
| PUBLICATION DATE | 25/07/2022 |
| PRODUCT DESCRIPTION | WALL FARBE - Breathable wall paint |
| APPLICATION SCOPE | The LCA analysis was conducted according to the ISO 14025, ISO 14040, ISO 14044 and EN15804 standards. Both process-specific data and data from the Ecoinvent 3.6 database were used. The methods for calculating and assessing the impacts were used as defined in 2019 EN 15804 2012+A2:2019. The LCA study covers the production phases of raw materials and energy; transport of materials; production at the company's sites; and the end of life of the material. |



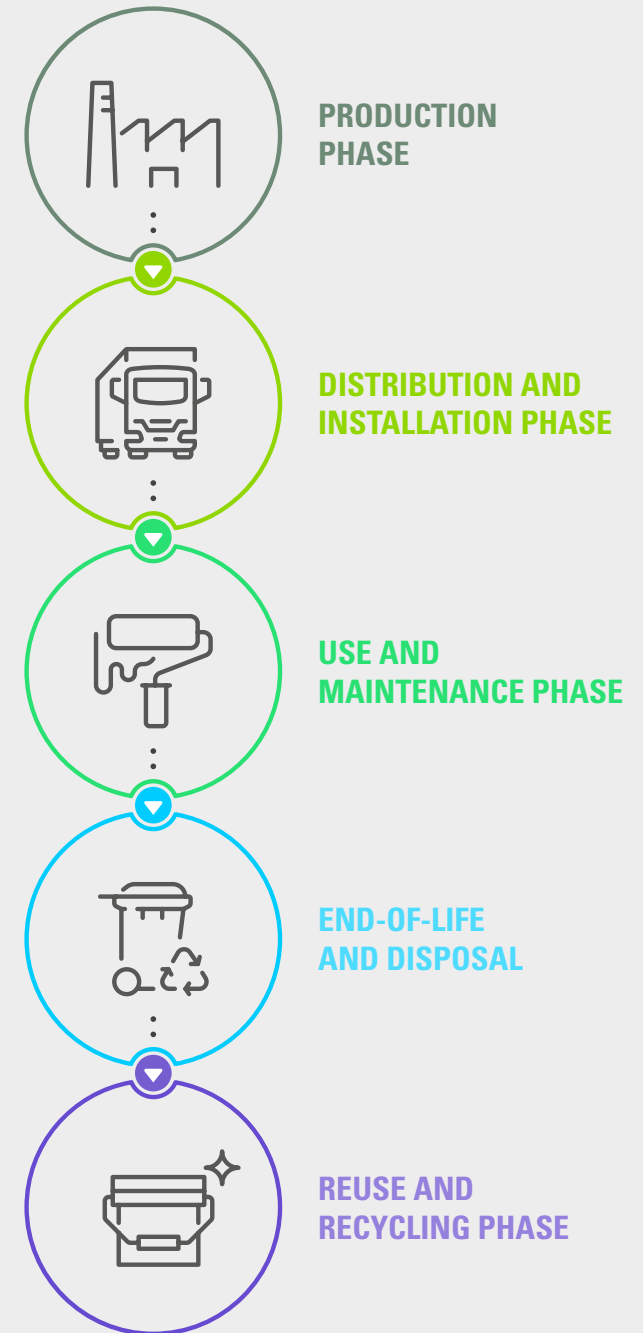
The abbreviation EPD stands for Environmental Product Declaration and is a document in which the environmental performance of a product is described in the form of standardised and objective data.

It makes it possible to analyse and quantify how much energy and natural resources are used by production and distribution processes, how much CO₂ is emitted into the atmosphere, what materials are used for packaging and how much waste is generated.

In the field of construction, the EPD is an essential basis for professionals such as architects and designers when it comes to the overall planning and evaluation of interventions. As the validation of the EPD must be performed by recognised Certification Bodies, it represents an important act of transparency and accountability for the market.

EPDs, created on a voluntary basis, must be prepared with reference to the LCA (Life Cycle Assessment) which is an analytical and systematic methodology that assesses the environmental significance of a product or service throughout its entire life cycle. LCA is the methodology that serves as the technical basis for a wide range of possible actions aimed at increasing the sustainability of products, as it helps to understand the impact generated towards the environment by products. The PCR (Product Category Rules) contain the rules for conducting the LCA, which must also comply with the international standard EN 15804 for construction products.

This EPD refers to WALL FARBE - Breathable wall paint.





VIERO, THE PROFESSIONAL REFERENCE FOR FACADES

WE ARE COMMITTED TO EVERY OPERATIONAL PHASE

Viero is the specialist for solving the main façade issues with a complete range of products and cladding systems for every need.

Innovative solutions, all of which certified in compliance with quality, environmental sustainability and energy efficiency regulations.

Viero confirms itself as the ideal partner for designers and companies operating on the building market, offering personalised consultancy and products of the highest level.



A+ CERTIFIED



HACCP CERTIFIED



EU Ecolabel
IT/44/001

ECOLABEL



CAM



WALL FARBE

This Environmental Product Declaration (EPD) refers to WALL FARBE, a breathable vinyl resin-based wall paint for large surfaces.

Thanks to its particularly high yield, it is ideal for interior work on large surfaces.

- DILUTION UP TO 50%
- HIGH BREATHABILITY
- EASY APPLICATION
- FOR INTERIORS

| TECHNICAL DATA | METHOD | MAIN DATA AT 20°C & 60% RELATIVE HUMIDITY |
|--------------------|-----------|--|
| CONTRAST RATIO | M.U. 1631 | 96.6 GOOD |
| KUBELKA-MUNK YIELD | ISO6504-1 | 8.1 MQ/L |
| WASHABILITY | ISO 11998 | |
| DIRT TRAP ΔL | UNI 10792 | > 15 HIGH |



CHEMICAL COMPOSITION OF PRODUCT

| PACKAGING VOLUME | PP [kg/kg] | IRON [kg/kg] | PAPER [kg/kg] | LDPE [kg/kg] | WOOD [kg/kg] |
|------------------|---------------|-----------------|------------------|-----------------|-----------------|
| 14 L | 3.07E-02 | 2.44E-03 | 8.26E-05 | 5.78E-04 | 4.69E-02 |
| 5 L | 3.42E-02 | 0.00E+00 | 2.31E-04 | 5.78E-04 | 5.78E-02 |

| WALL FARBE | |
|------------|------|
| Water | < 30 |
| Loads | < 70 |
| Emulsions | < 10 |
| Additives | < 10 |

ENVIRONMENTAL DECLARATION PROCESS

DECLARED UNIT:

For this EPD, in accordance with the reference standards, the concept of “declared unit” is used instead of “functional unit”.

The declared unit is the quantity of product required to produce 1 kg of finished product.






REFERENCE YEAR:

The data used refer to the calendar year 2020. Study carried out 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 (Transport to Landfill/Recovery Centre), C3 (Recovery/Reuse Process), C4 (Landfill) and D (Recovery/ Reuse Potential).



| |  PRODUCTION PHASE | | |  DISTRIBUTION AND INSTALLATION PHASE | |  USE AND MAINTENANCE PHASE | | | | | | |  END-OF-LIFE & DISPOSAL PHASE | | | |  REUSE & RECYCLING PHASE |
|-------------------|---|-----------|------------|--|--------------|--|-------------|---------|-------------|------------|------------|-----------|---|--|------------------|----------|--|
| | Raw Materials | Transport | Production | Transport | Installation | Use | Maintenance | Repairs | Replacement | Renovation | Energy use | Water use | Demolition (total / partial) | Transport (landfill / recovery centre) | Recovery / reuse | Landfill | Recovery / reuse potential |
| FORMS | A1 | A2 | A3 | A4 | A5 | B1 | B2 | B3 | B4 | B5 | B6 | B7 | C1 | C2 | C3 | C4 | D |
| DECLARATION FORMS | 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% | | | | | - | - | - | - | - | - | - | - | - | - | - | - |
| VARIABLES | Less than +10% for each product group | | | | | - | - | - | - | - | - | - | - | - | - | - | - |
| SITE VARIATIONS | Not relevant | | | | | - | - | - | - | - | - | - | - | - | - | - | - |

ENVIRONMENTAL PERFORMANCE

ENVIRONMENTAL CALCULATION SIMULATION

| EN15804 + A2 INDICATORS | | | | | | |
|------------------------------|------------------------|----------|----------|----------|----------|--|
| Impact category | Unit | A1 - A3 | C1 | C2 - C4 | D | |
| GWP | kg CO ₂ eq | 1.01E+02 | 0.00E+00 | 1.17E+00 | 0.00E+00 | |
| GWP - Fossil | kg CO ₂ eq | 9.77E+01 | 0.00E+00 | 1.57E-01 | 0.00E+00 | |
| GWP - Biogenic | kg CO ₂ eq | 3.25E+00 | 0.00E+00 | 1.01E+00 | 0.00E+00 | |
| GWP - Land use and LU change | kg CO ₂ eq | 8.21E-02 | 0.00E+00 | 1.27E-05 | 0.00E+00 | |
| ODP | kg CFC11 eq | 3.92E-05 | 0.00E+00 | 9.41E-09 | 0.00E+00 | |
| IRP | kBq U-235 eq | 9.47E+00 | 0.00E+00 | 3.18E-03 | 0.00E+00 | |
| POCP | kg NMVOC eq | 2.83E-01 | 0.00E+00 | 2.52E-03 | 0.00E+00 | |
| PM | disease inc. | 4.64E-06 | 0.00E+00 | 2.79E-08 | 0.00E+00 | |
| AP | mol H+ eq | 4.22E-01 | 0.00E+00 | 1.06E-03 | 0.00E+00 | |
| EP, freshwater | kg P eq | 2.66E-02 | 0.00E+00 | 1.09E-05 | 0.00E+00 | |
| EP, marine | kg N eq | 8.24E-02 | 0.00E+00 | 5.53E-04 | 0.00E+00 | |
| EP, terrestrial | mol N eq | 8.57E-01 | 0.00E+00 | 5.44E-03 | 0.00E+00 | |
| ETP, freshwater | CTUe | 2.14E+03 | 0.00E+00 | 3.50E+00 | 0.00E+00 | |
| ETP, freshwater - organics | CTUe | 3.39E+01 | 0.00E+00 | 4.02E-01 | 0.00E+00 | |
| ETP, freshwater - inorganics | CTUe | 7.18E+02 | 0.00E+00 | 4.03E-01 | 0.00E+00 | |
| ETP, freshwater - metals | CTUe | 1.39E+03 | 0.00E+00 | 2.70E+00 | 0.00E+00 | |
| LUP | Pt | 2.47E+03 | 0.00E+00 | 6.17E-01 | 0.00E+00 | |
| WDP | m ³ depriv. | 1.19E+02 | 0.00E+00 | 1.29E-02 | 0.00E+00 | |
| RUP, fossils | MJ | 1.46E+03 | 0.00E+00 | 6.36E-01 | 0.00E+00 | |
| RUP, minerals and metals | kg Sb eq | 7.28E-04 | 0.00E+00 | 1.34E-07 | 0.00E+00 | |
| HTP, non-cancer | CTUh | 2.07E-06 | 0.00E+00 | 3.88E-08 | 0.00E+00 | |
| HTP, non-cancer - organics | CTUh | 4.54E-08 | 0.00E+00 | 1.04E-09 | 0.00E+00 | |
| HTP, non-cancer - inorganics | CTUh | 3.80E-07 | 0.00E+00 | 2.29E-08 | 0.00E+00 | |
| HTP, non-cancer - metals | CTUh | 1.66E-06 | 0.00E+00 | 1.49E-08 | 0.00E+00 | |
| HTP, cancer | CTUh | 1.54E-07 | 0.00E+00 | 6.99E-09 | 0.00E+00 | |
| HTP, cancer - organics | CTUh | 5.33E-08 | 0.00E+00 | 6.83E-09 | 0.00E+00 | |
| HTP, cancer - inorganics | CTUh | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| HTP, cancer - metals | CTUh | 1.01E-07 | 0.00E+00 | 1.66E-10 | 0.00E+00 | |

WASTE

* The results in kg P04 eq. can be obtained by multiplying the results in kg P eq. by a conversion factor of 3.07.

| Impact category | Unit | A1 - A3 | C1 | C2 - C4 | D |
|-----------------|-------------|----------|----------|----------|----------|
| PENRT | MJ | 1,58E+03 | 0,00E+00 | 6,76E-01 | 0,00E+00 |
| PENRM | MJ | 1,81E+02 | 0,00E+00 | 1,81E+02 | 0,00E+00 |
| PENRE | MJ | 4,87E-02 | 0,00E+00 | 1,07E-05 | 0,00E+00 |
| PERT | MJ | 5,27E+02 | 0,00E+00 | 8,78E-03 | 0,00E+00 |
| PERM | MJ | 4,47E+02 | 0,00E+00 | 2,44E-03 | 0,00E+00 |
| PERE | MJ | 8,01E+01 | 0,00E+00 | 6,33E-03 | 0,00E+00 |
| ODP | kg CFC11 eq | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| WDP | m³ | 0,00E+00 | 0,00E+00 | 2,45E-02 | 0,00E+00 |

WASTE

| Impact category | Unit | A1 - A3 | C1 | C2 - C4 | D |
|-----------------|-----------------------|----------|----------|----------|----------|
| HWD | kg | 9,42E-04 | 0,00E+00 | 5,50E-03 | 0,00E+00 |
| NWHD | kg | 8,81E+00 | 0,00E+00 | 7,71E-01 | 0,00E+00 |
| RWD | kg | 3,30E-03 | 0,00E+00 | 4,16E-06 | 0,00E+00 |
| CRU | kg | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| MFR | kg | 0,00E+00 | 0,00E+00 | 1,53E-01 | 0,00E+00 |
| MER | kg | 0,00E+00 | 0,00E+00 | 6,88E-01 | 0,00E+00 |
| EE | MJ per energy carrier | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |

IPCC INDICATOR

| Impact category | Unit | A1 - A3 | C1 | C2 - C4 | D |
|-----------------|-----------------------|----------|----------|----------|----------|
| GWP-GHG | kg CO ₂ eq | 9,64E+01 | 0,00E+00 | 2,39E-01 | 0,00E+00 |

ADDITIONAL INFORMATION

GREEN PUBLIC PROCUREMENT (GPP)

Minimum Environmental Criteria (MEC) for Constructions. Minimum Environmental Criteria (MEC) are issued by the Ministry of the Environment and concern specific purchase categories. They provide “environmental considerations”, linked to the different phases of tender procedures (subject of the contract, technical specifications, rewarding technical characteristics linked to the most economically advantageous tender, contract execution conditions) aimed at qualifying, from an environmental point of view, both supplies and procurements throughout the entire life cycle of the service/product.

THE PAINT PRODUCT COMPLIES WITH THE MEC BUILDING REGULATIONS IF IT MEETS THE TECHNICAL SPECIFICATIONS

1. EMISSION LIMITS

The manufacturer of Paints and Varnishes **must present documentation proving compliance with the emission limits indicated in the table**, verified by measuring the emissions of its products.

This documentation will consist, for example, of a test report carried out by a third-party laboratory or, if the company has suitable instrumentation, in-house laboratory tests.

2.3 3 Technical specifications of the building*

2.3.5.5 Material emission*

| EMISSION LIMIT (µm²) | |
|---|------------------------|
| Benzene Trichloroethylene (trichloroethylene) di-2-ethylhexylphthalate (DEHP) Dibutyl phthalate (DBP) | 1 (for each substance) |
| Total VOCs (22) | 1500 |
| Formaldehyde | <60 |
| Acetaldehyde | <300 |
| Toluene | <450 |
| Tetrachloroethylene | <350 |
| Xylene | <300 |
| 1,2,4-Trimethylbenzene | <1500 |
| 1,4-dichlorobenzene | <90 |
| Ethylbenzene | <1000 |
| 2-Butoxyethanol | <1500 |
| Styrene | <350 |

2. HAZARDOUS SUBSTANCES

The manufacturer of paints and varnishes **must submit a declaration of conformity of the legal representative, accompanied by the Safety Data Sheet (SDS)** of the product. In the event of substances with such classifications not appearing in the SDS, the SDS itself is sufficient documentation to demonstrate compliance with the specific criterion.

2.4.1.3 Hazardous substances*

None of the following must be added intentionally to the components, parts or materials used:

- Cadmium, lead, chromium VI, mercury, arsenic and selenium additives in concentrations exceeding 0.010% by weight.
- Substances identified as “Substances of Very High Concern” (SVHCs) according to Article 59 of Regulation (EC) No 1907/2006 at a concentration greater than 0.10% w/w;
- Substances or mixtures classified or classifiable with the following hazard statements:
 - as carcinogenic, mutagenic or toxic for reproduction in category 1A, 1B or 2 (H340, H350, H350i, H360, H360F, H360D, H360FD, H360Fd, H360Df, H341, H351, H361f, H361d, H361fd, H362);
 - for acute oral, dermal, inhalation toxicity in category 1, 2 or 3 (H300, H301, H310, H311, H330, H331);
 - as dangerous to the aquatic environment in category 1, 2 (H400, H410, H411);
 - as having specific target organ toxicity category 1 and 2 (H370, H371, H372, H373).

3. POSSESSION OF THE ECOLABEL OR EQUIVALENT

The manufacturer of Paints and Varnishes **must present documentation declaring possession of the Ecolabel or an equivalent label**. Alternatively, it may present a type III environmental declaration (i.e. an EPD - Environmental Product Declaration).

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 the ecological and performance criteria of Decision 2014/312/EU2 as amended, on the awarding of the EU Ecolabel for paint products.

Verification: the designer shall prescribe that in the procurement phase the contractor shall ensure compliance with the criterion by using products bearing either:

- the EU Ecolabel or equivalent;
- a Type III environmental declaration in accordance with EN 15804 and ISO 14025

demonstrating compliance with this criterion. This can be verified if the environmental declaration contains the specific information related to the criteria contained in the above-mentioned decisions. Evidence of compliance with this criterion must be submitted to the contracting authority during the execution of the works, in the manner specified in the relevant specifications.

*NB: please refer to the MEC text of 20 May 2017 for more details and insights. The current reference text is the Decree of 11 October 2017, “Minimum Environmental Criteria for the awarding of design services and works for the new construction, renovation and maintenance of public buildings” (“Building MEC”), which amends the previous MEC, published in January 2017.

ACRONYMS

ENVIRONMENTAL IMPACT

ADP: abiotic resource depletion potential;

AP: acidification potential;

EP: eutrophication potential;

GWP: global warming potential;

ODP: stratospheric ozone depletion potential;

POCP: tropospheric ozone creation potential;

WDP: water deprivation potential.

RESOURCE CONSUMPTION

PERT: total use of renewable primary energy resources;

PERM: use of renewable primary energy resources used as raw materials;

PERE: use of renewable primary energy excluding renewable primary energy used as raw materials;

PENRT: total use of non-renewable primary energy resources;

PENRM: use of non-renewable primary energy resources used as raw materials;

PENRE: use of non-renewable primary energy excluding non-renewable primary energy used as raw materials;

SM: use of secondary material;

RSF: use of renewable secondary fuels;

NRSF: use of non-renewable secondary fuels;

FWT: total use of water.

WASTE PRODUCTION

HWD: hazardous waste disposed of;

NHWD: non-hazardous waste disposed of;

RWD: radioactive waste disposed of;

CRU: components for reuse;

MFR: materials for recycling;

MER: materials for energy recovery;

EE: exported energy;

IRP: ionising radiation;

PM: particulate matter;

HTP: human toxicity;

ETP: ecotoxicity potential;

LUP: land use potential;

RUP: resource use potential.

VERIFICATION AND REGISTRATION

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 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 declaration and data, according to ISO 14025:2006:

☒ External ☐ Internal

covering

☒ EPD process certification ☐ EPD verification

Third-party verifier:

Guido Croce

Procedure for follow-up during EPD validity involves third party verifier.

☐ Yes ☒ No

The holder of the EPD has ownership and responsibility for the declaration.

CPC CODE: 3511 paints, 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.

Viero is a **Cromology Italia S.p.A.** brand
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Viero