



ATTIVA

QUARTZ PAINTS AND FINISHES FOR EXTERIORS



EPD® ENVIRONMENTAL PRODUCT DECLARATION In accordance with ISO 14025 and EN 15804

- **PCR 2019:14** - Construction products
- **CPC CODE:** 3511 - PAINTS AND VARNISHES AND RELATED PRODUCTS
- **PROGRAMME:** The International EPD® System - www.environdec.com
- **PROGRAMME OPERATOR:** EPD International AB
- **GEOGRAPHICAL SCOPE:** EUROPE
- **REGISTRATION N°:** S-P-02076
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EPD®
THE INTERNATIONAL EPD® SYSTEM



www.attivacolori.it

ENVIRONMENTAL PRODUCT DECLARATION

For Attiva, the search for increasingly eco-friendly solutions, in line with recent Italian and European legislation, translates into **formulations characterised by advanced technology and minimum environmental impact and with important international certifications.**

The Environmental Product Declaration or EPD® is a document issued by an **independent entity** that, based on a **Life Cycle Assessment (LCA)** of the products, provides relevant, verified and comparable information about their environmental impact in accordance with **ISO 14025**.

This declaration is classified as **“type III labelling”** according to ISO series 14020. It allows products to be evaluated in the framework of both public tenders and building sustainability certification systems.

The **EPD®** is:

- ◆ **OBJECTIVE:** Environmental performance is calculated using the life cycle analysis methodology, based on the standards set out in ISO 14040.
- ◆ **COMPARABLE:** EPD®s in the same product category are comparable because they are developed on the basis of the same rules and requirements (Product Category Rules - PCR).
- ◆ **CREDIBLE:** The declaration is verified by a third-party auditor.

 **EPD®**
THE INTERNATIONAL EPD® SYSTEM



ENAMEL PAINTS AND VARNISHES FOR PROFESSIONALS

The history of **Attiva** is one of ongoing research into **cutting-edge products and targeted solutions** for treating and decorating various interior and exterior substrates.

A strategic brand since 2001 for **Boero Group**, Italy's leading player in the industry, Attiva offers a **technical and functional range of specialist coating systems formulated for specific needs**, with the aim of facilitating and enhancing the work of **application professionals**.

GROUP SITES

The **“Federico Mario Boero” production facility** located in Rivalta Scrivia in the province of Alessandria in northern Italy, built using cutting-edge criteria and operating since 2009, covers 120,000 square meters, of which 18,000 under cover, with average annual production of 27,000,000 kg/year.

Technological development is performed at the **“Riccardo Cavalleroni” Research and Development Center** in bloc F at the Rivalta Scrivia Science and Technology Park (PST), where teams of highly qualified engineers work with the main goal of developing innovative product formulation technologies, involving ongoing assessment of latest generation raw materials and upgrading tinting systems.

The **registered office and sales organisation** are in Genoa, where the Group and brand began life.

THE GOAL OF THE STUDY

The goal of the study is to **assess environmental impact** in relation to the production of Boero Group water-based paints, using an approach based on life cycle analysis, in order to communicate the results obtained through an **Environmental Product Declaration (EPD®)** in the framework of the International EPD® System.

The recipients of this document are end customers and all stakeholders affected by the environmental impact of the main **EXTERIOR FINISHES** in the Attiva range.

PRODUCTS

The products studied are **quartz paints produced using different classes of raw materials**.

Quartz paints are suitable for masonry substrates, including plaster, premixed products and similar, and consist of synthetic or mineral binders in water emulsion and pigments resistant to weathering (e.g. sunlight and rain). They also contain selected aggregates including silica, feldspars, carbonates, talcs and functional additives like thickeners, anti-sediment agents, preservatives and water repellents, etc. The type of binder (silicates, siloxanes, acrylics, etc.) determines the field of application according to the type of historical or modern building.



PRODUCT COMPOSITION:

COMPONENTS	PERCENTAGES (%)
WATER	< 20%
FILLERS AND PIGMENTS	< 65%
EMULSION AND RESINS	< 20%
ADDITIVES	< 5%

TABLE 1 - Average content declaration for the main components in the quartz paints line.

NOXYCLEAN

COD.711391

Photocatalytic siloxane paint

S-P-02076 **EPD®**
 environdec.com

EXTERIORS

Civil plaster, concrete, prefabricated structures, fibre cement agglomerates, etc.



- ◆ **EXCELLENT ECO-FRIENDLINESS**
- ◆ **SELF-CLEANING AND ANTI-POLLUTION**
- ◆ **PREVENTS THE FORMATION OF MOULD AND ALGAE**

Photocatalytic paint with siloxane resins and nanometric photocatalytic pigments. It combines the performance of a siloxane paint (low water absorption and high vapour permeability), in order to provide the best resistance conditions for exteriors, with new photocatalytic technology, which exploits the ability of titanium dioxide (in nanometric form) to be activated by UV radiation in sunlight and promote oxidation-reduction reactions with both organic and inorganic pollutant molecules. Present in the atmosphere as a result of emissions (vehicle traffic, industry, heating, etc.), they undergo a modification of their chemical structure and are transformed into water-soluble substances that, most importantly, are innocuous from a toxicological point of view. The product's self-cleaning and anti-pollution properties are very eco-friendly, breaking down the particles of "dirt". The same reaction takes place with microorganisms, using a natural process to fight the growth of mould and algae.

NOXYCLEAN FONDO

COD.716014

Water-based acrylic siloxane consolidating primer

S-P-02076 **EPD®**
 environdec.com

EXTERIORS

New plaster or previously painted facades, suitably prepared



- ◆ **EVENS OUT SUBSTRATE ABSORPTION**
- ◆ **FIGHTS CARBONATION SALT MIGRATION**
- ◆ **FORMULATED SPECIFICALLY FOR NOXYCLEAN FINISH**

Consolidating primer, ideal for substrate preparation in the cycle with Noxyclean photocatalytic acrylic siloxane finish. Good consolidating and substrate absorption equalising power. Reduces salt migration to the surface due to carbonation in new plasters that are still setting.

PLURIFOND W

COD.788778

Water-based pigmented primer with acrylic resins in emulsion and quartz fillers

S-P-02076 **EPD®**
 environdec.com

EXTERIORS

Civil plaster, concrete, prefabricated structures, fibre cement agglomerates, etc.



- ◆ **CONSOLIDATING**
- ◆ **HIGH EQUALISING POWER**
- ◆ **PIGMENTED**

Primer for substrate consolidation and absorption equalisation. Ideal for high-build finishing systems and traditional acrylic, synthetic, acrylic siloxane, elastomeric, etc. coatings. Evens out the absorption of THERM.AT premixed mortars used in thermal insulation systems. For exteriors on plaster, cement, fibre cement, concrete panels.

FARINA FINE

COD.712191

Acrylic anti-algae paint with very fine quartz flour

S-P-02076 **EPD®**
 environdec.com

EXTERIORS

Civil and rough plaster, cement, fibre cement, etc.



- ◆ **EXCELLENT FILLING POWER**
- ◆ **HIGH VAPOUR PERMEABILITY**
- ◆ **EXCELLENT RESISTANCE**

Wall paint with excellent filling and hiding power, resistance to weathering and water vapour permeability, plus high hardness, elasticity and adhesion, which means it can be used on various cement substrates and old paints. In compliance with standards UNI EN 15457 (resistance to fungi) and UNI EN 15458 (resistance to algae).

KELLERQUARZ

COD.711390

Acrylic anti-algae paint with quartz flour

S-P-02076 **EPD®**
 environdec.com

EXTERIORS

Civil and rough plaster, cement, fibre cement, etc.



- ◆ **FILLING POWER**
- ◆ **HIGH HIDING POWER**
- ◆ **EXCELLENT RESISTANCE**

Wall paint with good filling and hiding power, resistance to weathering and balance between water vapour permeability and water absorption. In compliance with standards UNI EN 15457 (resistance to fungi) and UNI EN 15458 (resistance to algae).

QUARZATTIVA

COD.712165

Acrylic anti-algae paint with quartz flour

S-P-02076 **EPD®**
environdec.com

EXTERIORS

Civil and rough plaster, cement, fibre cement, etc.



- ◆ **HIGH HIDING POWER**
- ◆ **EXCELLENT ADHESION**
- ◆ **GOOD BREATHABILITY**

Wall paint with high hiding power and resistance to weathering, plus good water vapour permeability. Excellent adhesion and hardness. In compliance with standards UNI EN 15457 (resistance to fungi) and UNI EN 15458 (resistance to algae).

PROSPETTO

COD.712188

Acrylic anti-algae paint with quartz flour

S-P-02076 **EPD®**
environdec.com

EXTERIORS

Civil and rough plaster, cement, fibre cement, etc.



- ◆ **GOOD HIDING POWER**
- ◆ **FILLING POWER**
- ◆ **SUITABLE FOR TEXTURED FINISHES**

Wall paint with good hiding power and filling properties because of the selected particle size of the quartz fillers used. In compliance with standards UNI EN 15457 (resistance to fungi) and UNI EN 15458 (resistance to algae).

LAX BETON

COD.711381

Acrylic anti-algae paint for cement and mineral substrates

S-P-02076 **EPD®**
environdec.com

EXTERIORS

Cement and mineral substrates and in particular concrete, reinforced concrete, prefabricated structures, etc.



- ◆ **EXCELLENT RESISTANCE TO WEATHERING**
- ◆ **LOW DIRT PICK-UP**
- ◆ **EXCELLENT ADHESION**

Protective anti-carbonation coating to protect and decorate cement and mineral substrates. Forms an effective barrier against carbon dioxide, reducing problems caused by metal rebar corrosion. Excellent resistance to weathering, UV rays, acid rain and alkalis. Good water vapour permeability, low water absorption and dirt pick-up. Excellent adhesion to substrates like concrete, reinforced concrete and cement-based plaster. In compliance with standards UNI EN 15457 (resistance to fungi) and UNI EN 15458 (resistance to algae).

ACRILAT INTONACHINO 1.0

COD.711367/711373

High-build **acrylic anti-algae** coating with skim coat effect

S-P-02076 **EPD®**
environdec.com

EXTERIORS

Civil plaster, concrete, prefabricated structures, fibre cement agglomerates, etc.



- ◆ **MASKS ANY IMPERFECTIONS**
- ◆ **EXCELLENT HIDING POWER**
- ◆ **HIGH RESISTANCE TO WEATHERING**

High-build anti-algae wall coating with acrylic polymers in water emulsion, photo-resistant pigments and controlled particle size. The build thickness obtained with the different particle sizes means the finish can mask any imperfections in the substrate, ensuring resistance to weathering and breathability. In compliance with standards UNI EN 15457 (resistance to fungi) and UNI EN 15458 (resistance to algae).

ACRILAT INTONACHINO 1.2

COD.711375

High-build **acrylic anti-algae** coating with skim coat effect

S-P-02076 **EPD®**
environdec.com

EXTERIORS

Civil plaster, concrete, prefabricated structures, fibre cement agglomerates, etc.



- ◆ **MASKS ANY IMPERFECTIONS**
- ◆ **EXCELLENT HIDING POWER**
- ◆ **HIGH RESISTANCE TO WEATHERING**

High-build anti-algae wall coating with acrylic polymers in water emulsion, photo-resistant pigments and controlled particle size. The build thickness obtained with the different particle sizes means the finish can mask any imperfections in the substrate, ensuring resistance to weathering and breathability. In compliance with standards UNI EN 15457 (resistance to fungi) and UNI EN 15458 (resistance to algae).

ACRILAT INTONACHINO 1.5

COD.711368/711374

High-build **acrylic anti-algae** coating with skim coat effect

S-P-02076 **EPD®**
environdec.com

EXTERIORS

Civil plaster, concrete, prefabricated structures, fibre cement agglomerates, etc.



- ◆ **MASKS ANY IMPERFECTIONS**
- ◆ **EXCELLENT HIDING POWER**
- ◆ **HIGH RESISTANCE TO WEATHERING**

High-build anti-algae wall coating with acrylic polymers in water emulsion, photo-resistant pigments and controlled particle size. The build thickness obtained with the different particle sizes means the finish can mask any imperfections in the substrate, ensuring resistance to weathering and breathability. In compliance with standards UNI EN 15457 (resistance to fungi) and UNI EN 15458 (resistance to algae).

AD 32 W

COD.788775

Water-repellent **water-based** fixative with siloxane polymers

S-P-02076 **EPD®**
environdec.com

INTERIORS AND EXTERIORS

Civil and rough plaster, scagliola, concrete, premixes, brickwork, etc.



- ◆ **CONSOLIDATING ACTION**
- ◆ **EVENS OUT ABSORPTION**
- ◆ **HIGH VAPOUR PERMEABILITY**

Water-repellent water-based fixative with siloxane polymers in aqueous phase and good plaster consolidating action. Evens out absorption while allowing the substrate to breathe naturally. Does not create a surface film. Suitable as insulating primer for acrylic siloxane and siloxane cycles.

SILAT FARINA

COD.711349

Anti-algae paint with **acrylic siloxane** resins and very fine quartz flour

S-P-02076 **EPD®**
environdec.com

EXTERIORS

Civil and rough plaster, concrete, fibre cement and previously treated facades, suitably prepared



- ◆ **EXCELLENT HIDING POWER**
- ◆ **MASKING AND FILLING ACTION**
- ◆ **BREATHABLE AND WATER-REPELLENT**

Wall paint with excellent filling and hiding power, good breathability and water-repellency. Ideal for the decorative and protective treatment of new plaster or facades previously painted with washable paints or other coatings with good adhesion. Helps mask small irregularities in the substrate. In compliance with standards UNI EN 15457 (resistance to fungi) and UNI EN 15458 (resistance to algae).

SILAT PITTURA

COD.711361

Anti-algae paint with **siloxane** resins

S-P-02076 **EPD®**
environdec.com

EXTERIORS

Civil and rough plaster, concrete, fibre cement and previously treated facades, suitably prepared



- ◆ **HIGH VAPOUR PERMEABILITY**
- ◆ **WATER-REPELLENT**
- ◆ **EXCELLENT RESISTANCE TO WEATHERING**

Wall paint with high breathability combined with high water-repellency, plus excellent versatility of use and substrate adhesion, including on old water-based paints, quartz coatings, etc. Satisfies DIN standards for water vapour permeability and water absorption. In compliance with standards UNI EN 15457 (resistance to fungi) and UNI EN 15458 (resistance to algae).

SILAT INTONACHINO 1.0

COD.711363/711369

High-build **acrylic siloxane anti-algae** coating with skim coat effect

S-P-02076 **EPD®**
environdec.com

EXTERIORS

Civil plaster, concrete, prefabricated structures, fibre cement agglomerates, etc.



- ◆ **MASKS ANY IMPERFECTIONS**
- ◆ **EXCELLENT HIDING POWER**
- ◆ **HIGH VAPOUR PERMEABILITY**

High-build acrylic siloxane wall coating with good water vapour permeability and water-repellency. With its high filling power, the product masks any imperfections in the substrate. In compliance with DIN 4108.3 (facade protection). In compliance with standards UNI EN 15457 (resistance to fungi) and UNI EN 15458 (resistance to algae).

SILAT INTONACHINO 1.2

COD.711362

High-build **acrylic siloxane anti-algae** coating with skim coat effect

S-P-02076 **EPD®**
environdec.com

EXTERIORS

Civil plaster, concrete, prefabricated structures, fibre cement agglomerates, etc.



- ◆ **MASKS ANY IMPERFECTIONS**
- ◆ **EXCELLENT HIDING POWER**
- ◆ **HIGH VAPOUR PERMEABILITY**

High-build acrylic siloxane wall coating with good water vapour permeability and water-repellency. With its high filling power, the product masks any imperfections in the substrate. In compliance with DIN 4108.3 (facade protection). In compliance with standards UNI EN 15457 (resistance to fungi) and UNI EN 15458 (resistance to algae).

SILAT INTONACHINO 1.5

COD.711364/711371

High-build **acrylic siloxane anti-algae** coating with skim coat effect

S-P-02076 **EPD®**
environdec.com

EXTERIORS

Intonaco civile, calcestruzzo, prefabbricati, agglomerati di fibrocemento, etc.



- ◆ **MASKS ANY IMPERFECTIONS**
- ◆ **EXCELLENT HIDING POWER**
- ◆ **HIGH VAPOUR PERMEABILITY**

High-build acrylic siloxane wall coating with good water vapour permeability and water-repellency. With its high filling power, the product masks any imperfections in the substrate. In compliance with DIN 4108.3 (facade protection). In compliance with standards UNI EN 15457 (resistance to fungi) and UNI EN 15458 (resistance to algae).

SILAT INTONACHINO PLUS 1.2

COD.716010

High-build **siloxane anti-algae coating** with skim coat effect

S-P-02076 **EPD®**
environdec.com

EXTERIORS

Civil plaster, concrete, prefabricated structures, fibre cement agglomerates, etc.



- ◆ **EXCELLENT VAPOUR PERMEABILITY**
- ◆ **OUTSTANDING WATER-REPELLENCY**
- ◆ **LOW DIRT PICK-UP**

High-build siloxane wall coating with high water vapour permeability, outstanding water-repellency and low dirt pick-up. With its high filling power, the product masks any imperfections in the substrate and makes it particularly suitable for renovating buildings of great historic value. In compliance with DIN 4108.3 (façade protection). In compliance with standards UNI EN 15457 (resistance to fungi) and UNI EN 15458 (resistance to algae).

921 W

COD.788774

Water-based siloxane water-repellent for exposed mineral substrates

S-P-02076 **EPD®**
environdec.com

INTERIORS AND EXTERIORS

Absorbent stone materials, exposed sandstone and limestone, plaster and cement agglomerates, if absorbent



- ◆ **HIGH PENETRATION**
- ◆ **PROTECTIVE ACTION**
- ◆ **ODOURLESS**

High penetration water-repellent. Does not form a film or alter the original appearance of treated surfaces. Does not affect the natural breathability of the substrate. Not a fixative. The product's water-repellent effect contributes to the natural prevention of mould and moss formation. Ideal for brickwork, plaster, soft natural stone (e.g. tuff) and/or hardwearing limestones (e.g. travertine), and concrete. To be applied until completely absorbed. Odourless and therefore ideal for poorly ventilated areas.

AD 999 W

COD.711309

Water-based fixative with pure **potassium silicate**

S-P-02076 **EPD®**
environdec.com

INTERIORS AND EXTERIORS

Lime or lime/cement-based civil plaster



- ◆ **CONSOLIDATING POWER**
- ◆ **HIGH VAPOUR PERMEABILITY**
- ◆ **BREATHABLE**

Applied on lime-based mineral substrates, this water-based fixative produces a crystal lattice that increases resistance to weathering and has a consolidating action, without affecting the breathability of the plaster. Only suitable for mineral substrates and as primer for silicate-based application systems (Silikat).

PROMOTORE DI ADESIONE UNIFORMANTE 0.3

COD.711299

Adhesion-enhancing primer for silicate finishes

S-P-02076 **EPD**[®]
 environdec.com

INTERIORS AND EXTERIORS

Civil plaster, concrete, prefabricated structures, fibre cement agglomerates, old organic coatings, etc.



- ◆ **EXCELLENT FILLING POWER**
- ◆ **MASKS MICRO-CRACKING**
- ◆ **EVEN OUT ABSORPTION**

Filling and adhesion-enhancing primer for silicate paints and coatings on old organic (synthetic) paints. Masks static micro-cracking like that caused by plaster shrinkage and evens out differences in absorption resulting from spot repairs and irregularities in the substrate. Ideal for restoring damaged facades subject to micro-cracking (depth less than 1 mm), it recreates the appearance of civil plaster. Suitable for subsequent recoating with silicate-based products.

PROMOTORE DI ADESIONE UNIFORMANTE 0.5

COD.711295

Adhesion-enhancing primer for silicate finishes

S-P-02076 **EPD**[®]
 environdec.com

INTERIORS AND EXTERIORS

Civil plaster, concrete, prefabricated structures, fibre cement agglomerates, old organic coatings, etc.



- ◆ **EXCELLENT FILLING POWER**
- ◆ **MASKS MICRO-CRACKING**
- ◆ **EVEN OUT ABSORPTION**

Filling and adhesion-enhancing primer for silicate paints and coatings on old organic (synthetic) paints. Masks static micro-cracking like that caused by plaster shrinkage and evens out differences in absorption resulting from spot repairs and irregularities in the substrate. Ideal for restoring damaged facades subject to micro-cracking (depth less than 1 mm), it recreates the appearance of civil plaster. Suitable for subsequent recoating with silicate-based products.

SILIKAT PITTURA

COD.711302

Potassium silicate mineral paint

S-P-02076 **EPD®**
 environdec.com

EXTERIORS

Lime or lime/cement civil plaster



- ◆ **EXCELLENT VAPOUR PERMEABILITY**
- ◆ **HIGH ADHESION AND RESISTANCE**
- ◆ **IDEAL FOR HISTORICAL BUILDINGS**

Mineral paint with very high water vapour permeability and resistance to weathering, plus excellent adhesion. Reproduces the colour shades and transparency of old lime paints. Particularly suitable for renovating buildings of great historical value.

In compliance with DIN 4108.3 (facade protection) and DIN 18363 (para. 2.4.6).

POLISILIKAT FONDO W

COD.716013

Water-based potassium polysilicate pigmented primer

S-P-02076 **EPD®**
 environdec.com

INTERIORS AND EXTERIORS

Civil plaster, concrete, prefabricated structures, fibre cement agglomerates, old organic coatings, etc.



- ◆ **CONSOLIDATING AND WATER-REPELLENT PROPERTIES**
- ◆ **EVEN OUT ABSORPTION**
- ◆ **BREATHABLE**

Potassium polysilicate pigmented mineral primer with consolidating and water-repellent properties. Evens out and reduces substrate absorption without affecting breathability. On plaster that is still setting (28 days), reduces the surface migration of any salts produced by carbonation. Ideal as primer for potassium silicate application systems and high-build systems in particular.

POLISILIKAT PITTURA

COD.716011

Potassium polysilicate anti-algae mineral paint

S-P-02076 **EPD®**
 environdec.com

EXTERIORS

Lime or lime/cement civil plaster



- ◆ **EXCELLENT VAPOUR PERMEABILITY**
- ◆ **HIGH WATER-REPELLENCY**
- ◆ **APPLICATION VERSATILITY**

Anti-algae paint with very high water vapour permeability and good impermeability to water in liquid form. Its high substrate adhesion means the product can be used on all types of plaster and old paint in dispersion, if firmly attached. Particularly suitable for renovating buildings of great historic value. In compliance with DIN 4108.3 – para. 2.4.6. (facade protection). In compliance with standards UNI EN 15457 (resistance to fungi) and UNI EN 15458 (resistance to algae).

POLISILIKAT INTONACHINO 1.2

COD.716012

High-build **potassium polysilicate anti-algae** coating

S-P-02076 **EPD®**
environdec.com

EXTERIORS

Lime or lime/cement plaster



- ◆ **EXCELLENT VAPOUR PERMEABILITY**
- ◆ **HIGH WATER-REPELLENCY**
- ◆ **EXCELLENT FILLING POWER**

High-build potassium polysilicate wall coating with skim coat effect and high filling and masking power. A mineral coating, it guarantees excellent substrate adhesion and high vapour permeability. In compliance with DIN 4108.3 – para. 2.4.6. (facade protection). In compliance with standards UNI EN 15457 (resistance to fungi) and UNI EN 15458 (resistance to algae).

PITTURA A CALCE

COD.716007

Mineral paint in paste form with lime putty

S-P-02076 **EPD®**
environdec.com

INTERIORS AND EXTERIORS

Lime or lime/cement civil plaster



- ◆ **HIGH BREATHABILITY**
- ◆ **EXCELLENT RESISTANCE TO ALKALIS**
- ◆ **VEILED CHROMATIC EFFECT**

Mineral paint in paste form with lime putty and selected mineral fillers, featuring high breathability and excellent resistance to alkalis. With its smooth matt appearance, low tendency to chalking and good hiding power when dry, it is ideal for decorating historical buildings because it recreates the chromatic effects of the original paintwork. Resistant to mould and algae.

INTONACO A CALCE 1.2

COD.716008

High-build mineral coating with lime putty

S-P-02076 **EPD®**
environdec.com

INTERIORS AND EXTERIORS

Lime or lime/cement civil plaster



- ◆ **RESISTANT TO CRACKING**
- ◆ **EXCELLENT MASKING POWER**
- ◆ **FILLING PROPERTIES**

High-build mineral wall coating with selected marble grits and powders, matured slaked lime and organic stabilisers. Featuring high breathability and excellent resistance to alkalis, it is the ideal product for restoring, decorating and protecting historical facades and interior walls, giving the substrate a natural appearance. With high filling power, it masks any imperfections in the substrate and, as a mineral coating, it guarantees excellent substrate adhesion and high vapour permeability.

FLEXAT INTERMEDIO

COD.711321

Anti-algae intermediate filling coat with acrylic copolymers

S-P-02076 **EPD®**
environdec.com

EXTERIORS

Civil plaster, concrete, prefabricated structures, fibre cement agglomerates, etc.



- ◆ **RESISTANT TO CRACKING**
- ◆ **EXCELLENT MASKING POWER**
- ◆ **FILLING PROPERTIES**

An intermediate coat in elastomer cycles, it is ideal to contain and mask dynamic cracking and micro-cracking in the substrate (depth less than 1 mm), recreating the appearance of civil plaster. Easy to apply, it has excellent filling power and high resistance to cracking. The controlled particle size fillers make it effective at equalising and masking uneven and irregular substrates. In compliance with standards UNI EN 15457 (resistance to fungi) and UNI EN 15458 (resistance to algae).

FLEXAT PITTURA

COD.711326

Anti-algae elastomer finish

S-P-02076 **EPD®**
environdec.com

EXTERIORS

Civil plaster, concrete, prefabricated structures, fibre cement agglomerates, etc.



- ◆ **HIGH ELASTICITY**
- ◆ **PROTECTIVE AND WATERPROOFING**
- ◆ **LOW DIRT PICK-UP**

Elastomeric paint with fine fillers, suitable for containing and masking dynamic cracking and micro-cracking in the substrate. The particular chemical composition of the binder promotes double crosslinking, both at the surface and at depth, guaranteeing waterproofing and low dirt pick-up, in addition to elasticity even at low temperatures. This makes the product suitable for protecting and waterproofing new or renovated buildings and to contain and prevent cracking up to 300 µ. In compliance with standards UNI EN 15457 and UNI EN 15458 (resistance to algae).

FLEXAT INTONACHINO 1.0

COD.711323

High-build **anti-algae elastomer** coating with fine skim coat effect

S-P-02076 **EPD®**
environdec.com

EXTERIORS

Civil plaster, concrete, prefabricated structures, fibre cement agglomerates, etc.



- ◆ **HIGH ELASTICITY**
- ◆ **EXCELLENT HIDING AND FILLING POWER**
- ◆ **LOW DIRT PICK-UP**

High-build anti-algae elastomer wall coating, ideal for containing and masking dynamic cracking and micro-cracking in the substrate. The particular chemical composition of the binder promotes double crosslinking, both at the surface and at depth, guaranteeing waterproofing and low dirt pick-up, in addition to elasticity even at low temperatures. This makes the product suitable for protecting and waterproofing new or renovated buildings. Masks any imperfections, guaranteeing resistance to weathering and breathability. In compliance with standards UNI EN 15457 (resistance to fungi) and UNI EN 15458 (resistance to algae).



METHODOLOGY USED

The environmental performance of products is calculated in accordance with the requirements of the **International EPD® System** and the Product Category Rules (PCR) 2019:14 Version 1.0 - Construction Products.

The methodology used to quantify environmental performance is **Life Cycle Assessment (LCA)**, as regulated by **ISO 14040-14044**.

The goal of the LCA study is to assess environmental impact in relation to the production of the Boero Group water-based paints examined.

To this end, specific data has been collected for the **Rivalta Scrivia production facility** and refers to 2018. Proxy data (i.e. generic data based on estimates and average values) represents less than 10% of the total.

The stated unit is 1 kg of product (including packaging).

As the products have different industrial formulas, the environmental performance declaration reports an **average value weighted for production by product class**. In accordance with the applicable PCR and EN 15804, the variation for the potential greenhouse effect is given below.



EPD®
THE INTERNATIONAL EPD® SYSTEM

SYSTEM BOUNDARIES

In accordance with the applicable PCR and standard EN 15804, the system boundaries refer to the following **three stages in the product life cycle**:

◆ **UPSTREAM PROCESSES**

(“from cradle-to-gate”) – Module **A1**

Processes relating to the procurement of raw materials and energy.

◆ **CORE PROCESSES, MANUFACTURING PROCESSES**

(“from gate-to-gate”) – Modules **A2+A3**

Processes involved in raw materials transport from suppliers to the factory (and any internal transport) and in the production of the product.

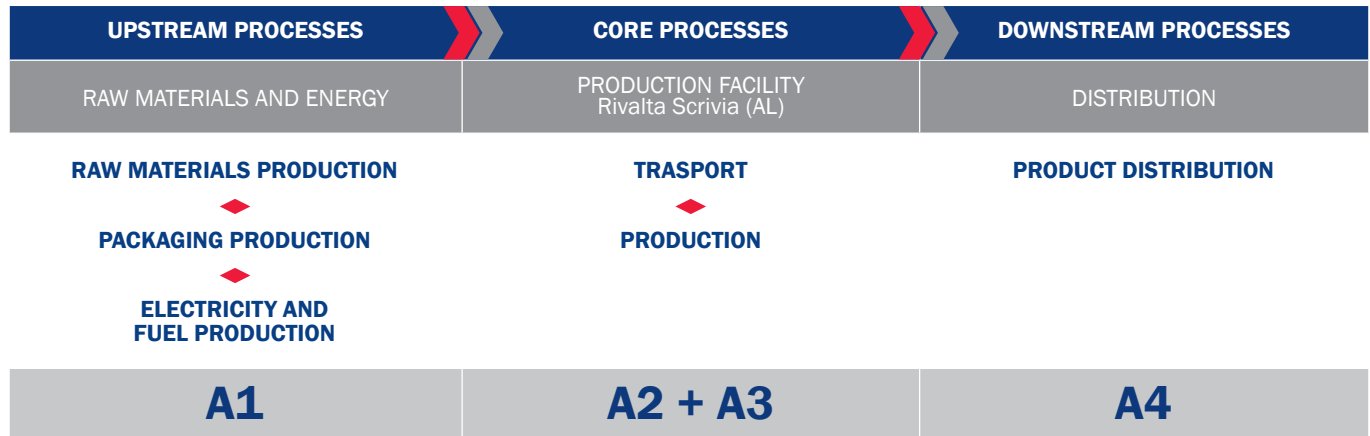
◆ **DOWNSTREAM PROCESSES**

(“from gate-to-grave”) – Modules from **A4 to D**

Processes relating to the storage, transport, use and disposal/recycling of the product.

The approach used for this study is of the “**cradle-to-gate with options**” type. Modules from A1 to A3 are included, plus optional module A4 (Figure 1 and Table 2).

SYSTEM BOUNDARIES - FIGURE 1



DECRPTION OF THE PROCESSES

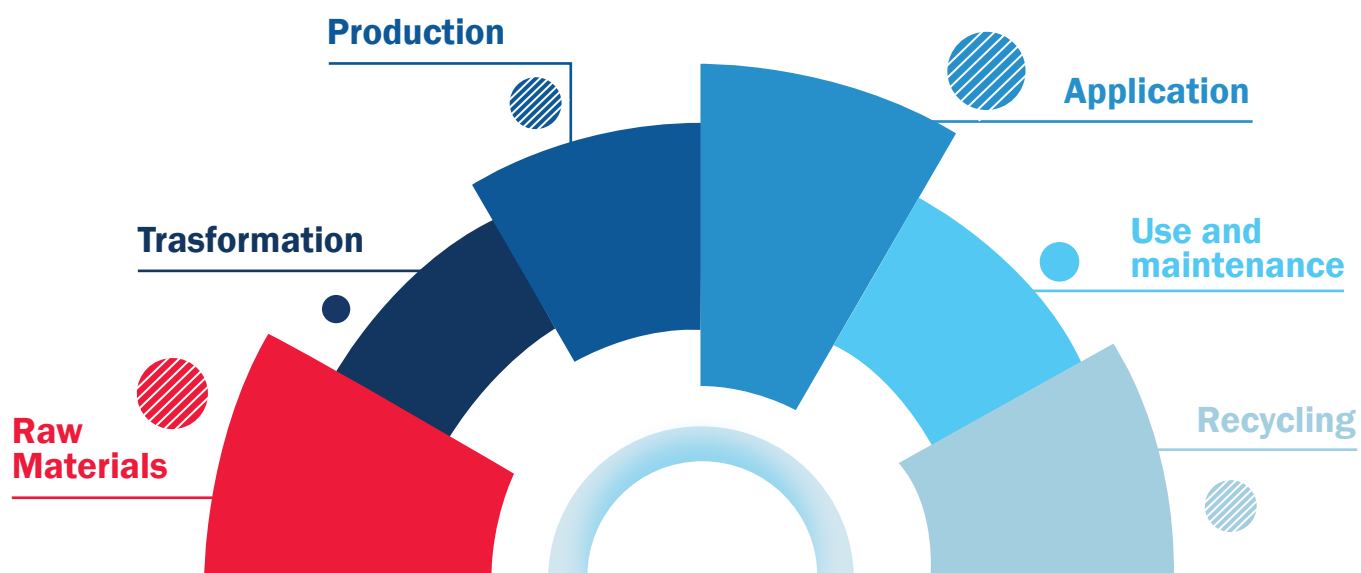
The production process starts with **the production and transport of all raw materials** used to manufacture the product (**Upstream processes**), including its components and materials needed for the production processes (e.g. energy). In more detail, products generally consist of a series of powders, resins, pigments and additives of various types.

The **product stages (Core processes)** are performed at the **Rivalta Scrivia production facility**: they include mixing the “ingredients” to produce the water-based paint and its primary and secondary/tertiary packaging (e.g. stretch film for bundling and wood pallets).

After packaging, the product begins the distribution stage (which forms part of the **Downstream processes**).

The distribution stage involves:

- ◆ **storage** in the Boero Group's Rivalta Scrivia distribution centre;
- ◆ **transport** of the product to points of sale.


SYSTEM BOUNDARIES - TABLE 2*

	PRODUCT STAGE			CONSTRUCTION PROCESS STAGE				USE STAGE					END OF LIFE STAGE				RESOURCE RECOVERY STAGE
	UP STREAM	CORE		DOWNSTREAM													DOWNSTREAM
	Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition (total/partial)	Transport (disposal /recycling centre)	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	-	-	-	-	-	-	-	-	-	-	-	-	-
Geography	EU 27	EU 27	EU 27	EU 27	-	-	-	-	-	-	-	-	-	-	-	-	-
Specific data	>90%					-	-	-	-	-	-	-	-	-	-	-	-
Variation - Products	49,5%-118,7%					-	-	-	-	-	-	-	-	-	-	-	-
Variation - Sites	Not relevant					-	-	-	-	-	-	-	-	-	-	-	-

*(X = included in the study | - = module not declared)



USE OF RESOURCES - TABLE 3*

PARAMETER		UNIT	A1	A2	A3	A4	TOTAL
Primary energy resources Renewable	Use as energy carrier	MJ, net calorific value	3,831	0,013	0,006	0,017	3,867
	Use as raw materials	MJ, net calorific value	1,652	0,003	0,003	0,005	1,664
	TOTAL	MJ, net calorific value	5,483	0,016	0,010	0,022	5,531
Primary energy resources Non-renewable	Use as energy carrier	MJ, net calorific value	22,568	1,107	0,081	1,650	25,408
	Use as raw materials	MJ, net calorific value	2,179	0,003	0,001	0,004	2,187
	TOTAL	MJ, net calorific value	24,748	1,110	0,082	1,654	27,595
Secondary materials		kg	-	-	-	-	-
Renewable secondary fuels		MJ	-	-	-	-	-
Non-renewable secondary fuels		MJ	-	-	-	-	-
Net use of fresh water		M ³	0,000	0,000	0,026	0,000	0,026

*(the data refer to the stated unit)

POLLUTANT EMISSIONS - TABLE 4*

PARAMETER		UNIT	A1	A2	A3	A4	TOTAL
Global Warming Potential (GWP)	Fossil	kg CO ₂ eq	1,392	0,068	0,061	0,101	1,622
	Biogenic	kg CO ₂ eq	0,160	0,000	0,000	0,000	0,161
	Land use	kg CO ₂ eq	0,007	0,000	0,000	0,000	0,007
	TOTAL	kg CO₂ eq	1,558	0,068	0,062	0,102	1,790
Total GWP (without biogenic CO ₂)		kg CO₂ eq	1,400	0,068	0,061	0,101	1,631
GWP-GHG		kg CO₂ eq	1,400	0,068	0,061	0,101	1,631
Acidification Potential (AP)		kg SO ₂ eq	0,011	0,000	0,000	0,000	0,012
Acidification Potential (AP)		mol H ⁺ eq	0,011	0,000	0,000	0,001	0,012
Eutrophication aquatic freshwater (EP-freshwater)		kg PO ₄ -eq	0,002	0,000	0,000	0,000	0,003
Eutrophication aquatic marine (EP-marine)		kg N eq	0,002	0,000	0,000	0,000	0,002
Eutrophication terrestrial (EP)		mol N eq	0,013	0,001	0,000	0,002	0,017
Ozone depletion (ODP)		kg CFC-11 eq	1,42 • 10 ⁻⁷	1,25 • 10 ⁻⁸	7,30 • 10 ⁻¹⁰	1,87 • 10 ⁻⁸	1,74 • 10 ⁻⁷
Photochemical oxidant formation (POFP)		kg NMVOC eq	0,004	0,000	0,000	0,001	0,005
Abiotic depletion potential - Elements		kg Sb eq	6,60 • 10 ⁻⁶	1,88 • 10 ⁻⁷	1,51 • 10 ⁻⁸	2,83 • 10 ⁻⁷	7,09 • 10 ⁻⁶
Abiotic depletion potential - Fossil fuels		MJ, net calorific value	19,987	1,025	0,075	1,532	22,618
Water scarcity potential (WSI)		m ³ eq	0,799	0,006	0,003	0,008	0,816

*(the data refer to the stated unit. See glossary on page 24)

WASTE PRODUCTION AND OTHER INDICATORS - TABLE 5*

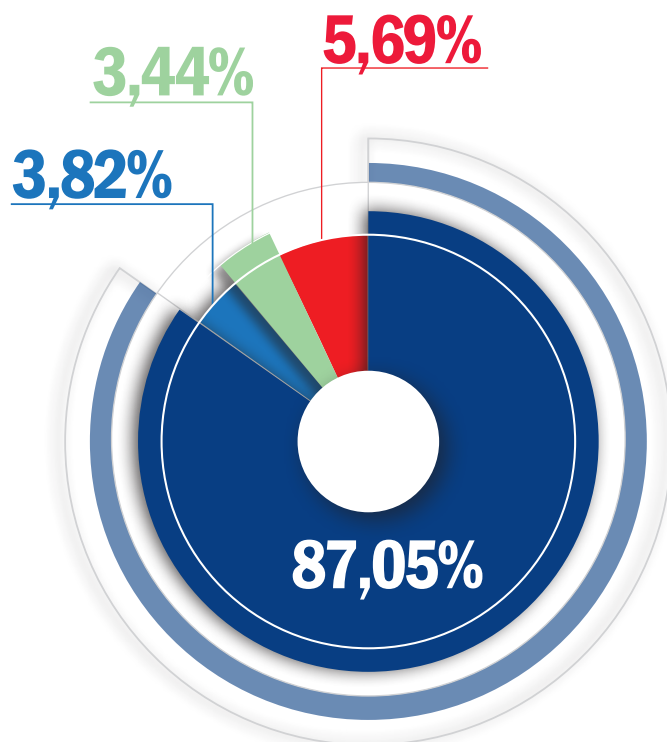
PARAMETER	UNIT	A1	A2	A3	A4	TOTAL
Hazardous waste disposed	kg	0,005	0,000	0,008	0,000	0,014
Non-hazardous waste disposed	kg	0,344	0,049	0,016	0,073	0,481
Radioactive waste disposed	kg	7,05 • 10 ⁻⁵	7,08 • 10 ⁻⁶	3,23 • 10 ⁻⁷	1,06 • 10 ⁻⁵	8,85 • 10 ⁻⁵

*(the data refer to average results per stated unit)

INTERPRETATION OF RESULTS

By way of example, **the contribution of the various life cycle stages to Global Warming Potential (GWP)** is reported in the figure.

As can be seen, the most significant stage (over 87%) consists of the **Upstream processes (A1)**, i.e. procurement processes for raw materials (product components or materials needed for production processes) performed upstream of manufacturing processes in the factory.



◆ A1 ◆ A2 ◆ A3 ◆ A4

FIG.2: Global Warming Potential (GWP)



EN 15804 STANDARD USED AS CORE PCR

PCR:	PCR 2019:14 Version 1.0 Construction products
PCR review by:	International EPD® System Technical Committee. Contact details: info@environdec.com.
Independent verification of the declaration and data performed in accordance with ISO 14025:	EPD® verification
Third-party auditor:	Guido Croce Approved by: The International EPD® System Technical Committee, supported by the Secretariat
The data follow-up procedure during the period of validity of the EPD® involves verification by a third party:	Yes

CERTIFICATION ENTITY

This EPD® has been approved by an independent auditor in accordance with the rules and regulations published by the **International EPD® System** (General Programme Instructions for the International EPD® System) and with **PCR 2019:14 Version 1.0, Construction Products**.

EPD® valid until **02-12-2024**

NOTES

- ◆ EPD®'s developed in accordance with different programmes may not be comparable.
- ◆ EPD®'s for construction products may not be comparable if they are not in compliance with standard EN 15804.

All stages in the life cycle have been analysed and accounted for in the study.

This EPD® and additional information about it are available on the International EPD® System website:

www.environdec.com

REFERENCES

General Programme Instructions for the International EPD® System, v.3.0.

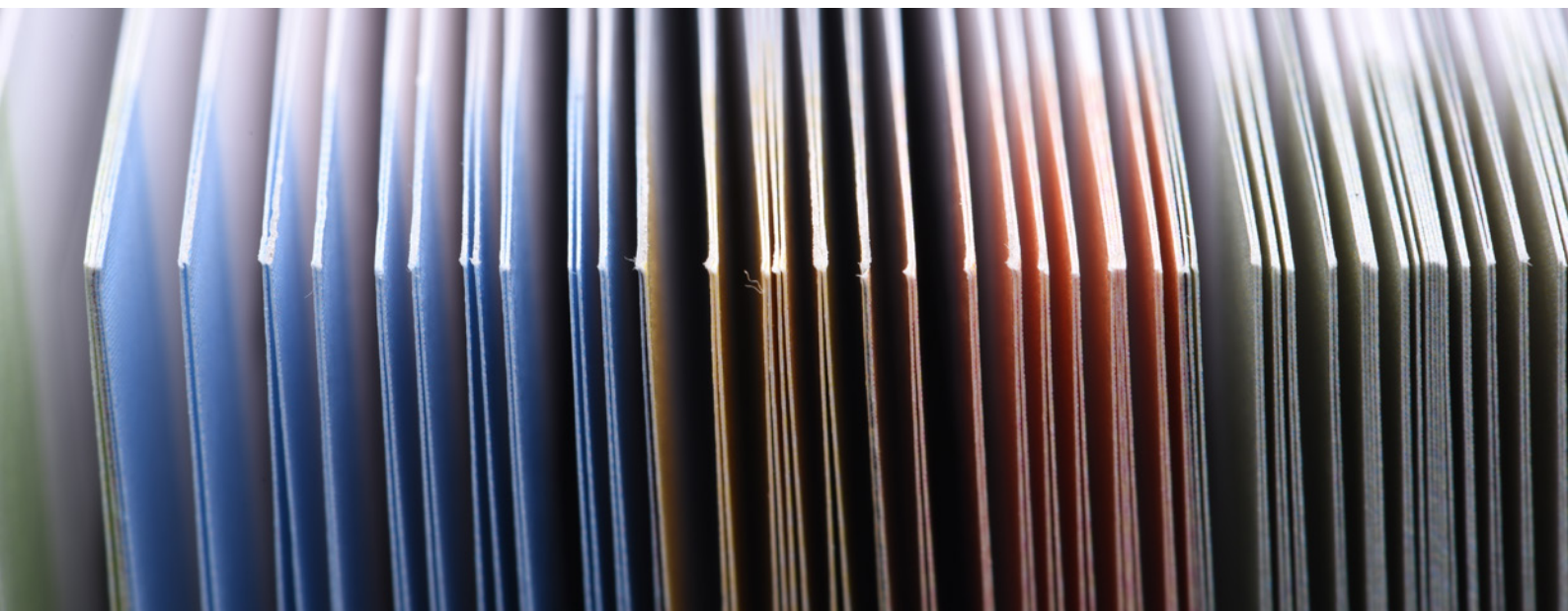
PCR 2019:14 Version 1.0 Construction Products EN 15804:2012+A2:2019

ISO 21930 Environmental Declaration of Building Products. Database Ecoinvent v.3.5 (www.ecoinvent.org).

LCA study "Water-based, Quartz and Enamel Paints" Rev.0 - BOERO BARTOLOMEO S.P.A.

GLOSSARY

- ◆ **LIFE CYCLE ASSESSMENT (LCA):** this is a technique regulated by standard ISO 14040 to quantify the energetic and environmental load of a product system's life cycle by quantifying the energy and materials used and the air, liquid and solid emissions released into the environment, from raw material extraction to disposal of final waste.
- ◆ **PRODUCT CATEGORY RULES (PCR):** Specific product requirements.
- ◆ **GLOBAL WARMING POTENTIAL (GWP):** Global warming due to the emission into the atmosphere of greenhouse gases (GHG) such as carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), etc.
- ◆ **OZONE DEPLETION POTENTIAL (ODP):** Degradation and reduction, caused by chlorofluorocarbons (CFC) or chlorofluoromethanes (CFM), of the ozone layer in the stratosphere, which filters the ultraviolet component of the sun's rays thanks to its particularly reactive compounds.
- ◆ **ACIDIFICATION POTENTIAL (AP):** Ozone formation on the earth's surface due to the emission of unburnt hydrocarbons and nitrogen oxides into the atmosphere in the presence of solar radiation. This phenomenon is harmful to living organisms and is often present in large urban centres. The indicator is expressed in kg NMVOC eq (Non-Methane Volatile Organic Compounds).
- ◆ **EUTROPHICATION POTENTIAL (EP):** Reduction in dissolved oxygen levels in water media, with the collapse of fish and other aquatic species due to excess addition of large quantities of mineral nutrients such as nitrogen and phosphorous and subsequent dramatic increase in flora that feed on these nutrients. The indicator is expressed in kg PO₄³⁻-eq (phosphate), kg N eq (nitrogen) and mol N eq (moles of nitrogen).
- ◆ **PHOTOCHEMICAL OXIDANT FORMATION POTENTIAL (POFP):** Ozone formation on the earth's surface due to the emission of unburnt hydrocarbons and nitrogen oxides into the atmosphere in the presence of solar radiation. This phenomenon is harmful to living organisms and is often present in large urban centres. The indicator is expressed in kg NMVOC eq (Non-Methane Volatile Organic Compounds).
- ◆ **WATER SCARCITY INDEX (WSI):** Indicator that represents the equivalent volume of water consumed proportionate to the water availability of single countries.



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