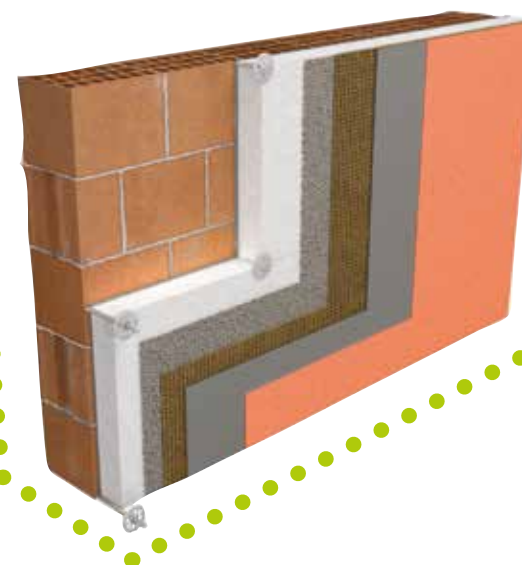


SETTEF



**EXTERNAL THERMAL INSULATION COMPOSITE SYSTEM
THERMOPHON P, PV, MINERAL, NATURAL ENVIRONMENTAL PRODUCT DECLARATION**
IN ACCORDANCE WITH ISO 14025:2010 AND EN 15804:2012+A2: 2019

**Registration
number**

S-P-03093

**Date
of publication**

2021/04/16

**Valid
until**

2026/03/17

Program

The International
EPD® System
www.environdec.com

**Program
Operator**

EPD International AB



cromology
the art of professional painting



TABLE OF CONTENTS

General information of the EPD programme 2

Environmental Product Declaration 3

Sustainability for Cromology: an all-round value..... 4

- A commitment at every stage

- A shared commitment

Cromology: the strength of an international group 6

SETTEF: the professional reference for facades 7

Advantages and benefits of thermal insulation systems 8

- Environmental protection

- Economy and Savings

- Property qualification

- Comfort and well-being

- Balanced temperature in every season

Description of Thermophon systems..... 11

- Constituent elements

- Components and weights

- Technical Data

- Products

Environmental impact statement..... 21

- Declared unit

- Reference year

- System boundaries

- Production

- End of life

- Cut-off

Environmental performance 24

- End of life Scenario 1

- End of life Scenario 2

Additional information..... 34

- Acronyms

- Verification and registration

- Bibliography

- Contact information

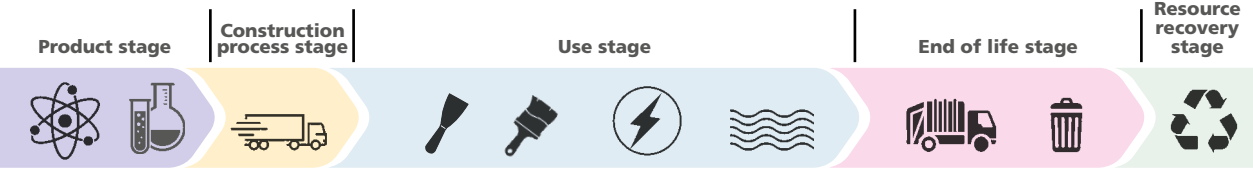
PROGRAMME EPD GENERAL INFORMATION

EPD Programme	The International EPD® System www.environdec.com
EPD Program 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 Prepared by	S4 S.r.l.
Owner of the declaration	Dr. Marco Demi Cromology Italia S.p.A.
Verified by	Dr. Ugo Pretato (Studio Fieschi & Soci)
Geographical scope	International
EPD registration number	S-P-03093
Approval date	xx-xx-2021
Valid until	17-03-2026
Product description	External Thermal Insulation Composite System THERMOPHON.
Applications	Use in architecture and construction for cladding.
Scope of application of the LCA	The LCA (Life Cycle Assessment) was conducted according to the ISO 14025, ISO 14040, ISO 14044 and EN 15804 standards. Both process-specific data and data from the Ecoinvent 3.6 database were used. The methods for calculating and assessing the impact were used as defined in 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 declared unit is the quantity of product needed for the thermal insulation of a 1 square metre area of SETTEF brand ETICS certified kits: • Thermophon P • Thermophon PV • Thermophon Mineral • Thermophon Natural

ENVIRONMENTAL PRODUCT DECLARATION

EPD, the abbreviation of Environmental Product Declaration, 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 the production and distribution processes, how much CO2 is emitted into the atmosphere, what materials are used for the 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 the operations to be carried out.

As the validation of the EPD must be done through 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 regulations governing the conducting of the LCA, which must also comply with the international standard EN 15804 for construction products.



The subject of this EPD is the SETTEF THERMOPHON thermal insulation system in the variants P, PV, MINERAL and NATURAL.



SUSTAINABILITY FOR CROMOLOGY: A 360° VALUE

A COMMITMENT IN EVERY OPERATIONAL PHASE

Sustainability is a fundamental value for Cromology. The company constantly invests in the development of products with high technical performance, which are easy to use, environmentally friendly, and capable of increasing productivity and aesthetic performance as well as improving work conditions.

For Cromology, the culture of colour is rooted in respect for the environment and for people through:

- systematic analysis of the processes and products in order to find increasingly higher performance solutions with less environmental impact. In addition to the attention paid during the production phase, the products ensure protection of the environment and people's health. More than 90% of the product lines are water-based and consist of a wide range of products with low environmental impact and with VOC < 1g/litre.
- an industrial policy aimed at guaranteeing maximum safety at work, in the factory, and on the construction site. Safety is an absolute value, and the 'Zero Accidents' objective is pursued by implementing safety directives and providing training on safety issues and good practices for oneself and for others. In addition, every year, all the Cromology factories stop to celebrate "World Safety Day". The protection of employees has always been a core value and there is an ongoing commitment to supporting community initiatives.
- shared responsibility with customers and partners for generating value throughout the construction supply chain.

Cromology adopts voluntary certification standards for the management of the health and safety of employees and contractors, consumer protection, and environmental protection.

PRODCUT SAFETY AND RESPONSABILITY		ETICS EUROPEAN TECHNICAL ASSESMENT
		INDOOR AIR QUALITY
		HACCP - PROTOCOL OF PREVENTION OF HEALTH HYGIENIC TYPE
		ISO 9001:2015 - QUALITY MANAGEMENT SYSTEM
		ANTI MOLD EFFECTIVENESS UNI EN 15458 - ANTI ALGAE EFFECTIVENESS
ENVIRONMENTAL RESPONSABILITY		ISO 14001:2015 ENVIRONMENTAL PROTECTION IN INDUSTRIAL PRODUCTION PROCESSES
		ENVIRONMENTAL PRODUCT DECLARATION
		ECOLABEL
SOCIAL RESPONSABILITY		ISO 45001:2018 MANAGEMENT SYSTEM FOR HEALTH AND SAFETY AT WORK
		DLGS 231/2001 ADMINISTRATIVE RESPONSIBILITY OF COMPANIES



A SHARED COMMITMENT

On the strength of its experience, Cromology works in synergy with the most important and influential trade associations in the building sector.



CORTEXA, is the consortium set up in 2007 to bring together the main Italian manufacturers of quality thermal insulation systems. SETTEF, one of the founding companies, aims to offer operators controlled and certified systems based on precise quality and regulatory requirements, in this way contributing to the dissemination of a culture of quality in both the design and installation of the system.



ANIT, was founded in 1984. The Association aims to promote, spread, and develop thermal and acoustic insulation systems in the building industry as a means of safeguarding the environment and people's well-being.



GBC, is a non-profit association of leading companies and professional associations operating in the sustainable building segment. GBC Italy is part of the World GBC, an international network present in more than 70 countries. GBC Italy encourages a process of transformation of the Italian building market via the promotion of the third-party certification system and its own certification protocols.



ASSOVERNICI, is an industrial association founded in 2010 to represent paint products and a point of reference for the entire industry. It is the second largest association for importance in Europe, thus representing the reality of our country at a European level. Cromology actively contributed to the creation of this association in its role as founding member.

Since 2016, Cromology has also been actively involved in national regulatory workgroups as a member of **CTI**, an organisation federated with the UNI the purpose of which is to carry out regulatory and standardising activities in the thermotechnical sector through the drafting of standards and other documents (guidelines or recommendations), concerning the thermotechnical sector, the revision of already existing standards and documents (CTI and/or UNI-CTI) and participation in international standardisation works in the sector.

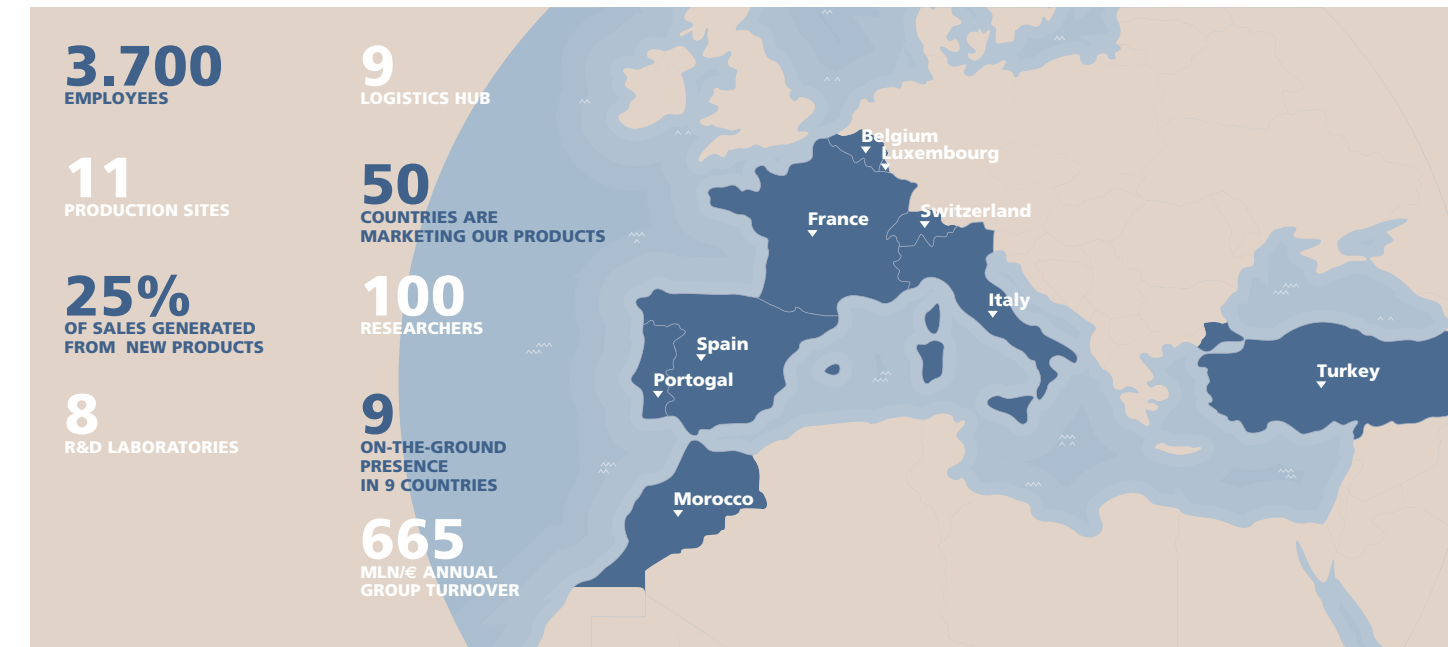


cromology the art of professional painting THE STRENGTH OF A **LARGE GROUP**

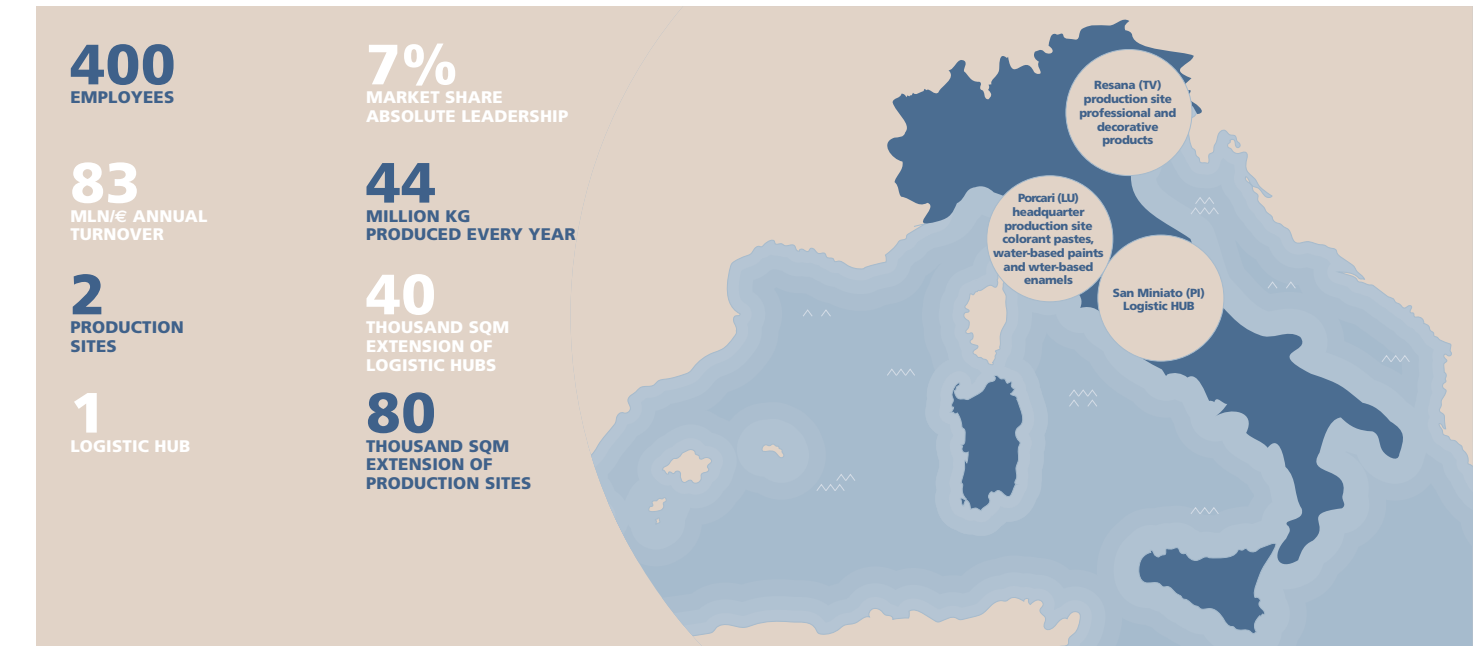
Cromology Group was founded in 2015, at the end of a decade-long reshaping process started in the late 90s, when Lafarge Peintures created the Specialty Materials division that subsequently became Materis Paints. The new company quickly turned into a global player extending its operations in emerging markets.

Cromology has carefully preserved the pioneering spirit of its Dutch origins of the 1700s. It has grown into a solid group with worldwide presence and a leading position in southern Europe, with influence in 50+ countries, and an annual global turnover of 665+mln/€. The real asset of the group are its 3700 employees - 100 of them being highly specialized researchers and technicians - with 11 production sites and 8 R&D laboratories. 25% of the turnover is generated by new products.

Cromology brands are in over 50 countries around the world, with a direct presence in 9 countries. In each market, Cromology's commercial brands are an expression of history, professionalism and capacity for innovation. 25% of the turnover is generated by new products.



Cromology Italia believes in a multi-channel strategy diversified by brand, service offer and type of customer: from the designer, to the professional applicator, to the private individual. With an offer of 7 specialized brands, Cromology holds 7% of the Italian market, a position of absolute leadership. The head office is in Porcari, in the province of Lucca, and the company has two cutting-edge production sites of 80,000 square meters, a hub logistics area of 45,000 square meters and the collaboration of 400 collaborators throughout the Italian territory, including staff on site and the sales network. With its own brand portfolio and a wide range of products and services, Cromology wants to be the trusted partner alongside of clients, professionals and individuals, to achieve professional excellence together.



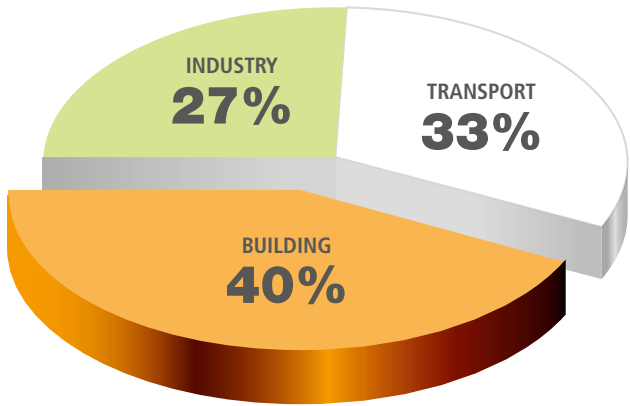
SETTEF THE PROFESSIONAL REFERENCE FOR THE FACADE

For over 70 years Settef has been addressing to professionals with a range of high-quality products, for all façade requirements and all types of buildings, even adapting to specific climatic conditions. In addition to its range of exterior paints and coatings, Settef supplies the Thermophon thermal insulation system, one of the first in Italy, thus still remaining the benchmark for energy upgrading. Additionally, its Cepro line consists of lime-based products used for architectural remodeling and modern environmental-sustainable buildings. Cepro offers technologically advanced solutions based on natural hydraulic lime, both for conventional plasters, as well as more complex dehumidification and restoration systems.

ADVANTAGES AND **BENEFITS** OF THERMAL INSULATION SYSTEMS

ENVIRONMENTAL PROTECTION

A building needs energy to heat or cool it. It is well known that buildings account for more than 40% of energy consumption, which results in the emission of carbon dioxide (CO₂) into the atmosphere.



In the graph: the percentages of energy consumption are broken down by macro-sectors, from which it is clear how much energy expenditure for heating or cooling (BUILDING) accounts for a large part of total pollution.

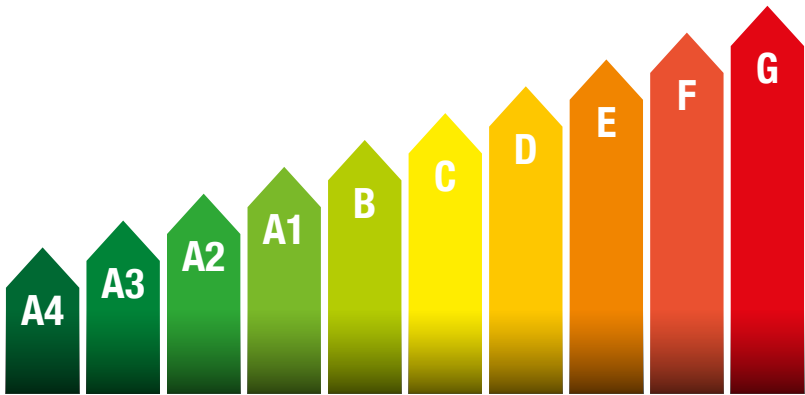
Reducing energy consumption, therefore, means having a cleaner atmosphere and consequently:

- this improves the quality of the air we breathe, both indoors and outdoors, and
- makes a significant contribution towards protecting the planet's natural heritage.

ECONOMY AND SAVINGS QUALIFICATION OF THE BUILDING

The use of a THERMOPHON thermal insulation system brings numerous economic advantages.

- Savings in heating and cooling costs (air conditioning, ventilation, etc.).
- Enhancement of the building or housing unit. The thermal insulation system allows for obtaining a higher energy classification. This classification (G the lowest, A4 the best) affects both the market price of the house and possibly also the rent.



• Tax deductions. Tax deductions for energy requalification are established according to the budget law.

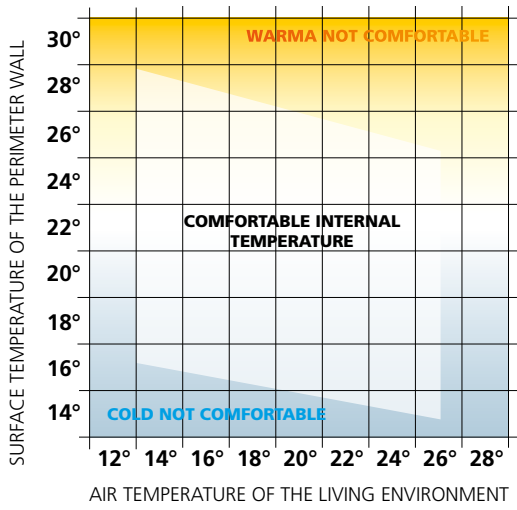
QUALIFICATION OF THE BUILDING

In every building there are 'thermal bridges', i.e., parts of a building with a worse transmittance than the context in which they are located. Examples of thermal bridges can be a wall in contact with the roof, a windowsill, or a door frame. At these points of contact it is easy to have water infiltration and create the conditions for the formation of mould and condensation, which leads to the deterioration of the structure, as well as a worsening of the indoor environment in which people live. Thermal insulation, acting on thermal bridges, prevents this damage and brings a triple advantage: reduced risks for maintenance and repair work on the structure; more effective insulation and, once again, healthier environments. In addition, by acting on the external structure, the thermal insulation system does not reduce the interior living space.

COMFORT AND WELLBEING

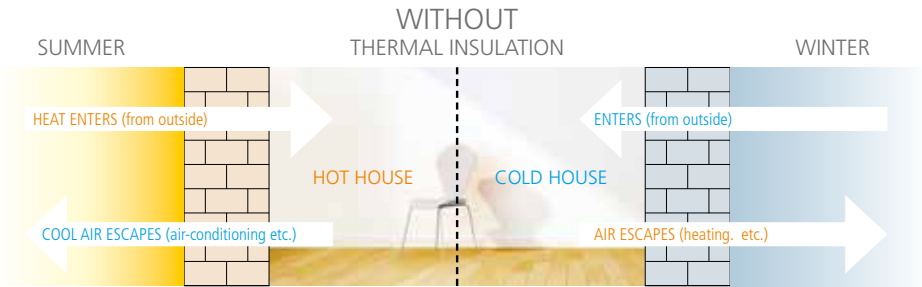
A thermally insulated environment ensures better liveability. The room temperature is more stable, so you do not experience the discomfort caused by heat or cold outside. A more stable indoor temperature also has a positive effect on health, reducing the risk of seasonal illnesses. The walls of a building that is protected from the outside and from temperature fluctuations are less prone to the formation of internal condensation and the proliferation of mould, thus making the environment healthier.

In the graph: an indoor environment is comfortable if its temperature is more favourable than the outside temperature that is, if it is warmer in winter and cooler in summer, without being too extreme. In addition, greater living comfort is perceived if there is a minimum difference between the internal air and that of the perimeter walls.



A BALANCED TEMPERATURE IN EVERY SEASON

The thermal insulation system, by insulating the perimeter walls, reduces the influence of the outside temperature on the inside temperature, and therefore the walls and interior environment are not as cold in winter and not as hot in summer.



Uninsulated perimeter walls are the main cause of heat loss in a building. For this reason, an external insulation system can significantly improve the energy performance of the building.



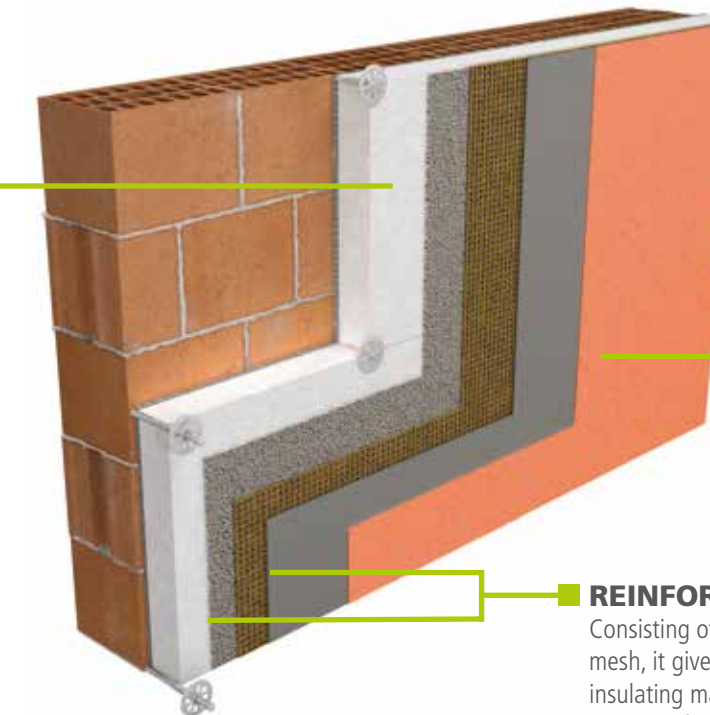
DESCRIPTION OF THE **THERMOPHON** SYSTEMS

The subject of this EPD is the THERMOPHON thermal insulation system, in the variants P (with an expanded polystyrene insulation panel and paste adhesive), PV (with an expanded polystyrene insulation panel and powder adhesive), R (with a rock wool insulation panel) and S (with a cork insulation panel).

The thermal insulation system (ETICS: acronym for External Thermal Insulation Composite System) is a work intervention carried out on the external walls, aimed at improving the energy performance of the building and the living comfort inside. It is defined as a system because it is composed of a plurality of products and accessories, which together are superimposed on the external masonry to form a basic structure as in the figure below. Each layer of the system has a specific function and only the correct design and installation will ensure its effectiveness and resistance over time. SETTEF offers a wide range of THERMOPHON cladding systems, which, differing one from the other due to the type of products used, guarantee the best effectiveness and durability in any climatic/environmental condition.

INSULATING MATERIAL

This mainly carries out the function of summer and winter thermal insulation. The technical characteristics will vary with the varying of the materials used.



FINISHING COAT

This is the last layer, consisting of the finishing plaster. It provides the aesthetic component (colour, structure) and protection from the atmospheric agents (UV rays, rain, etc.).

REINFORCED BASE COAT

Consisting of a levelling coat and reinforcing mesh, it gives protection to the underlying insulating material and mechanical resistance to the surface.

DESCRIPTION OF THE SYSTEMS: **CONSTITUENT ELEMENTS**

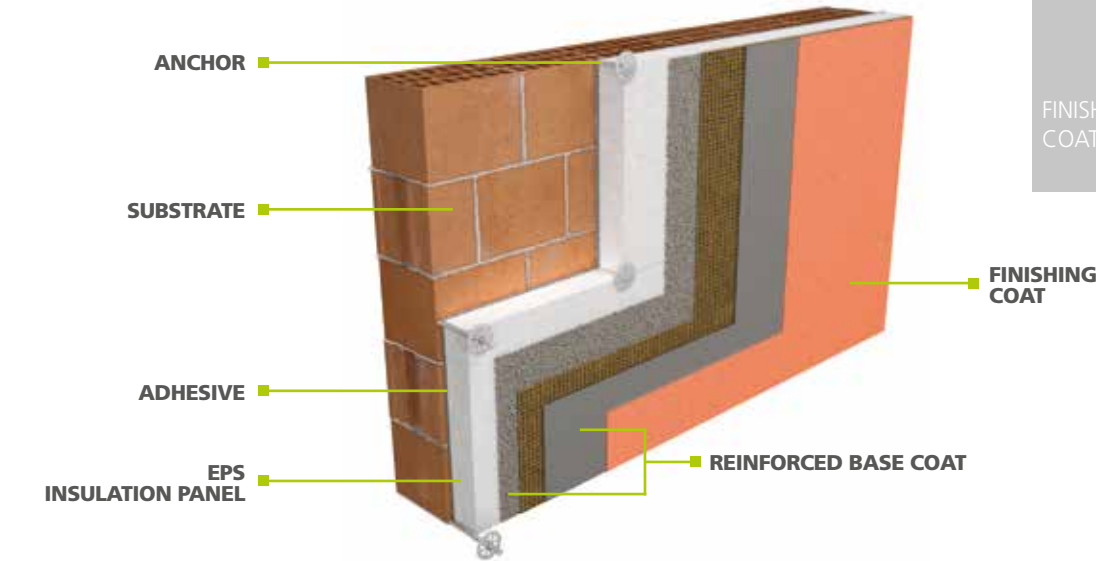
THERMOPHON **P**



Thermal insulation system using EPS insulation panels with adhesive/base coat in a paste form.

- Distinctive features**
- High thermal insulation
 - Optimum adhesion even on difficult substrates
 - Cost-effectiveness and speed of application
 - Guaranteed quality and reliability
 - Benefits from the European Technical Assessment - ETA No. 08/0332

For further details, please refer to the technical data sheets and specifications available at www.SETTEF.it



FIXING	BONDING 11	
	ANCHORS	
INSULATION PRODUCT	EPS White T 150	
REINFORCED BASE COAT	BONDING 11	
	MESH SETTEF	
PRYMER	ACRYLICS	SILOXANE
	FONDFIX PLUS	FONDFIX PLUS
FINISHING COAT	CORTINA CAP MEDIO or TAORMINA FINE	SILACRYL R



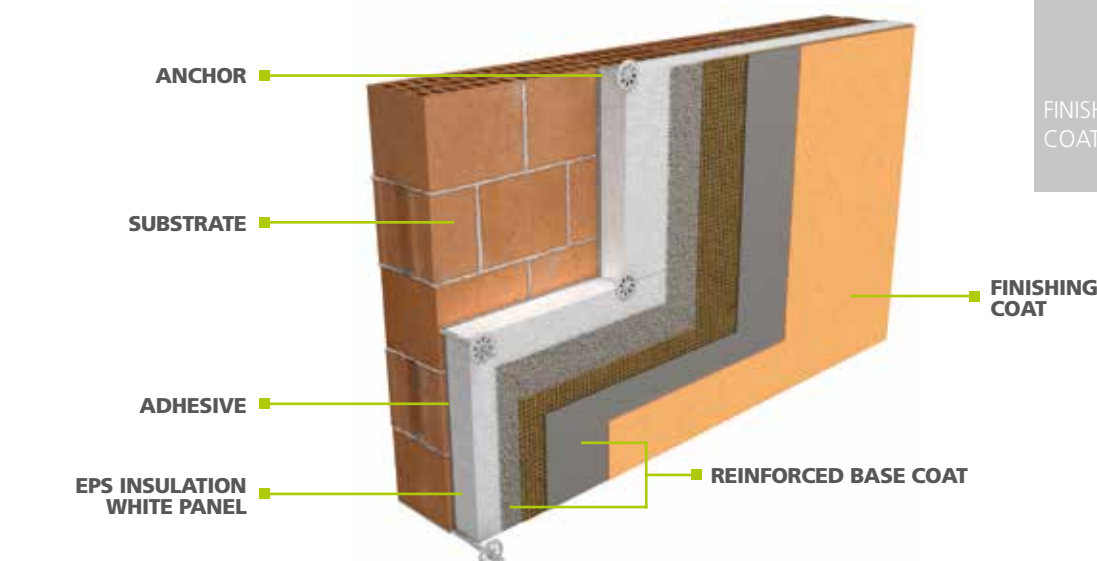
THERMOPHON **PV**



Thermal insulation system using EPS insulation panels with mineral adhesive/base coat in powder form.

- Distinctive features**
- High thermal insulation
 - Quick installation
 - Excellent cost-performance ratio
 - High reliability and durability
 - Benefits from the European Technical Assessment - ETA No. 10/0369

For further details, please refer to the technical data sheets and specifications available at www.SETTEF.it



FIXING	BONGING 05 GREY, or BONDING GG GREY - G1 F GREY		
	ANCHORS		
INSULATION PRODUCT	EPS White T 100 - EPS White T 150 - EPS Grey T 100		
REINFORCED BASE COAT	BONGING 05 GREY, or BONDING GG GREY - G1 F GREY		
	MESH SETTEF		
PRYMER	ACRYLICS	SILOXANE	SILICATE
	FONDFIX PLUS	FONDFIX PLUS	SILISETTEF GRIP
FINISHING COAT	CORTINA CAP MEDIO or TAORMINA FINE	SYLANCOAT 1,2 SYLANCOAT 1,5	SILISETTEF MEDIO 1,5



DESCRIPTION OF THE SYSTEMS: **CONSTITUENT ELEMENTS**

THERMOPHON **MINERAL**

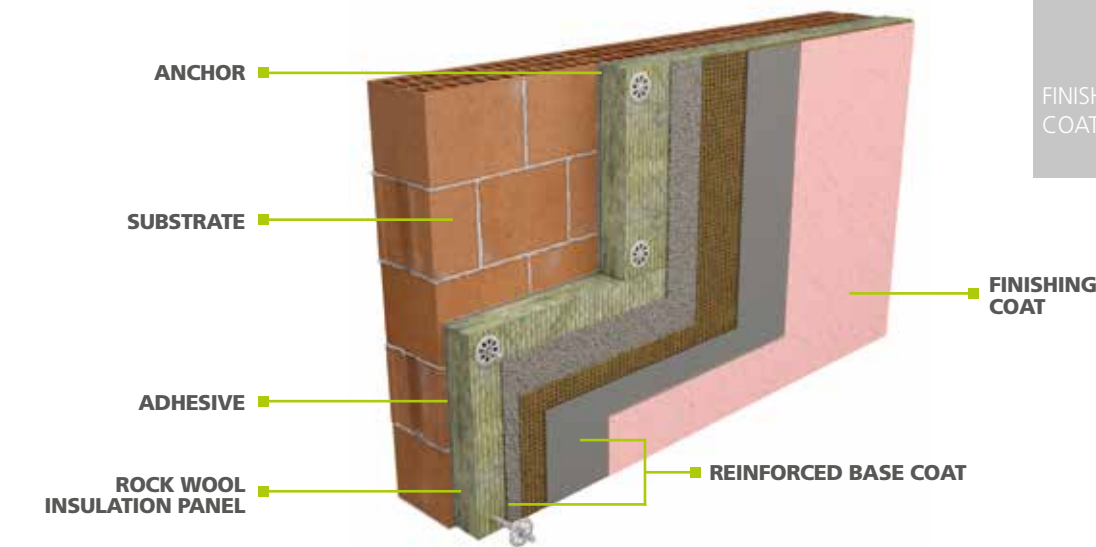


Thermal and acoustic insulation system with rock wool insulation panels.

Distinctive features

- High sound absorption and insulation
- High thermal insulation
- Fire retardant - non-combustible
- High vapour permeability
- Benefits from the European Technical Assessment - ETA No. 12/0217

For further details, please refer to the technical data sheets and specifications available at www.SETTEF.it



FIXING	BONGING 05 GREY, in alternativa BONDING GG GREY - G1 F GREY	
	ANCHORS	
INSULATION PRODUCT	ROCKWOOL	
REINFORCED BASE COAT	BONGING 05 GREY, or BONDING GG GREY - G1 F GREY	
	MESH SETTEF	
PRYMER	SILOXANE	SILICATE
	FONDFIX PLUS	SILISETTEF GRIP
FINISHING COAT	SYLANCOAT 1,5	SILISETTEF MEDIO 1,5

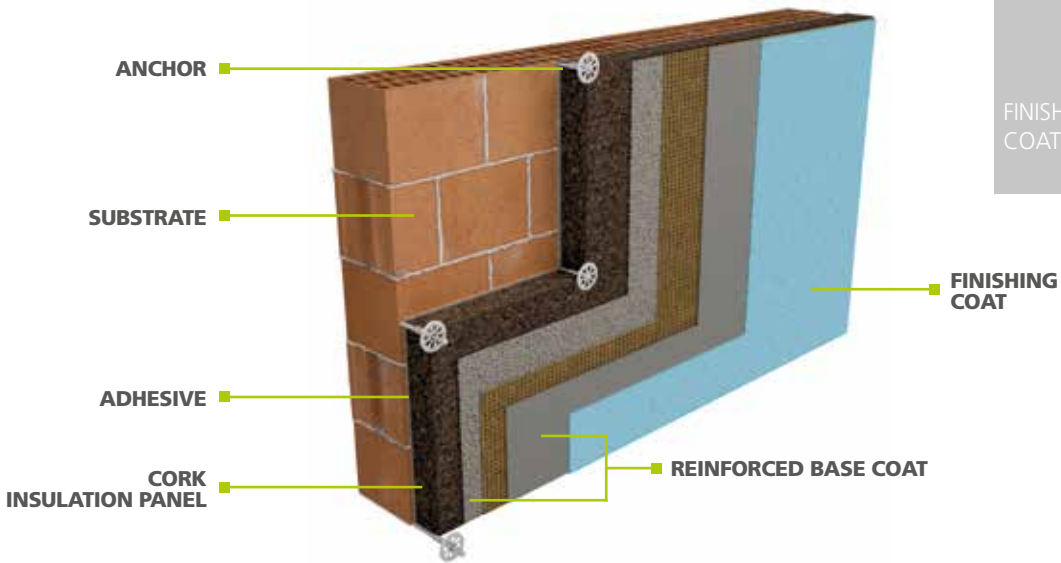


Thermal insulation system with cork insulation panels.

Distinctive features

- High mechanical resistance
- Natural and ecological system
- High thermal insulation in summer
- Good thermal insulation in winter
- High vapour permeability
- Benefits from the European Technical Assessment - ETA No. 12/0216

For further details, please refer to the technical data sheets and specifications available at www.SETTEF.it



FIXING	BONDING GREY	
	ANCHORS	
INSULATION PRODUCT	CORK INSULATION PANEL	
REINFORCED BASE COAT	BONDING GREY	
	MESH SETTEF	
PRYMER	SILOXANE	SILICATE
	FONDFIX PLUS	SILISETTEF GRIP
FINISHING COAT	SILACRYL G	SILISETTEF MEDIO 1,5



DESCRIPTION OF THE SYSTEMS: COMPONENTS AND WEIGHTS

The main components and auxiliary materials of the systems studied are shown in the tables below. The decision to consider a 10-cm thick insulating panel stems from the need to effectively synthesise the current demand on the Italian market. The weight values shown in the tables refer to the declared unit of 1 m². In the SETTEF range, EPS with tensile strengths of from 100 to 150 are available.

THERMOPHON P - EPS					
		HP 1 - Cortina Cap Medio		HP 2 - Silacryl R / Taormina Fine	
System components		Weight (kg)	Percentage	Weight (kg)	Percentage
Adhesive Insulation products Anchors	Bonding 11	4,25	31%	4,25	32%
	EPS - 10 cm	1,65	12%	1,65	13%
	STR U 2G - 13,5 cm	0,26	2%	0,26	2%
Base coat	Bonding 11	4,5	33%	4,50	34%
Mesh	Mesh Settef	0,16	1%	0,16	1%
Prymer	Fondfix Plus	0,16	1%	0,16	1%
Finishing coat	HP 1 Cortina Cap Medio	2,75	20%		
	HP 2 Silacryl R Taormina Fine			2,20	17%
TOTAL		13,73	100%	13,43	100%

THERMOPHON PV - EPS					
		HP 1 - Cortina Cap Medio Silisettef Medio 1,5 Sylancoat 1,5		HP 2- Sylancoat 1,2 / Taormina Fine	
System components		Weight (kg)	Percentage	Weight (kg)	Percentage
Adhesive Insulation products Anchors	Bonding 05, GG, G1F Grigio	4,25	31%	4,25	32%
	EPS - 10 cm	1,65	12%	1,65	13%
	STR U 2G - 13,5 cm	0,26	2%	0,26	2%
Base coat	Bonding 05, GG, G1F Grigio	4,50	33%	4,50	34%
Mesh	Mesh Settef	0,16	1%	0,16	1%
Prymer	Fondfix Plus Silisettef Grip	0,16	1%	0,16	1%
Finishing coat	HP 1 Cortina Cap Medio Silisettef Medio 1.5 Sylancoat 1,5	2,75	20%		
	HP 2 Sylancoat 1,2 Taormina Fine			2,20	17%
TOTAL		13,73	100%	13,18	100%

Primary Packaging		
	ETICS with Finishing coat 1.2mm 2.20 kg/m²	ETICS with Finishing coat 1.5mm 2.75 kg/m²
Polypropylene (kg)	0.281	0.293
Iron (kg)	0.016	0.017
Paper (kg)	0.009	0.009

THERMOPHON MINERAL			
System components		Weight (KG)	Percentage
Adhesive Insulation products Anchors	Bonding 05, GG, G1F Grigio	4,25	21%
	Front Rock Max Plus - 10 cm	7,80	39%
	STR U 2G - 13,5 cm	0,26	1%
Base coat	Bonding 05, GG, G1F Grigio	4,50	23%
Mesh	Mesh Settef	0,16	1%
Prymer	Fondfix Plus Silisettef Grip	0,16	1%
Finishing coat	Sylancoat 1,5 Silisettef Medio 1,5	2,75	14%
	TOTAL	19,88	100%

THERMOPHON NATURAL			
System components		Weight (KG)	Percentage
Adhesive Insulation products Anchors	Bonding Grigio	4,25	18%
	Corkpan - 10 cm	11,00	48%
	STR U 2G - 13,5 cm	0,26	1%
Base coat	Bonding Grigio	4,50	19%
Mesh	Mesh Settef	0,16	1%
Prymer	Fondfix Plus Silisettef Grip	0,16	1%
Finishing coat	Silacryl G Silisettef Medio 1.5	2,75	12%
	TOTAL	23,08	100%

TECHNICAL DATA

The products being studied are intended for the external cladding of architectural works and buildings:

TECHNICAL FEATURES	Reference Unit	Thermophon P	Thermophon PV	Thermophon MINERAL	Thermophon NATURAL
Insulating thicknesses available	mm	30 - 200	30 - 200 (White) 60 -200 (Grey)	50 - 200	30 - 200
Thermal conductivity (insulation product) (λ)	W/mK	EPS White T150 0,035	EPS White T150 0,035 EPS White T100 0,036 EPS Grey T100 0,031	≤ 0,035 ≤ 0,036 -	0,039
Thermal resistance	m²K/W	R _{ETICS} = R _{INSULATION} + R _{RENDERING}	R _{ETICS} = R _{INSULATION} + R _{RENDERING}	R _{ETICS} = R _{INSULATION} + R _{RENDERING}	R _{ETICS} = R _{INSULATION} + R _{RENDERING}
Reaction to fire (euroclass)	Euroclass	NPD	B - s1, d0 (with finishing coat Silisettef Medio 1,5) / B - s2, d0 (with finishing coat Sylancoat 1,5)	B – s1, d0 (with all finishing coat)	NPD
Water absorption	kg/m²	< 0.5 kg/m² after 24h	< 0.5 kg/m² after 24h with all finishes except Silisettef Medio 1.5 (≥ 0.5 kg/m²)	< 0.5 kg/m² after 24h with all finishes except Silisettef Medio 1.5 (≥ 0.5 kg/m²)	< 0.5 kg/m² after 24h
Impact resistance	Category	Category II	Category II	Category II	Category II
Water vapour permeability	m	S _d ≤ 2	S _d ≤ 2	S _d ≤ 2	S _d ≤ 2
(Resistance to water vapour diffusion)	Strato di base e Isolante	MPa	≥ 0.08	≥ 0.08	≥ 0.08
	Adesivo e Supporto	MPa	≥ 0.25	≥ 0.25	≥ 0.25
	Adesivo e Isolante	MPa	≥ 0.08	≥ 0.08	≥ 0.08

Their classification according to the UN CPC code provides multiple identification codes. None of the products in the study contain any substances classified by the European Chemicals Agency (ECHA) list as Substances of Very High Concern (SVHC) in quantities of 0.1% or more by weight.

DESCRIPTION OF THE SYSTEMS: THE INSULATING PRODUCTS

PANELS



THERMOPHON WHITE 036 T100
Insulating panel in white sintered expanded polystyrene cut from a block with a straight edge specifically for thermal insulation in the building industry.
Approved by ETICS according to EAD040083-00-0404 and in compliance with standards UNI EN 13163 and UNI EN 13499.
Also available in the MEC version.



THERMOPHON WHITE 035 T150
Insulating panel in white sintered expanded polystyrene cut from a block with a straight edge specifically for thermal insulation in the building industry.
Approved by ETICS according to EAD040083-00-0404 and in compliance with standards UNI EN 13163 and UNI EN 13499.
Also available in the MEC version.



THERMOPHON GREY 031 T100
Insulating panel in grey sintered expanded polystyrene cut from a block with a straight edge specifically for thermal insulation in the building industry.
Approved by ETICS according to EAD040083-00-0404 and in compliance with standards UNI EN 13163 and UNI EN 13499.
Also available in the MEC version.



THERMOPHON GREY 030 T150
Insulating panel in grey sintered expanded polystyrene cut from a block with a straight edge specifically for thermal insulation in the building industry.
Approved by ETICS according to EAD040083-00-0404 and in compliance with standards UNI EN 13163 and UNI EN 13499.
Also available in the MEC version.



FRONT ROCK MAX PLUS
Rock wool insulation panel.
Approved by ETICS according to EAD040083-00-0404.
Complies with the MEC requirements (Minimum Environmental Criteria).



CORKPAN
Brown cork insulation panel.
ETICS approved according to EAD040083-00-0404.
Complies with the MEC requirements (Minimum Environmental Criteria).

ADHESIVES AND BASE COAT COMPOUNDS



BONDING 11
Grey paste adhesive for thermal insulation and universal base coat compound.
THEORETICAL CONSUMPTION PER COAT 4 - 5 kg/m² (per coat)
DILUTION 1:1 with Portland cement CEM II/A-L 32.5



BONDING 05
Powder adhesive for thermal insulation and universal base coat compound with a grain size of 0.5 mm.
THEORETICAL CONSUMPTION PER COAT 3 - 4 kg/m² (as a levelling coat); 8 - 9 kg/m² (for insulation)
DILUTION: Up to 22% with water



BONDING GG
Powder adhesive for thermal insulation and universal base coat compound with a grain size of 0.7 mm.
THEORETICAL CONSUMPTION PER COAT 3 - 4 kg/m² (as a levelling coat); 8 - 9 kg/m² (for insulation)
DILUTION: Up to 23% with water



BONDING G1 F
Powder adhesive for thermal insulation and universal base coat compound with a grain size of 1 mm.
THEORETICAL CONSUMPTION PER COAT 3 - 4 kg/m² (as a levelling coat); 8 - 9 kg/m² (for insulation)
DILUTION: Up to 21% with water

PRYMERS



FONDFIX PLUS
Universal pigmented primer with filling effect
• RESISTANCE TO ALKALIS AND ATMOSPHERIC AGENTS
• HIGH FILLING AND MASKING POWER
THEORETICAL YIELD PER COAT 12 - 15 m²/Litre
DILUTION: Up to 10% with water



SILISETTEF GRIP
Mineral primer, filling and levelling based on potassium silicate in aqueous phase.
• HIGH FILLING POWER
• HIGH BREATHABILITY
• EXCELLENT SILICATE-BASED BONDING PRIMER FOR SILOXANE AND ACRYLIC PRODUCTS
THEORETICAL YIELD PER COAT 5 - 6,5 m²/L
DILUTION: Max. 15% con acqua

FINISHING COAT



TAORMINA FINE 1,2 mm
Acrylic protective coating with a finecompacted levelling appearance.
• OUTSTANDING APPLICABILITY, ELASTICITY AND ADHERENCE
• PREVENTIVE PROTECTION AGAINST THE FORMATION OF ALGAE AND FUNGUS
THEORETICAL CONSUMPTION PER COAT: 1,2 mm 2,0 - 2,4 kg/m²



SILISETTEF MEDIO 1,5 mm
Fibre-reinforced silicate coating with a compact rustic smooth appearance.
• HIGH BREATHABILITY
• COMPLIES WITH DIN 18363
• EXCELLENT WORKABILITY
• EXCELLENT ADHESION ON ALL TYPES OF MINERAL SUBSTRATES
THEORETICAL CONSUMPTION PER COAT: 1,5 mm 2,5 - 3,0 kg/m²



CORTINA CAP MEDIO 1,5 mm
Acrylic protective coating with a rusticmedium smooth appearance.
• EXCELLENT WORKABILITY AND ADHESION
• PREVENTIVE PROTECTION AGAINST THE FORMATION OF ALGAE AND FUNGUS
THEORETICAL CONSUMPTION PER COAT: 1,5 mm 2,5 - 3,0 kg/m²



SYLANCOAT
Acryl-siloxane coating with a compact appearance. Available in 1.2-mm and 1.5-mm grain sizes.
• HIGH ADHESION
• EASE OF APPLICATION
• PREVENTIVE PROTECTION AGAINST THE FORMATION OF ALGAE AND FUNGUS
• HIGH RESISTANCE TO ALKALIS AND ATMOSPHERIC AGENTS
• FIBRE-REINFORCED STRUCTURE
THEORETICAL CONSUMPTION PER COAT: 1,2 mm 2,0 - 2,4 kg/m² 1,5 mm 2,5 - 3,0 kg/m²



ENVIRONMENTAL IMPACT DECLARATION

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 needed for the thermal insulation of a 1-square-metre area of the SETTEF brand ETICS-certified kits:

- Thermophon **P**
- Thermophon **PV**
- Thermophon **MINERAL**
- Thermophon **NATURAL**

SYSTEM BOUNDARIES

This EPD is of the “cradle to gate with options” type and includes modules A1 (Raw materials), A2 (Transport), A3 (Manufacturing), C1 (Deconstruction - Demolition), C2 (Transport to waste processing), C3 (Waste processing), C4 (Disposal) and D (Reuse - Recovery - Recycling potential).

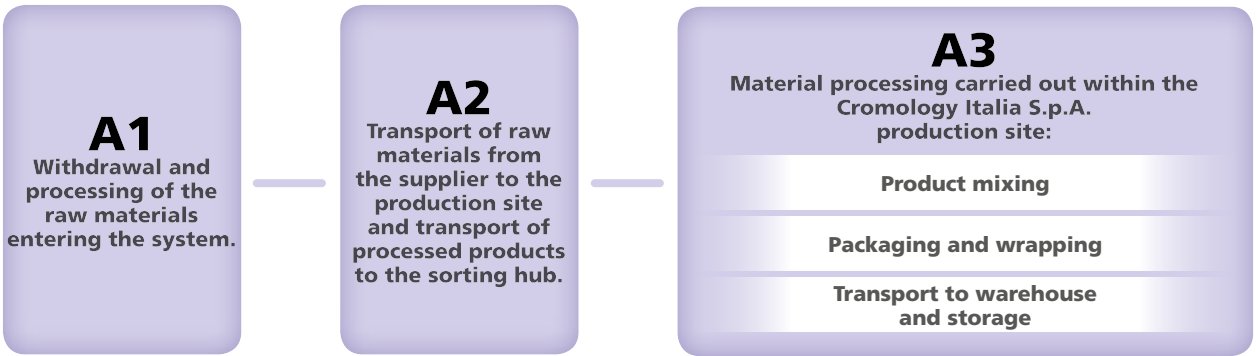
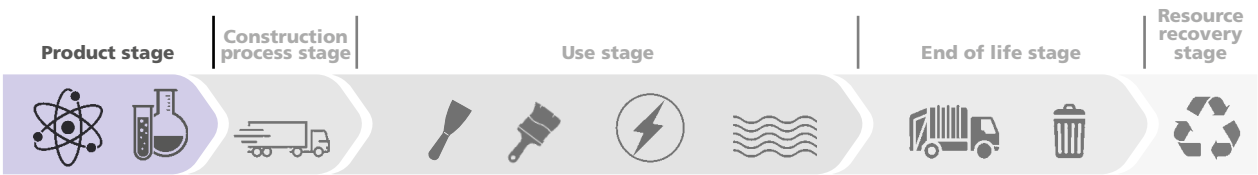
	Product stage			Construction process stage		Use stage							End of life stage			Resource recovery stage	
																	
	Raw material supply	Transport of raw materials	Manufacturing	Transport to customer	Installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction/demolition	Transport to waste processing	Waste processing	Disposal	Reuse – recovery - recycling potential
Form	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Form declared	X	X	X	ND	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%	> 90%	> 90%	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation products	Less than ±10% for each product group			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation sites	Not relevant			-	-	-	-	-	-	-	-	-	-	-	-	-	-

REFERENCE YEAR

The data used are for the calendar year 2019. Study carried out in the year 2020/2021.

ENVIRONMENTAL IMPACT DECLARATION

PRODUCTION (A1 - A3)

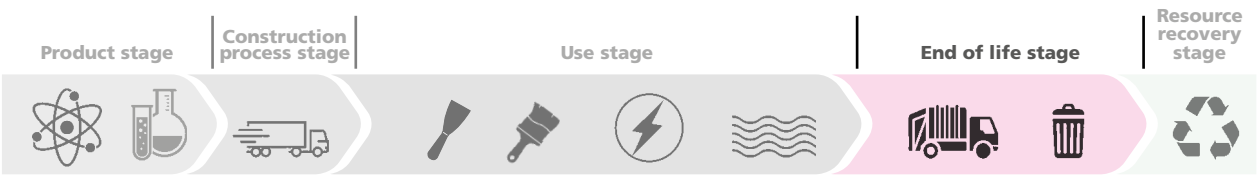


The processing cycle involves the addition of all the raw materials required for the production (resins, fillers, additives) by means of hoppers or tanks in which they are dosed and then loaded into the machine. The working cycle for the production of thick coatings and levelling adhesives for thermal coatings generally foresees the following phases:

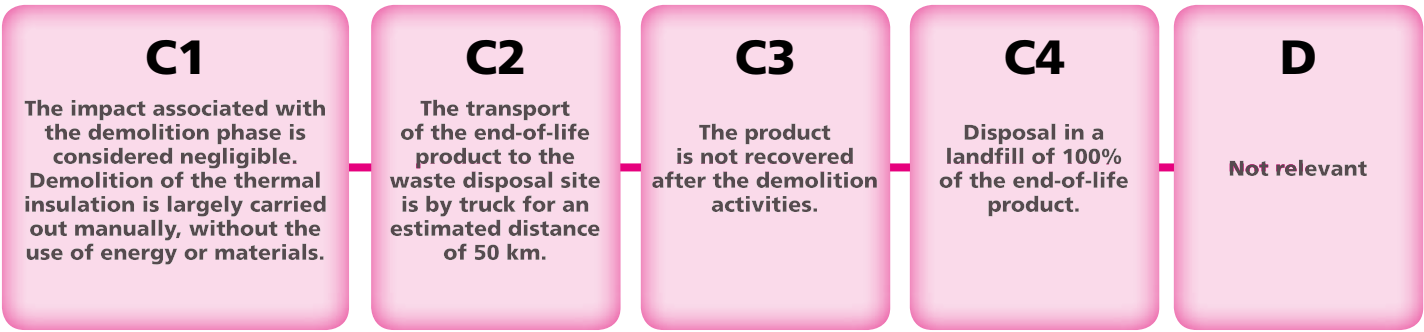
1. Withdrawal of the raw materials from storage and conveying to the mixers (automatically if possible).
2. Dispersal of raw materials by means of the mixers.
3. Checking and testing of the mixture for the physical and chemical characteristics.
4. Packaging via use of packaging machines.
5. Shipping c/o the Logistics Hub

The energy emission factor of the mix used (GWP-GHG) is 0,734 Kg CO₂ e/KWh

END OF LIFE (C1-C2-C3-C4)



The product end-of-life scenario foresees the following:



The RSL (Reference Service Life), given the nature of the product and its intended use, is estimated to be equal to the lifetime of the installation building, namely, 50 years.

CUT-OFF

The environmental impact related to personnel, infrastructures, and the production of materials not directly consumed in the production process has not been included in the study. All process inputs and outputs for which data are available have been included in the calculation. Less than 1% of the total inputs/outputs of the System have been cut off.

ENVIRONMENTAL PERFORMANCE

The values refer to the declared unit, i.e., the quantity of product required to insulate 1 m2 with an insulation thickness of 100 mm.

THERMOPHON P

ADHESIVE/ BASE COAT	PRYMER	FINISHING COAT	AVERAGE PRODUCT
Bonding 11	Fondfix Plus	Cortina Cap Medio	P 1
		Taormina Fine	
		Silacryl R	

INDICATORS EN15804+A2			AVERAGE P 1						
Impact category		Reference unit	A1 - A3	Δ min-max	C1	C2	C3	C4	D
	ADP (fossil)	MJ	3.91E+02	±3.4%	0.00E+00	9.45E-01	0.00E+00	1.96E+00	0.00E+00
	ADP (minerals & metals)	kg Sb eq	2.65E-06	±2.6%	0.00E+00	4.43E-10	0.00E+00	7.12E-10	0.00E+00
	AP	Mole H+ eq.	8.99E-02	±2.3%	0.00E+00	4.24E-04	0.00E+00	6.67E-04	0.00E+00
	EP Freshwater	kg P eq*	3.18E-03	±1.7%	0.00E+00	3.98E-06	0.00E+00	6.60E-06	0.00E+00
	EP Marine	kg N eq	9.15E-04	±4.9%	0.00E+00	3.78E-07	0.00E+00	6.14E-07	0.00E+00
	EP Terrestrial	Mole N eq.	1.87E-01	±1.6%	0.00E+00	1.84E-03	0.00E+00	2.56E-03	0.00E+00
	GWP Biogenic	kg CO2 eq	6.44E-03	±1.2%	0.00E+00	1.69E-05	0.00E+00	1.90E-05	0.00E+00
	GWP Fossil	kg CO2 eq	2.51E+01	±2.8%	0.00E+00	6.11E-02	0.00E+00	7.00E-02	0.00E+00
	GWP Luluc	kg CO2 eq	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP Total	kg CO2 eq	2.51E+01	±2.8%	0.00E+00	6.12E-02	0.00E+00	7.00E-02	0.00E+00
	ODP	kg CFC-11 eq.	1.88E-06	±4.6%	0.00E+00	1.15E-08	0.00E+00	2.30E-08	0.00E+00
	POCP	kg NMVOC	7.22E-02	±1.8%	0.00E+00	5.18E-04	0.00E+00	7.39E-04	0.00E+00
	WDP	m³eq.	5.08E+00	±3.2%	0.00E+00	2.10E-03	0.00E+00	3.79E-02	0.00E+00

RESOURCE CONSUMPTION

		AVERAGE P 1						
Impact category	Reference unit	A1 - A3	Δ min-max	C1	C2	C3	C4	D
PERT	MJ	2.39E+01	±1.1%	0.00E+00	1.14E-02	0.00E+00	1.56E-02	0.00E+00
PERM	MJ	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERE	MJ	2.39E+01	±1.1%	0.00E+00	1.14E-02	0.00E+00	1.56E-02	0.00E+00
PENRT	MJ	4.20E+02	±3.2%	0.00E+00	9.65E-01	0.00E+00	1.98E+00	0.00E+00
PENRM	MJ	6.60E+01	±0.0%	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRE	MJ	3.54E+02	±3.8%	0.00E+00	9.65E-01	0.00E+00	1.98E+00	0.00E+00
SM	kg	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	MJ	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FWT	m³	2.82E-01	±3.7%	0.00E+00	1.21E-04	0.00E+00	2.15E-03	0.00E+00

WASTE

		AVERAGE P 1						
Impact category	Reference unit	A1 - A3	Δ min-max	C1	C2	C3	C4	D
HWD	kg	3.91E+02	±2.2%	0.00E+00	2.33E-06	0.00E+00	2.92E-06	0.00E+00
NHWD	kg	2.65E-06	±0.3%	0.00E+00	1.28E-01	0.00E+00	1.35E+01	0.00E+00
RWD	kg	8.99E-02	±0.9%	0.00E+00	6.61E-06	0.00E+00	1.30E-05	0.00E+00
CRU	kg	3.18E-03	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MFR	kg	9.15E-04	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MER	kg	1.87E-01	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EE	MJ	6.44E-03	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Additional indicators		AVERAGE P 1						
Impact category	Reference unit	A1 - A3	Δ min-max	C1	C2	C3	C4	D
GWP-GHG	kg CO2 eq	2.40E+01	±2.7%	0.00E+00	6.08E-02	0.00E+00	6.92E-02	0.00E+00

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

ENVIRONMENTAL PERFORMANCE

The products of the PV line have been divided into 5 uniform sub-groups as regards the primer and the finish used. The reported results are the average of the product results marketed as Thermophon PV. All indicators are within ± 10%.

The values refer to the declared unit, i.e., the quantity of product required to insulate 1 m2 with an insulation thickness of 100 mm.

THERMOPHON PV

ADHESIVE/ BASE COAT	PRYMER	FINISHING COAT	AVERAGE PRODUCT
Bonding Grigio	Silisetef Grip	Silisetef Medio 1,5	PV 1
Bonding 05 Grigio	Silisetef Grip	Silisetef Medio 1,5	
Bonding GG Grigio	Silisetef Grip	Silisetef Medio 1,5	
Bonding G1 Grigio F	Silisetef Grip	Silisetef Medio 1,5	
Bonding Grigio	Fondfix Plus	Sylancoat 1.5	PV 2
Bonding 05 Grigio	Fondfix Plus	Sylancoat 1.5	
Bonding GG Grigio	Fondfix Plus	Sylancoat 1.5	
Bonding G1 Grigio F	Fondfix Plus	Sylancoat 1.5	
Bonding Grigio	Fondfix Plus	Sylancoat 1,2	PV 3
Bonding 05 Grigio	Fondfix Plus	Sylancoat 1,2	
Bonding GG Grigio	Fondfix Plus	Sylancoat 1,2	
Bonding G1 Grigio F	Fondfix Plus	Sylancoat 1,2	
Bonding Grigio	Fondfix Plus	Cortina Cap Medio	PV 4
Bonding 05 Grigio	Fondfix Plus	Cortina Cap Medio	
Bonding GG Grigio	Fondfix Plus	Cortina Cap Medio	
Bonding G1 Grigio F	Fondfix Plus	Cortina Cap Medio	
Bonding Grigio	Fondfix Plus	Taormina Fine	PV 5
Bonding 05 Grigio	Fondfix Plus	Taormina Fine	
Bonding GG Grigio	Fondfix Plus	Taormina Fine	
Bonding G1 Grigio F	Fondfix Plus	Taormina Fine	

PV 1

INDICATORI EN15804+A2			AVERAGE PV 1							
Impact category	Reference unit	A1 - A3	Δ min-max	C1	C2	C3	C4	D		
 ADP (fossil)	MJ	3.12E+02	±2.9%	0.00E+00	9.65E-01	0.00E+00	2.00E+00	0.00E+00		
 ADP (minerals & metals)	kg Sb eq	1.22E-06	±4.2%	0.00E+00	4.52E-10	0.00E+00	7.27E-10	0.00E+00		
 AP	Mole H+ eq.	7.80E-02	±3.5%	0.00E+00	4.32E-04	0.00E+00	6.80E-04	0.00E+00		
 EP Freshwater	kg P eq*	3.55E-03	±9.4%	0.00E+00	4.06E-06	0.00E+00	6.73E-06	0.00E+00		
 EP Marine	kg N eq	7.65E-04	±4.6%	0.00E+00	3.85E-07	0.00E+00	6.27E-07	0.00E+00		
 EP Terrestrial	Mole N eq.	1.75E-01	±3.0%	0.00E+00	1.87E-03	0.00E+00	2.61E-03	0.00E+00		
 GWP Biogenic	kg CO2 eq	8.98E-03	±7.2%	0.00E+00	1.72E-05	0.00E+00	1.94E-05	0.00E+00		
GWP Fossil	kg CO2 eq	2.34E+01	±5.5%	0.00E+00	6.24E-02	0.00E+00	7.14E-02	0.00E+00		
GWP Luluc	kg CO2 eq	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
GWP Total	kg CO2 eq	2.34E+01	±5.5%	0.00E+00	6.24E-02	0.00E+00	7.14E-02	0.00E+00		
 ODP	kg CFC-11 eq.	4.31E-05	±0.2%	0.00E+00	1.18E-08	0.00E+00	2.35E-08	0.00E+00		
 POCP	kg NMVOC	6.23E-02	±2.6%	0.00E+00	5.29E-04	0.00E+00	7.54E-04	0.00E+00		
 WDP	m³eq.	4.29E+00	±3.6%	0.00E+00	2.14E-03	0.00E+00	3.87E-02	0.00E+00		

RESOURCE CONSUMPTION

		AVERAGE PV 1						
Impact category	Reference unit	A1 - A3	Δ min-max	C1	C2	C3	C4	D
PERT	MJ	2.54E+01	±5.5%	0.00E+00	1.17E-02	0.00E+00	1.59E-02	0.00E+00
PERM	MJ	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERE	MJ	2.54E+01	±5.5%	0.00E+00	1.17E-02	0.00E+00	1.59E-02	0.00E+00
PENRT	MJ	3.42E+02	±3.5%	0.00E+00	9.84E-01	0.00E+00	2.02E+00	0.00E+00
PENRM	MJ	6.60E+01	±0.0%	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRE	MJ	2.76E+02	±4.3%	0.00E+00	9.84E-01	0.00E+00	2.02E+00	0.00E+00
SM	kg	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	MJ	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FWT	m³	2.29E-01	±3.5%	0.00E+00	1.24E-04	0.00E+00	2.20E-03	0.00E+00

WASTE

		AVERAGE PV 1						
Impact category	Reference unit	A1 - A3	Δ min-max	C1	C2	C3	C4	D
HWD	kg	4.60E-04	±2.2%	0.00E+00	2.38E-06	0.00E+00	2.98E-06	0.00E+00
NHWD	kg	1.29E+01	±8.4%	0.00E+00	1.30E-01	0.00E+00	1.38E+01	0.00E+00
RWD	kg	6.80E-04	±8.8%	0.00E+00	6.75E-06	0.00E+00	1.33E-05	0.00E+00
CRU	kg	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MFR	kg	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MER	kg	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EE	MJ	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Additional indicators		AVERAGE PV 1						
Impact category	Reference unit	A1 - A3	Δ min-max	C1	C2	C3	C4	D
GWP-GHG	kg CO2 eq	2.25E+01	±5.6%	0.00E+00	6.20E-02	0.00E+00	7.06E-02	0.00E+00

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

ENVIRONMENTAL PERFORMANCE

The values refer to the declared unit, i.e., the quantity of product required to insulate 1 m2 with an insulation thickness of 100 mm.

THERMOPHON PV

ADHESIVE/ BASE COAT	PRYMER	FINISHING COAT	AVERAGE PRODUCT
Bonding Grigio	Silisetef Grip	Silisetef Medio 1,5	PV 1
Bonding 05 Grigio	Silisetef Grip	Silisetef Medio 1,5	
Bonding GG Grigio	Silisetef Grip	Silisetef Medio 1,5	
Bonding G1 Grigio F	Silisetef Grip	Silisetef Medio 1,5	
Bonding Grigio	Fondfix Plus	Sylancoat 1.5	PV 2
Bonding 05 Grigio	Fondfix Plus	Sylancoat 1.5	
Bonding GG Grigio	Fondfix Plus	Sylancoat 1.5	
Bonding G1 Grigio F	Fondfix Plus	Sylancoat 1.5	
Bonding Grigio	Fondfix Plus	Sylancoat 1,2	PV 3
Bonding 05 Grigio	Fondfix Plus	Sylancoat 1,2	
Bonding GG Grigio	Fondfix Plus	Sylancoat 1,2	
Bonding G1 Grigio F	Fondfix Plus	Sylancoat 1,2	
Bonding Grigio	Fondfix Plus	Cortina Cap Medio	PV 4
Bonding 05 Grigio	Fondfix Plus	Cortina Cap Medio	
Bonding GG Grigio	Fondfix Plus	Cortina Cap Medio	
Bonding G1 Grigio F	Fondfix Plus	Cortina Cap Medio	
Bonding Grigio	Fondfix Plus	Taormina Fine	PV 5
Bonding 05 Grigio	Fondfix Plus	Taormina Fine	
Bonding GG Grigio	Fondfix Plus	Taormina Fine	
Bonding G1 Grigio F	Fondfix Plus	Taormina Fine	

PV 2

INDICATORS EN15804+A2			AVERAGE PV 2						
Impact category		Reference unit	A1 - A3	Δ min-max	C1	C2	C3	C4	D
	ADP (fossil)	MJ	3.04E+02	±3.0%	0.00E+00	9.65E-01	0.00E+00	2.00E+00	0.00E+00
	ADP (minerals & metals)	kg Sb eq	1.13E-06	±4.5%	0.00E+00	4.52E-10	0.00E+00	7.27E-10	0.00E+00
	AP	Mole H+ eq.	7.87E-02	±3.4%	0.00E+00	4.32E-04	0.00E+00	6.80E-04	0.00E+00
	EP Freshwater	kg P eq*	3.67E-03	±9.1%	0.00E+00	4.06E-06	0.00E+00	6.73E-06	0.00E+00
	EP Marine	kg N eq	7.95E-04	±4.4%	0.00E+00	3.85E-07	0.00E+00	6.27E-07	0.00E+00
	EP Terrestrial	Mole N eq.	1.76E-01	±3.0%	0.00E+00	1.87E-03	0.00E+00	2.61E-03	0.00E+00
	GWP Biogenic	kg CO2 eq	7.94E-03	±8.2%	0.00E+00	1.72E-05	0.00E+00	1.94E-05	0.00E+00
	GWP Fossil	kg CO2 eq	2.34E+01	±5.5%	0.00E+00	6.24E-02	0.00E+00	7.14E-02	0.00E+00
	GWP Luluc	kg CO2 eq	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP Total	kg CO2 eq	2.34E+01	±5.5%	0.00E+00	6.24E-02	0.00E+00	7.14E-02	0.00E+00
	ODP	kg CFC-11 eq.	1.78E-06	±4.0%	0.00E+00	1.18E-08	0.00E+00	2.35E-08	0.00E+00
	POCP	kg NMVOC	6.25E-02	±2.6%	0.00E+00	5.29E-04	0.00E+00	7.54E-04	0.00E+00
	WDP	m³eq.	4.06E+00	±3.8%	0.00E+00	2.14E-03	0.00E+00	3.87E-02	0.00E+00

RESOURCE CONSUMPTION

		AVERAGE PV 2						
Impact category	Reference unit	A1 - A3	Δ min-max	C1	C2	C3	C4	D
PERT	MJ	2.53E+01	±5.6%	0.00E+00	1.17E-02	0.00E+00	1.59E-02	0.00E+00
PERM	MJ	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERE	MJ	2.53E+01	±5.6%	0.00E+00	1.17E-02	0.00E+00	1.59E-02	0.00E+00
PENRT	MJ	3.34E+02	±3.5%	0.00E+00	9.84E-01	0.00E+00	2.02E+00	0.00E+00
PENRM	MJ	6.60E+01	±0.0%	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRE	MJ	2.68E+02	±4.4%	0.00E+00	9.84E-01	0.00E+00	2.02E+00	0.00E+00
SM	kg	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	MJ	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FWT	m³	2.23E-01	±3.6%	0.00E+00	1.24E-04	0.00E+00	2.20E-03	0.00E+00

WASTE

		AVERAGE PV 2						
Impact category	Reference unit	A1 - A3	Δ min-max	C1	C2	C3	C4	D
HWD	kg	4.70E-04	±2.1%	0.00E+00	2.38E-06	0.00E+00	2.98E-06	0.00E+00
NHWD	kg	1.22E+01	±8.8%	0.00E+00	1.30E-01	0.00E+00	1.38E+01	0.00E+00
RWD	kg	6.95E-04	±9.4%	0.00E+00	6.75E-06	0.00E+00	1.33E-05	0.00E+00
CRU	kg	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MFR	kg	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MER	kg	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EE	MJ	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Additional indicators		AVERAGE PV 2						
Impact category	Reference unit	A1 - A3	Δ min-max	C1	C2	C3	C4	D
GWP-GHG	kg CO2 eq	2.26E+01	±5.6%	0.00E+00	6.20E-02	0.00E+00	7.06E-02	0.00E+00

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

ENVIRONMENTAL PERFORMANCE

The values refer to the declared unit, i.e., the quantity of product required to insulate 1 m2 with an insulation thickness of 100 mm.

THERMOPHON PV

ADHESIVE/ BASE COAT	PRYMER	FINISHING COAT	AVERAGE PRODUCT
Bonding Grigio	Silisetef Grip	Silisetef Medio 1,5	PV 1
Bonding 05 Grigio	Silisetef Grip	Silisetef Medio 1,5	
Bonding GG Grigio	Silisetef Grip	Silisetef Medio 1,5	
Bonding G1 Grigio F	Silisetef Grip	Silisetef Medio 1,5	
Bonding Grigio	Fondfix Plus	Sylancoat 1.5	PV 2
Bonding 05 Grigio	Fondfix Plus	Sylancoat 1.5	
Bonding GG Grigio	Fondfix Plus	Sylancoat 1.5	
Bonding G1 Grigio F	Fondfix Plus	Sylancoat 1.5	
Bonding Grigio	Fondfix Plus	Sylancoat 1,2	PV 3
Bonding 05 Grigio	Fondfix Plus	Sylancoat 1,2	
Bonding GG Grigio	Fondfix Plus	Sylancoat 1,2	
Bonding G1 Grigio F	Fondfix Plus	Sylancoat 1,2	
Bonding Grigio	Fondfix Plus	Cortina Cap Medio	PV 4
Bonding 05 Grigio	Fondfix Plus	Cortina Cap Medio	
Bonding GG Grigio	Fondfix Plus	Cortina Cap Medio	
Bonding G1 Grigio F	Fondfix Plus	Cortina Cap Medio	
Bonding Grigio	Fondfix Plus	Taormina Fine	PV 5
Bonding 05 Grigio	Fondfix Plus	Taormina Fine	
Bonding GG Grigio	Fondfix Plus	Taormina Fine	
Bonding G1 Grigio F	Fondfix Plus	Taormina Fine	

PV 3

INDICATORS EN15804+A2			AVERAGE PV 3						
Impact category		Reference unit	A1 - A3	Δ min-max	C1	C2	C3	C4	D
	ADP (fossil)	MJ	2.93E+02	±3.1%	0.00E+00	9.26E-01	0.00E+00	1.92E+00	0.00E+00
	ADP (minerals & metals)	kg Sb eq	1.10E-06	±4.6%	0.00E+00	4.33E-10	0.00E+00	6.98E-10	0.00E+00
	AP	Mole H+ eq.	7.48E-02	±3.6%	0.00E+00	4.15E-04	0.00E+00	6.53E-04	0.00E+00
	EP Freshwater	kg P eq*	3.42E-03	±9.6%	0.00E+00	3.90E-06	0.00E+00	6.46E-06	0.00E+00
	EP Marine	kg N eq	7.50E-04	±5.3%	0.00E+00	3.70E-07	0.00E+00	6.02E-07	0.00E+00
	EP Terrestrial	Mole N eq.	1.67E-01	±3.1%	0.00E+00	1.80E-03	0.00E+00	2.50E-03	0.00E+00
	GWP Biogenic	kg CO2 eq	7.30E-03	±9.0%	0.00E+00	1.65E-05	0.00E+00	1.86E-05	0.00E+00
	GWP Fossil	kg CO2 eq	2.24E+01	±5.8%	0.00E+00	5.99E-02	0.00E+00	6.85E-02	0.00E+00
	GWP Luluc	kg CO2 eq	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP Total	kg CO2 eq	2.24E+01	±5.8%	0.00E+00	5.99E-02	0.00E+00	6.86E-02	0.00E+00
	ODP	kg CFC-11 eq.	1.61E-06	±4.4%	0.00E+00	1.13E-08	0.00E+00	2.25E-08	0.00E+00
	POCP	kg NMVOC	5.98E-02	±2.8%	0.00E+00	5.07E-04	0.00E+00	7.24E-04	0.00E+00
	WDP	m³eq.	3.95E+00	±3.9%	0.00E+00	2.06E-03	0.00E+00		0.00E+00

RESOURCE CONSUMPTION

		AVERAGE PV 3						
Impact category	Reference unit	A1 - A3	Δ min-max	C1	C2	C3	C4	D
PERT	MJ	2.40E+01	±5.9%	0.00E+00	1.12E-02	0.00E+00	1.53E-02	0.00E+00
PERM	MJ	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERE	MJ	2.40E+01	±5.9%	0.00E+00	1.12E-02	0.00E+00	1.53E-02	0.00E+00
PENRT	MJ	3.22E+02	±3.7%	0.00E+00	9.45E-01	0.00E+00	1.94E+00	0.00E+00
PENRM	MJ	6.60E+01	±0.0%	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRE	MJ	2.56E+02	±4.6%	0.00E+00	9.45E-01	0.00E+00	1.94E+00	0.00E+00
SM	kg	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	MJ	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FWT	m³	2.17E-01	±3.7%	0.00E+00	1.19E-04	0.00E+00	2.11E-03	0.00E+00

WASTE

		AVERAGE PV 3						
Impact category	Reference unit	A1 - A3	Δ min-max	C1	C2	C3	C4	D
HWD	kg	4.45E-04	±3.4%	0.00E+00	2.28E-06	0.00E+00	2.86E-06	0.00E+00
NHWD	kg	1.15E+01	±9.4%	0.00E+00	1.25E-01	0.00E+00	1.33E+01	0.00E+00
RWD	kg	6.60E-04	±9.1%	0.00E+00	6.48E-06	0.00E+00	1.27E-05	0.00E+00
CRU	kg	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MFR	kg	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MER	kg	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EE	MJ	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Additional indicators		AVERAGE PV 3						
Impact category	Reference unit	A1 - A3	Δ min-max	C1	C2	C3	C4	D
GWP-GHG	kg CO2 eq	2.15E+01	±5.8%	0.00E+00	5.96E-02	0.00E+00	6.77E-02	0.00E+00

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

ENVIRONMENTAL PERFORMANCE

The values refer to the declared unit, i.e., the quantity of product required to insulate 1 m2 with an insulation thickness of 100 mm.

THERMOPHON PV

ADHESIVE/ BASE COAT	PRYMER	FINISHING COAT	AVERAGE PRODUCT
Bonding Grigio	Silisetef Grip	Silisetef Medio 1,5	PV 1
Bonding 05 Grigio	Silisetef Grip	Silisetef Medio 1,5	
Bonding GG Grigio	Silisetef Grip	Silisetef Medio 1,5	
Bonding G1 Grigio F	Silisetef Grip	Silisetef Medio 1,5	
Bonding Grigio	Fondfix Plus	Sylancoat 1.5	PV 2
Bonding 05 Grigio	Fondfix Plus	Sylancoat 1.5	
Bonding GG Grigio	Fondfix Plus	Sylancoat 1.5	
Bonding G1 Grigio F	Fondfix Plus	Sylancoat 1.5	
Bonding Grigio	Fondfix Plus	Sylancoat 1,2	PV 3
Bonding 05 Grigio	Fondfix Plus	Sylancoat 1,2	
Bonding GG Grigio	Fondfix Plus	Sylancoat 1,2	
Bonding G1 Grigio F	Fondfix Plus	Sylancoat 1,2	
Bonding Grigio	Fondfix Plus	Cortina Cap Medio	PV 4
Bonding 05 Grigio	Fondfix Plus	Cortina Cap Medio	
Bonding GG Grigio	Fondfix Plus	Cortina Cap Medio	
Bonding G1 Grigio F	Fondfix Plus	Cortina Cap Medio	
Bonding Grigio	Fondfix Plus	Taormina Fine	PV 5
Bonding 05 Grigio	Fondfix Plus	Taormina Fine	
Bonding GG Grigio	Fondfix Plus	Taormina Fine	
Bonding G1 Grigio F	Fondfix Plus	Taormina Fine	

PV 4

INDICATORS EN15804+A2			AVERAGE PV 4						
Impact category		Reference unit	A1 - A3	Δ min-max	C1	C2	C3	C4	D
	ADP (fossil)	MJ	3.22E+02	±2.8%	0.00E+00	9.65E-01	0.00E+00	2.00E+00	0.00E+00
	ADP (minerals & metals)	kg Sb eq	1.25E-06	±4.1%	0.00E+00	4.52E-10	0.00E+00	7.27E-10	0.00E+00
	AP	Mole H+ eq.	8.01E-02	±3.4%	0.00E+00	4.32E-04	0.00E+00	6.80E-04	0.00E+00
	EP Freshwater	kg P eq*	3.56E-03	±9.3%	0.00E+00	4.06E-06	0.00E+00	6.73E-06	0.00E+00
	EP Marine	kg N eq	8.60E-04	±4.7%	0.00E+00	3.85E-07	0.00E+00	6.27E-07	0.00E+00
	EP Terrestrial	Mole N eq.	1.74E-01	±3.0%	0.00E+00	1.87E-03	0.00E+00	2.61E-03	0.00E+00
	GWP Biogenic	kg CO2 eq	7.43E-03	±8.7%	0.00E+00	1.72E-05	0.00E+00	1.94E-05	0.00E+00
	GWP Fossil	kg CO2 eq	2.39E+01	±5.4%	0.00E+00	6.24E-02	0.00E+00	7.14E-02	0.00E+00
	GWP Luluc	kg CO2 eq	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP Total	kg CO2 eq	2.39E+01	±5.4%	0.00E+00	6.24E-02	0.00E+00	7.14E-02	0.00E+00
	ODP	kg CFC-11 eq.	1.97E-06	±3.6%	0.00E+00	1.18E-08	0.00E+00	2.35E-08	0.00E+00
	POCP	kg NMVOC	6.31E-02	±2.6%	0.00E+00	5.29E-04	0.00E+00	7.54E-04	0.00E+00
	WDP	m³eq.	4.28E+00	±3.6%	0.00E+00	2.14E-03	0.00E+00	3.87E-02	0.00E+00

RESOURCE CONSUMPTION

		AVERAGE PV 4						
Impact category	Reference unit	A1 - A3	Δ min-max	C1	C2	C3	C4	D
PERT	MJ	2.46E+01	±5.7%	0.00E+00	1.17E-02	0.00E+00	1.59E-02	0.00E+00
PERM	MJ	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERE	MJ	2.46E+01	±5.7%	0.00E+00	1.17E-02	0.00E+00	1.59E-02	0.00E+00
PENRT	MJ	3.52E+02	±3.4%	0.00E+00	9.84E-01	0.00E+00	2.02E+00	0.00E+00
PENRM	MJ	6.60E+01	±0.0%	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRE	MJ	2.86E+02	±4.1%	0.00E+00	9.84E-01	0.00E+00	2.02E+00	0.00E+00
SM	kg	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	MJ	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FWT	m³	2.38E-01	±3.4%	0.00E+00	1.24E-04	0.00E+00	2.20E-03	0.00E+00

WASTE

		AVERAGE PV 4						
Impact category	Reference unit	A1 - A3	Δ min-max	C1	C2	C3	C4	D
HWD	kg	4.65E-04	±3.2%	0.00E+00	2.38E-06	0.00E+00	2.98E-06	0.00E+00
NHWD	kg	1.17E+01	±9.2%	0.00E+00	1.30E-01	0.00E+00	1.38E+01	0.00E+00
RWD	kg	6.70E-04	±9.0%	0.00E+00	6.75E-06	0.00E+00	1.33E-05	0.00E+00
CRU	kg	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MFR	kg	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MER	kg	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EE	MJ	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Additional indicators		AVERAGE PV 4						
Impact category	Reference unit	A1 - A3	Δ min-max	C1	C2	C3	C4	D
GWP-GHG	kg CO2 eq	2.30E+01	±5.5%	0.00E+00	6.20E-02	0.00E+00	7.06E-02	0.00E+00

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

ENVIRONMENTAL PERFORMANCE

The values refer to the declared unit, i.e., the quantity of product required to insulate 1 m2 with an insulation thickness of 100 mm.

THERMOPHON PV

ADHESIVE/ BASE COAT	PRYMER	FINISHING COAT	AVERAGE PRODUCT
Bonding Grigio	Silisetef Grip	Silisetef Medio 1,5	PV 1
Bonding 05 Grigio	Silisetef Grip	Silisetef Medio 1,5	
Bonding GG Grigio	Silisetef Grip	Silisetef Medio 1,5	
Bonding G1 Grigio F	Silisetef Grip	Silisetef Medio 1,5	
Bonding Grigio	Fondfix Plus	Sylancoat 1.5	PV 2
Bonding 05 Grigio	Fondfix Plus	Sylancoat 1.5	
Bonding GG Grigio	Fondfix Plus	Sylancoat 1.5	
Bonding G1 Grigio F	Fondfix Plus	Sylancoat 1.5	
Bonding Grigio	Fondfix Plus	Sylancoat 1,2	PV 3
Bonding 05 Grigio	Fondfix Plus	Sylancoat 1,2	
Bonding GG Grigio	Fondfix Plus	Sylancoat 1,2	
Bonding G1 Grigio F	Fondfix Plus	Sylancoat 1,2	
Bonding Grigio	Fondfix Plus	Cortina Cap Medio	PV 4
Bonding 05 Grigio	Fondfix Plus	Cortina Cap Medio	
Bonding GG Grigio	Fondfix Plus	Cortina Cap Medio	
Bonding G1 Grigio F	Fondfix Plus	Cortina Cap Medio	
Bonding Grigio	Fondfix Plus	Taormina Fine	PV 5
Bonding 05 Grigio	Fondfix Plus	Taormina Fine	
Bonding GG Grigio	Fondfix Plus	Taormina Fine	
Bonding G1 Grigio F	Fondfix Plus	Taormina Fine	

PV 5

INDICATORS EN15804+A2			AVERAGE PV 5						
Impact category		Reference unit	A1 - A3	Δ min-max	C1	C2	C3	C4	D
	ADP (fossil)	MJ	2.96E+02	±3.1%	0.00E+00	9.26E-01	0.00E+00	1.92E+00	0.00E+00
	ADP (minerals & metals)	kg Sb eq	1.11E-06	±4.6%	0.00E+00	4.33E-10	0.00E+00	6.98E-10	0.00E+00
	AP	Mole H+ eq.	7.60E-02	±3.6%	0.00E+00	4.15E-04	0.00E+00	6.53E-04	0.00E+00
	EP Freshwater	kg P eq*	3.45E-03	±9.6%	0.00E+00	3.90E-06	0.00E+00	6.46E-06	0.00E+00
	EP Marine	kg N eq	7.70E-04	±5.2%	0.00E+00	3.70E-07	0.00E+00	6.02E-07	0.00E+00
	EP Terrestrial	Mole N eq.	1.68E-01	±3.1%	0.00E+00	1.80E-03	0.00E+00	2.50E-03	0.00E+00
	GWP Biogenic	kg CO2 eq	7.37E-03	±8.8%	0.00E+00	1.65E-05	0.00E+00	1.86E-05	0.00E+00
	GWP Fossil	kg CO2 eq	2.25E+01	±5.8%	0.00E+00	5.99E-02	0.00E+00	6.85E-02	0.00E+00
	GWP Luluc	kg CO2 eq	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP Total	kg CO2 eq	2.25E+01	±5.8%	0.00E+00	5.99E-02	0.00E+00	6.86E-02	0.00E+00
	ODP	kg CFC-11 eq.	1.80E-06	±3.9%	0.00E+00	1.13E-08	0.00E+00	2.25E-08	0.00E+00
	POCP	kg NMVOC	6.05E-02	±2.7%	0.00E+00	5.07E-04	0.00E+00	7.24E-04	0.00E+00
	WDP	m³eq.	3.96E+00	±3.9%	0.00E+00	2.06E-03	0.00E+00	3.72E-02	0.00E+00

RESOURCE CONSUMPTION

		AVERAGE PV 5						
Impact category	Reference unit	A1 - A3	Δ min-max	C1	C2	C3	C4	D
PERT	MJ	2.41E+01	±5.8%	0.00E+00	1.12E-02	0.00E+00	1.53E-02	0.00E+00
PERM	MJ	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERE	MJ	2.41E+01	±5.8%	0.00E+00	1.12E-02	0.00E+00	1.53E-02	0.00E+00
PENRT	MJ	3.25E+02	±3.6%	0.00E+00	9.45E-01	0.00E+00	1.94E+00	0.00E+00
PENRM	MJ	6.60E+01	±0.0%	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRE	MJ	2.59E+02	±4.6%	0.00E+00	9.45E-01	0.00E+00	1.94E+00	0.00E+00
SM	kg	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	MJ	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FWT	m³	2.18E-01	±3.7%	0.00E+00	1.19E-04	0.00E+00	2.11E-03	0.00E+00

WASTE

		AVERAGE PV 5						
Impact category	Reference unit	A1 - A3	Δ min-max	C1	C2	C3	C4	D
HWD	kg	4.50E-04	±2.2%	0.00E+00	2.28E-06	0.00E+00	2.86E-06	0.00E+00
NHWD	kg	1.16E+01	±9.3%	0.00E+00	1.25E-01	0.00E+00	1.33E+01	0.00E+00
RWD	kg	6.70E-04	±9.0%	0.00E+00	6.48E-06	0.00E+00	1.27E-05	0.00E+00
CRU	kg	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MFR	kg	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MER	kg	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EE	MJ	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Additional indicators		AVERAGE PV 5						
Impact category	Reference unit	A1 - A3	Δ min-max	C1	C2	C3	C4	D
GWP-GHG	kg CO2 eq	2.16E+01	±5.8%	0.00E+00	5.96E-02	0.00E+00	6.77E-02	0.00E+00

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

ENVIRONMENTAL PERFORMANCE

The values refer to the declared unit, i.e., the quantity of product required to insulate 1 m2 with an insulation thickness of 100 mm.

THERMOPHON MINERAL

ADHESIVE/ BASE COAT	PRYMER	FINISHING COAT	AVERAGE PRODUCT
Bonding Grigio	Silisettef Grip	Silisettef Medio 1,5	MIN 1
Bonding O5 Grigio	Silisettef Grip	Silisettef Medio 1,5	
Bonding GG Grigio	Silisettef Grip	Silisettef Medio 1,5	
Bonding G1 Grigio F	Silisettef Grip	Silisettef Medio 1,5	
Bonding Grigio	Fondfix Plus	Sylancoat 1.5	MIN 2
Bonding O5 Grigio	Fondfix Plus	Sylancoat 1.5	
Bonding GG Grigio	Fondfix Plus	Sylancoat 1.5	
Bonding G1 Grigio F	Fondfix Plus	Sylancoat 1.5	

MIN 1

INDICATORS EN15804+A2			AVERAGE MIN 1						
Impact category		Reference unit	A1 - A3	Δ min-max	C1	C2	C3	C4	D
	ADP (fossil)	MJ	3.02E+02	±3.0%	0.00E+00	1.40E+00	0.00E+00	2.89E+00	0.00E+00
	ADP (minerals & metals)	kg Sb eq	1.46E-06	±3.5%	0.00E+00	6.54E-10	0.00E+00	1.05E-09	0.00E+00
	AP	Mole H+ eq.	1.48E-01	±1.8%	0.00E+00	6.26E-04	0.00E+00	9.85E-04	0.00E+00
	EP Freshwater	kg P eq*	6.67E-03	±5.0%	0.00E+00	5.88E-06	0.00E+00	9.75E-06	0.00E+00
	EP Marine	kg N eq	1.05E-03	±3.8%	0.00E+00	5.58E-07	0.00E+00	9.08E-07	0.00E+00
	EP Terrestrial	Mole N eq.	2.96E-01	±1.8%	0.00E+00	2.71E-03	0.00E+00	3.78E-03	0.00E+00
	GWP Biogenic	kg CO2 eq	1.42E-02	±4.6%	0.00E+00	2.49E-05	0.00E+00	2.81E-05	0.00E+00
	GWP Fossil	kg CO2 eq	2.78E+01	±4.7%	0.00E+00	9.03E-02	0.00E+00	1.03E-01	0.00E+00
	GWP Luluc	kg CO2 eq	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP Total	kg CO2 eq	2.78E+01	±4.7%	0.00E+00	9.04E-02	0.00E+00	1.03E-01	0.00E+00
	ODP	kg CFC-11 eq.	4.35E-05	±0.2%	0.00E+00	1.70E-08	0.00E+00	3.40E-08	0.00E+00
	POCP	kg NMVOC	9.08E-02	±1.8%	0.00E+00	7.65E-04	0.00E+00	1.09E-03	0.00E+00
	WDP	m³eq.	4.06E+00	±3.8%	0.00E+00	3.10E-03	0.00E+00	5.61E-02	0.00E+00

RESOURCE CONSUMPTION

		AVERAGE MIN 1						
Impact category	Reference unit	A1 - A3	Δ min-max	C1	C2	C3	C4	D
PERT	MJ	3.41E+01	±4.1%	0.00E+00	1.69E-02	0.00E+00	2.31E-02	0.00E+00
PERM	MJ	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERE	MJ	3.41E+01	±4.1%	0.00E+00	1.69E-02	0.00E+00	2.31E-02	0.00E+00
PENRT	MJ	3.31E+02	±3.6%	0.00E+00	1.43E+00	0.00E+00	2.92E+00	0.00E+00
PENRM	MJ	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRE	MJ	3.31E+02	±3.6%	0.00E+00	1.43E+00	0.00E+00	2.92E+00	0.00E+00
SM	kg	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	MJ	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FWT	m³	1.93E-01	±4.2%	0.00E+00	1.79E-04	0.00E+00	3.18E-03	0.00E+00

WASTE

		AVERAGE MIN 1						
Impact category	Reference unit	A1 - A3	Δ min-max	C1	C2	C3	C4	D
HWD	kg	5.40E-04	±1.9%	0.00E+00	3.44E-06	0.00E+00	4.31E-06	0.00E+00
NHWD	kg	2.04E+01	±5.3%	0.00E+00	1.88E-01	0.00E+00	2.00E+01	0.00E+00
RWD	kg	7.70E-04	±7.8%	0.00E+00	9.77E-06	0.00E+00	1.92E-05	0.00E+00
CRU	kg	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MFR	kg	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MER	kg	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EE	MJ	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Additional indicators		AVERAGE MIN 1						
Impact category	Reference unit	A1 - A3	Δ min-max	C1	C2	C3	C4	D
GWP-GHG	kg CO2 eq	2.71E+01	±4.6%	0.00E+00	8.98E-02	0.00E+00	1.02E-01	0.00E+00

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

ENVIRONMENTAL PERFORMANCE

The values refer to the declared unit, i.e., the quantity of product required to insulate 1 m2 with an insulation thickness of 100 mm.

THERMOPHON MINERAL

ADHESIVE/ BASE COAT	PRYMER	FINISHING COAT	AVERAGE PRODUCT
Bonding Grigio	Silisettef Grip	Silisettef Medio 1,5	MIN 1
Bonding 05 Grigio	Silisettef Grip	Silisettef Medio 1,5	
Bonding GG Grigio	Silisettef Grip	Silisettef Medio 1,5	
Bonding G1 Grigio F	Silisettef Grip	Silisettef Medio 1,5	
Bonding Grigio	Fondfix Plus	Sylancoat 1.5	MIN 2
Bonding 05 Grigio	Fondfix Plus	Sylancoat 1.5	
Bonding GG Grigio	Fondfix Plus	Sylancoat 1.5	
Bonding G1 Grigio F	Fondfix Plus	Sylancoat 1.5	

MIN 2

INDICATORS EN15804+A2			AVERAGE MIN 2						
Impact category		Reference unit	A1 - A3	Δ min-max	C1	C2	C3	C4	D
	ADP (fossil)	MJ	2.95E+02	±3.1%	0.00E+00	1.40E+00	0.00E+00	2.89E+00	0.00E+00
	ADP (minerals & metals)	kg Sb eq	1.37E-06	±3.7%	0.00E+00	6.54E-10	0.00E+00	1.05E-09	0.00E+00
	AP	Mole H+ eq.	1.49E-01	±1.8%	0.00E+00	6.26E-04	0.00E+00	9.85E-04	0.00E+00
	EP Freshwater	kg P eq*	6.78E-03	±4.9%	0.00E+00	5.88E-06	0.00E+00	9.75E-06	0.00E+00
	EP Marine	kg N eq	1.08E-03	±3.7%	0.00E+00	5.58E-07	0.00E+00	9.08E-07	0.00E+00
	EP Terrestrial	Mole N eq.	2.97E-01	±1.8%	0.00E+00	2.71E-03	0.00E+00	3.78E-03	0.00E+00
	GWP Biogenic	kg CO2 eq	1.31E-02	±5.0%	0.00E+00	2.49E-05	0.00E+00	2.81E-05	0.00E+00
	GWP Fossil	kg CO2 eq	2.78E+01	±4.7%	0.00E+00	9.03E-02	0.00E+00	1.03E-01	0.00E+00
	GWP Luluc	kg CO2 eq	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP Total	kg CO2 eq	2.78E+01	±4.7%	0.00E+00	9.04E-02	0.00E+00	1.03E-01	0.00E+00
	ODP	kg CFC-11 eq.	2.17E-06	±3.3%	0.00E+00	1.70E-08	0.00E+00	3.40E-08	0.00E+00
	POCP	kg NMVOC	9.10E-02	±1.8%	0.00E+00	7.65E-04	0.00E+00	1.09E-03	0.00E+00
	WDP	m³eq.	3.83E+00	±4.0%	0.00E+00	3.10E-03	0.00E+00	5.61E-02	0.00E+00

RESOURCE CONSUMPTION

		AVERAGE MIN 2						
Impact category	Reference unit	A1 - A3	Δ min-max	C1	C2	C3	C4	D
PERT	MJ	3.40E+01	±4.1%	0.00E+00	1.69E-02	0.00E+00	2.31E-02	0.00E+00
PERM	MJ	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERE	MJ	3.40E+01	±4.1%	0.00E+00	1.69E-02	0.00E+00	2.31E-02	0.00E+00
PENRT	MJ	3.23E+02	±3.7%	0.00E+00	1.43E+00	0.00E+00	2.92E+00	0.00E+00
PENRM	MJ	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRE	MJ	3.23E+02	±3.7%	0.00E+00	1.43E+00	0.00E+00	2.92E+00	0.00E+00
SM	kg	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	MJ	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FWT	m³	1.87E-01	±4.3%	0.00E+00	1.79E-04	0.00E+00	3.18E-03	0.00E+00

WASTE

		AVERAGE MIN 2						
Impact category	Reference unit	A1 - A3	Δ min-max	C1	C2	C3	C4	D
HWD	kg	5.55E-04	±2.7%	0.00E+00	3.44E-06	0.00E+00	4.31E-06	0.00E+00
NHWD	kg	1.98E+01	±5.4%	0.00E+00	1.88E-01	0.00E+00	2.00E+01	0.00E+00
RWD	kg	7.85E-04	±8.3%	0.00E+00	9.77E-06	0.00E+00	1.92E-05	0.00E+00
CRU	kg	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MFR	kg	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MER	kg	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EE	MJ	0.00E+00	n.d.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Additional indicators		AVERAGE MIN 2						
Impact category	Reference unit	A1 - A3	Δ min-max	C1	C2	C3	C4	D
GWP-GHG	kg CO2 eq	2.71E+01	±4.6%	0.00E+00	8.98E-02	0.00E+00	1.02E-01	0.00E+00

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

ENVIRONMENTAL PERFORMANCE

The values refer to the declared unit, i.e., the quantity of product required to insulate 1 m2 with an insulation thickness of 100 mm.

THERMOPHON NATURAL

ADHESIVE/ BASE COAT	PRYMER	FINISHING COAT	AVERAGE PRODUCT
Bonding Grigio	Fondfix Plus	Silacryl G	NAT 1
Bonding Grigio	Silisettef Grip	Silisettef OT Medio	NAT 2

Contenuto di carbonio biogenico	KG DI C
Carbonio biogenico nel prodotto	5.5
Carbonio biogenico nel packaging	< 5%

NAT 1

INDICATORS EN15804+A2			AVERAGE NAT 1					
Impact category	Reference unit	A1 - A3	C1	C2	C3	C4	D	
 ADP (fossil)	MJ	3.62E+02	0.00E+00	1.62E+00	0.00E+00	3.35E+00	0.00E+00	
 ADP (minerals & metals)	kg Sb eq	1.83E-06	0.00E+00	7.59E-10	0.00E+00	1.22E-09	0.00E+00	
 AP	Mole H+ eq.	1.25E-01	0.00E+00	7.27E-04	0.00E+00	1.14E-03	0.00E+00	
 EP Freshwater	kg P eq*	9.38E-03	0.00E+00	6.82E-06	0.00E+00	1.13E-05	0.00E+00	
 EP Marine	kg N eq	1.65E-03	0.00E+00	6.48E-07	0.00E+00	1.05E-06	0.00E+00	
 EP Terrestrial	Mole N eq.	3.07E-01	0.00E+00	3.15E-03	0.00E+00	4.39E-03	0.00E+00	
 GWP Biogenic	kg CO2 eq	4.36E-02	0.00E+00	2.89E-05	0.00E+00	3.27E-05	0.00E+00	
GWP Fossil	kg CO2 eq	2.86E+01	0.00E+00	1.05E-01	0.00E+00	1.20E-01	0.00E+00	
GWP Luluc	kg CO2 eq	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
GWP Total	kg CO2 eq	2.86E+01	0.00E+00	1.05E-01	0.00E+00	1.20E-01	0.00E+00	
 ODP	kg CFC-11 eq.	2.50E-06	0.00E+00	1.98E-08	0.00E+00	3.95E-08	0.00E+00	
 POCP	kg NMVOC	9.48E-02	0.00E+00	8.89E-04	0.00E+00	1.27E-03	0.00E+00	
 WDP	m³eq.	9.51E+00	0.00E+00	3.60E-03	0.00E+00	6.51E-02	0.00E+00	

RESOURCE CONSUMPTION

		AVERAGE NAT 1					
Impact category	Reference unit	A1 - A3	C1	C2	C3	C4	D
PERT	MJ	1.56E+03	0.00E+00	1.96E-02	0.00E+00	2.68E-02	0.00E+00
PERM	MJ	1.87E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERE	MJ	1.37E+03	0.00E+00	1.96E-02	0.00E+00	2.68E-02	0.00E+00
PENRT	MJ	4.31E+02	0.00E+00	1.65E+00	0.00E+00	3.39E+00	0.00E+00
PENRM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRE	MJ	4.31E+02	0.00E+00	1.65E+00	0.00E+00	3.39E+00	0.00E+00
SM	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FWT	m³	4.12E-01	0.00E+00	2.08E-04	0.00E+00	3.69E-03	0.00E+00

WASTE

		AVERAGE NAT 1					
Impact category	Reference unit	A1 - A3	C1	C2	C3	C4	D
HWD	kg	6.50E-04	0.00E+00	4.00E-06	0.00E+00	5.01E-06	0.00E+00
NHWD	kg	2.34E+01	0.00E+00	2.19E-01	0.00E+00	2.32E+01	0.00E+00
RWD	kg	1.48E-03	0.00E+00	1.13E-05	0.00E+00	2.23E-05	0.00E+00
CRU	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MFR	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MER	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EE	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Additional indicators		AVERAGE NAT 1					
Impact category	Reference unit	A1 - A3	C1	C2	C3	C4	D
GWP-GHG	kg CO2 eq	2.78E+01	0.00E+00	1.04E-01	0.00E+00	1.19E-01	0.00E+00

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

ENVIRONMENTAL PERFORMANCE

The values refer to the declared unit, i.e., the quantity of product required to insulate 1 m2 with an insulation thickness of 100 mm.

THERMOPHON NATURAL

ADHESIVE/ BASE COAT	PRYMER	FINISHING COAT	AVERAGE PRODUCT
Bonding Grigio	Fondfix Plus	Silacryl G	NAT 1
Bonding Grigio	Silisettef Grip	Silisettef OT Medio	NAT 2

Contenuto di carbonio biogenico	KG DI C
Carbonio biogenico nel prodotto	5.5
Carbonio biogenico nel packaging	< 5%

NAT 2

INDICATORS EN15804+A2			AVERAGE NAT 2					
Impact category	Reference unit	A1 - A3	C1	C2	C3	C4	D	
 ADP (fossil)	MJ	3.55E+02	0.00E+00	1.62E+00	0.00E+00	3.35E+00	0.00E+00	
 ADP (minerals & metals)	kg Sb eq	1.80E-06	0.00E+00	7.59E-10	0.00E+00	1.22E-09	0.00E+00	
 AP	Mole H+ eq.	1.22E-01	0.00E+00	7.27E-04	0.00E+00	1.14E-03	0.00E+00	
 EP Freshwater	kg P eq*	9.28E-03	0.00E+00	6.82E-06	0.00E+00	1.13E-05	0.00E+00	
 EP Marine	kg N eq	1.56E-03	0.00E+00	6.48E-07	0.00E+00	1.05E-06	0.00E+00	
 EP Terrestrial	Mole N eq.	3.05E-01	0.00E+00	3.15E-03	0.00E+00	4.39E-03	0.00E+00	
 GWP Biogenic	kg CO2 eq	4.47E-02	0.00E+00	2.89E-05	0.00E+00	3.27E-05	0.00E+00	
GWP Fossil	kg CO2 eq	2.82E+01	0.00E+00	1.05E-01	0.00E+00	1.20E-01	0.00E+00	
GWP Luluc	kg CO2 eq	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
GWP Total	kg CO2 eq	2.82E+01	0.00E+00	1.05E-01	0.00E+00	1.20E-01	0.00E+00	
 ODP	kg CFC-11 eq.	3.11E-06	0.00E+00	1.98E-08	0.00E+00	3.95E-08	0.00E+00	
 POCP	kg NMVOC	9.38E-02	0.00E+00	8.89E-04	0.00E+00	1.27E-03	0.00E+00	
 WDP	m³eq.	9.50E+00	0.00E+00	3.60E-03	0.00E+00	6.51E-02	0.00E+00	

RESOURCE CONSUMPTION

		AVERAGE NAT 2					
Impact category	Reference unit	A1 - A3	C1	C2	C3	C4	D
PERT	MJ	1.56E+03	0.00E+00	1.96E-02	0.00E+00	2.68E-02	0.00E+00
PERM	MJ	1.87E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERE	MJ	1.37E+03	0.00E+00	1.96E-02	0.00E+00	2.68E-02	0.00E+00
PENRT	MJ	4.24E+02	0.00E+00	1.65E+00	0.00E+00	3.39E+00	0.00E+00
PENRM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRE	MJ	4.24E+02	0.00E+00	1.65E+00	0.00E+00	3.39E+00	0.00E+00
SM	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FWT	m³	4.05E-01	0.00E+00	2.08E-04	0.00E+00	3.69E-03	0.00E+00

WASTE

		AVERAGE NAT 2					
Impact category	Reference unit	A1 - A3	C1	C2	C3	C4	D
HWD	kg	6.40E-04	0.00E+00	4.00E-06	0.00E+00	5.01E-06	0.00E+00
NHWD	kg	2.39E+01	0.00E+00	2.19E-01	0.00E+00	2.32E+01	0.00E+00
RWD	kg	1.47E-03	0.00E+00	1.13E-05	0.00E+00	2.23E-05	0.00E+00
CRU	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MFR	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MER	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EE	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Additional indicators		AVERAGE NAT 2					
Impact category	Reference unit	A1 - A3	C1	C2	C3	C4	
GWP-GHG	kg CO2 eq	2.74E+01	0.00E+00	1.04E-01	0.00E+00	1.19E-01	0.00E+00

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



ENVIRONMENTAL PERFORMANCE

ENVIRONMENTAL CALCULATION SIMULATION

The ETICS product range includes various insulation thicknesses for different materials. To calculate the impact of a kit with an insulation thickness differing from 100mm, the impact of just the insulation material in more or less (EPS Tables, Rock Wool, Cork) multiplied by the conversion factor indicated in the table must be added to the values indicated above.

EXAMPLE THERMOPHON P with 130-mm thick EPS insulation, calculation of GWP total of phase A1-A3:

From the product specification table (P1) there is a GWP in phase A1-A3 of 25.1 kg CO₂e.

The conversion factor for EPS T100 with a thickness of 130 mm is 0.50 (Conversion factor table).

The impact related to EPS insulation at stage A1-A3 for GWP total is 3.85 kg CO₂e (Table EPS).

The total GWP of the kit will therefore be: 25.1 + (3.85 * 0.50) = 27,025 kg CO₂e.

Thickness (mm)	CONVERSIONE FACTORS			
	EPS T100	EPS T150	Lana di roccia	Sughero
30	-1.16	-1.08	-7.70	-7.70
40	-0.99	-0.89	-6.60	-6.60
50	-0.83	-0.70	-5.50	-5.50
60	-0.66	-0.51	-4.40	-4.40
70	-0.50	-0.32	-3.30	-3.30
80	-0.33	-0.13	-2.20	-2.20
90	-0.17	0.06	-1.10	-1.10
100	0.00	0.25	0.00	0.00
110	0.17	0.44	1.10	1.10
120	0.33	0.63	2.20	2.20
130	0.50	0.82	3.30	3.30
140	0.66	1.01	4.40	4.40
150	0.83	1.20	5.50	5.50
160	0.99	1.39	6.60	6.60
170	1.16	1.58	7.70	7.70
180	1.32	1.77	8.80	8.80
190	1.49	1.96	9.90	9.90
200	1.65	2.15	11.00	11.00

ENVIRONMENTAL PERFORMANCE

ENVIRONMENTAL CALCULATION SIMULATION

EPS

INDICATORS EN15804+A2			EPS					
Impact category	Reference unit	A1 - A3	C1	C2	C3	C4	D	
 ADP (fossil)	MJ	7.81E+01	0.00E+00	7.03E-02	0.00E+00	1.45E-01	0.00E+00	
 ADP (minerals & metals)	kg Sb eq	6.54E-08	0.00E+00	3.29E-11	0.00E+00	5.29E-11	0.00E+00	
 AP	Mole H+ eq.	1.38E-02	0.00E+00	3.16E-05	0.00E+00	4.95E-05	0.00E+00	
 EP Freshwater	kg P eq*	2.20E-04	0.00E+00	2.96E-07	0.00E+00	4.90E-07	0.00E+00	
 EP Marine	kg N eq	2.51E-05	0.00E+00	2.81E-08	0.00E+00	4.57E-08	0.00E+00	
 EP Terrestrial	Mole N eq.	2.59E-02	0.00E+00	1.40E-04	0.00E+00	1.90E-04	0.00E+00	
 GWP Biogenic	kg CO2 eq	3.30E-04	0.00E+00	1.25E-06	0.00E+00	1.41E-06	0.00E+00	
GWP Fossil	kg CO2 eq	3.85E+00	0.00E+00	4.54E-03	0.00E+00	5.20E-03	0.00E+00	
GWP Luluc	kg CO2 eq	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
GWP Total	kg CO2 eq	3.85E+00	0.00E+00	4.54E-03	0.00E+00	5.20E-03	0.00E+00	
 ODP	kg CFC-11 eq.	9.65E-08	0.00E+00	8.56E-10	0.00E+00	1.71E-09	0.00E+00	
 POCP	kg NMVOC	1.28E-02	0.00E+00	3.84E-05	0.00E+00	5.49E-05	0.00E+00	
 WDP	m³eq.	1.17E+00	0.00E+00	1.60E-04	0.00E+00	2.82E-03	0.00E+00	

RESOURCE CONSUMPTION

		EPS					
Impact category	Reference unit	A1 - A3	C1	C2	C3	C4	D
PERT	MJ	2.18E+00	0.00E+00	8.50E-04	0.00E+00	1.16E-03	0.00E+00
PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERE	MJ	2.18E+00	0.00E+00	8.50E-04	0.00E+00	1.16E-03	0.00E+00
PENRT	MJ	8.35E+01	0.00E+00	7.17E-02	0.00E+00	1.47E-01	0.00E+00
PENRM	MJ	4.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRE	MJ	4.35E+01	0.00E+00	7.17E-02	0.00E+00	1.47E-01	0.00E+00
SM	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FWT	m³	6.64E-02	0.00E+00	8.92E-06	0.00E+00	1.60E-04	0.00E+00

WASTE

		EPS					
Impact category	Reference unit	A1 - A3	C1	C2	C3	C4	D
HWD	kg	1.64E-05	0.00E+00	1.73E-07	0.00E+00	2.17E-07	0.00E+00
NHWD	kg	6.23E-01	0.00E+00	9.48E-03	0.00E+00	1.01E+00	0.00E+00
RWD	kg	4.86E-05	0.00E+00	4.91E-07	0.00E+00	9.67E-07	0.00E+00
CRU	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MFR	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MER	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EE	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Additional indicators		EPS					
Impact category	Reference unit	A1 - A3	C1	C2	C3	C4	D
GWP-GHG	kg CO2 eq	3.60E+00	0.00E+00	4.52E-03	0.00E+00	5.14E-03	0.00E+00

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

ENVIRONMENTAL PERFORMANCE

ENVIRONMENTAL CALCULATION SIMULATION

ROCK WOOL

INDICATORS EN15804+A2			ROCK WOOL					
Impact category		Reference unit	A1 - A3	C1	C2	C3	C4	D
	ADP (fossil)	MJ	1.53E+01	0.00E+00	7.03E-02	0.00E+00	1.45E-01	0.00E+00
	ADP (minerals & metals)	kg Sb eq	4.42E-08	0.00E+00	3.29E-11	0.00E+00	5.29E-11	0.00E+00
	AP	Mole H+ eq.	1.19E-02	0.00E+00	3.16E-05	0.00E+00	4.95E-05	0.00E+00
	EP Freshwater	kg P eq*	4.50E-04	0.00E+00	2.96E-07	0.00E+00	4.90E-07	0.00E+00
	EP Marine	kg N eq	4.20E-05	0.00E+00	2.81E-08	0.00E+00	4.57E-08	0.00E+00
	EP Terrestrial	Mole N eq.	2.11E-02	0.00E+00	1.40E-04	0.00E+00	1.90E-04	0.00E+00
	GWP Biogenic	kg CO2 eq	7.40E-04	0.00E+00	1.25E-06	0.00E+00	1.41E-06	0.00E+00
	GWP Fossil	kg CO2 eq	1.38E+00	0.00E+00	4.54E-03	0.00E+00	5.20E-03	0.00E+00
	GWP Luluc	kg CO2 eq	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP Total	kg CO2 eq	1.38E+00	0.00E+00	4.54E-03	0.00E+00	5.20E-03	0.00E+00
	ODP	kg CFC-11 eq.	7.14E-08	0.00E+00	8.56E-10	0.00E+00	1.71E-09	0.00E+00
	POCP	kg NMVOC	6.36E-03	0.00E+00	3.84E-05	0.00E+00	5.49E-05	0.00E+00
	WDP	m³eq.	2.18E-01	0.00E+00	1.60E-04	0.00E+00	2.82E-03	0.00E+00

RESOURCE CONSUMPTION

		ROCK WOOL					
Impact category	Reference unit	A1 - A3	C1	C2	C3	C4	D
PERT	MJ	1.57E+00	0.00E+00	8.50E-04	0.00E+00	1.16E-03	0.00E+00
PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERE	MJ	1.57E+00	0.00E+00	8.50E-04	0.00E+00	1.16E-03	0.00E+00
PENRT	MJ	1.62E+01	0.00E+00	7.17E-02	0.00E+00	1.47E-01	0.00E+00
PENRM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRE	MJ	1.62E+01	0.00E+00	7.17E-02	0.00E+00	1.47E-01	0.00E+00
SM	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FWT	m³	9.46E-03	0.00E+00	8.92E-06	0.00E+00	1.60E-04	0.00E+00

WASTE

		ROCK WOOL					
Impact category	Reference unit	A1 - A3	C1	C2	C3	C4	D
HWD	kg	1.45E-05	0.00E+00	1.73E-07	0.00E+00	2.17E-07	0.00E+00
NHWD	kg	1.10E+00	0.00E+00	9.48E-03	0.00E+00	1.01E+00	0.00E+00
RWD	kg	2.19E-05	0.00E+00	4.91E-07	0.00E+00	9.67E-07	0.00E+00
CRU	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MFR	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MER	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EE	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Additional indicators		ROCK WOOL					
Impact category	Reference unit	A1 - A3	C1	C2	C3	C4	D
GWP-GHG	kg CO2 eq	1.34E+00	0.00E+00	4.52E-03	0.00E+00	5.14E-03	0.00E+00

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

ENVIRONMENTAL PERFORMANCE

ENVIRONMENTAL CALCULATION SIMULATION

CORK

INDICATORS EN15804+A2			CORK					
Impact category		Reference unit	A1 - A3	C1	C2	C3	C4	D
	ADP (fossil)	MJ	1.60E+01	0.00E+00	7.03E-02	0.00E+00	1.45E-01	0.00E+00
	ADP (minerals & metals)	kg Sb eq	6.70E-08	0.00E+00	3.29E-11	0.00E+00	5.29E-11	0.00E+00
	AP	Mole H+ eq.	6.28E-03	0.00E+00	3.16E-05	0.00E+00	4.95E-05	0.00E+00
	EP Freshwater	kg P eq*	5.80E-04	0.00E+00	2.96E-07	0.00E+00	4.90E-07	0.00E+00
	EP Marine	kg N eq	8.06E-05	0.00E+00	2.81E-08	0.00E+00	4.57E-08	0.00E+00
	EP Terrestrial	Mole N eq.	1.60E-02	0.00E+00	1.40E-04	0.00E+00	1.90E-04	0.00E+00
	GWP Biogenic	kg CO2 eq	3.33E-03	0.00E+00	1.25E-06	0.00E+00	1.41E-06	0.00E+00
	GWP Fossil	kg CO2 eq	1.04E+00	0.00E+00	4.54E-03	0.00E+00	5.20E-03	0.00E+00
	GWP Luluc	kg CO2 eq	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP Total	kg CO2 eq	1.04E+00	0.00E+00	4.54E-03	0.00E+00	5.20E-03	0.00E+00
	ODP	kg CFC-11 eq.	8.16E-08	0.00E+00	8.56E-10	0.00E+00	1.71E-09	0.00E+00
	POCP	kg NMVOC	4.86E-03	0.00E+00	3.84E-05	0.00E+00	5.49E-05	0.00E+00
	WDP	m³eq.	6.63E-01	0.00E+00	1.60E-04	0.00E+00	2.82E-03	0.00E+00

RESOURCE CONSUMPTION

		CORK					
Impact category	Reference unit	A1 - A3	C1	C2	C3	C4	D
PERT	MJ	1.40E+02	0.00E+00	8.50E-04	0.00E+00	1.16E-03	0.00E+00
PERM	MJ	1.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERE	MJ	1.23E+02	0.00E+00	8.50E-04	0.00E+00	1.16E-03	0.00E+00
PENRT	MJ	2.06E+01	0.00E+00	7.17E-02	0.00E+00	1.47E-01	0.00E+00
PENRM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRE	MJ	2.06E+01	0.00E+00	7.17E-02	0.00E+00	1.47E-01	0.00E+00
SM	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FWT	m³	2.66E-02	0.00E+00	8.92E-06	0.00E+00	1.60E-04	0.00E+00

WASTE

		CORK					
Impact category	Reference unit	A1 - A3	C1	C2	C3	C4	D
HWD	kg	1.91E-05	0.00E+00	1.73E-07	0.00E+00	2.17E-07	0.00E+00
NHWD	kg	1.21E+00	0.00E+00	9.48E-03	0.00E+00	1.01E+00	0.00E+00
RWD	kg	8.37E-05	0.00E+00	4.91E-07	0.00E+00	9.67E-07	0.00E+00
CRU	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MFR	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MER	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EE	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Additional indicators		CORK					
Impact category	Reference unit	A1 - A3	C1	C2	C3	C4	D
GWP-GHG	kg CO2 eq	1.01E+00	0.00E+00	4.52E-03	0.00E+00	5.14E-03	0.00E+00

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

ADDITIONAL INFORMATION

The SETTEF insulation range includes panels which comply with what is described in Paragraph 2.4.2.9 of the Building MEC (Ministerial Decree dated 11 October 2017). More specifically, they comply with the following criteria:

- they must not be manufactured using flame retardants that are subject to restrictions or prohibitions under applicable national or Community legislation;
- they must not be produced using expanding agents with an ozone depletion potential greater than zero.
- they must not be produced or formulated using lead catalysts when sprayed or in the course of plastic foam formation;
- if produced from an expandable polystyrene resin, the blowing agents must be less than 6% by weight of the finished product;
- if made from mineral wools, they must comply with note Q or note R of Regulation (EC) No 1272/2008 (CLP) as amended and integrated;
- If the finished product contains one or more of the components listed in the following table, they must be made of recycled and/or recovered material according to the minimum quantities indicated, measured against the weight of the finished product.

	Isolante in forma di pannello
Cellulosa	-
Lana di vetro	60%
Lana di roccia	15%
Perlite espansa	30%
Fibre in poliestere	60 - 80%
Poliestere espanso	dal 10 al 60% in funzione della tecnologia adottata per la produzione.
Poliestere estruso	dal 5 al 45% in funzione della tipologia del prodotto e della tecnologia adottata per la produzione.
Poliestere espanso	1 - 10% in funzione della tipologia del prodotto e della tecnologia adottata per la produzione.
Agglomerato di Poliuretano	70%
Agglomerato di gomma	60%
Isolante riflettente in alluminio	-

ACRONYMS

ENVIRONMENTAL IMPACTS:

ADP = Abiotic Depletion Potential (elements);
AP = Acidification Potential;
EP = Eutrophication Potential;
GWP = Global Warming Potential;
ODP = Ozone Depletion Potential;
POCP = Photochemical 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 resources 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 resources 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 net fresh water.

WASTE PRODUCTION:

HWD = Hazardous waste disposed;
NHWD = Non-hazardous waste disposed;
RWD = Radioactive waste disposed;
CRU = Components for reuse; MFR = Materials for recycling;
MER = Materials for energy recovery; EE = Exported energy.

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 Secretarian www.environdec.com/contact

Indipendent third-party verification of th declaration and data, according to ISO 14025:2006:

☒ External ☐ Internal
☐ EPD process certification ☒ EPD verification

Third-party verifier:
Ugo Pretato (Studio Fieschi & Soci)

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

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

CODICE CPC: OTHERS

CONTACT INFO

EPD Owner:
Cromology Italia S.p.A.
Via IV Novembre, 4 I Porcari (LU), Italy
Dott. Marco Demi
E-mail: marco.demi@cromology.it
Numero verde: 800 825161
<https://www.cromology.it>



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.

Autori dello studio LCA:
S4 s.r.l. - Via F. Cavallotti, 71 - 19121 - La Spezia



SETTEF

Settef is a trademark of **Cromology Italia S.p.a.**
Registered office: Via IV Novembre, 4
55016 Porcari (LU)
Phone 199 11 99 55 - Fax 199 11 99 77
www.settef.it - info@settef.it



Monday - Friday: 8.30 - 17.30
numero.verde@cromology.it

MKSECF0222



8 003681 519283