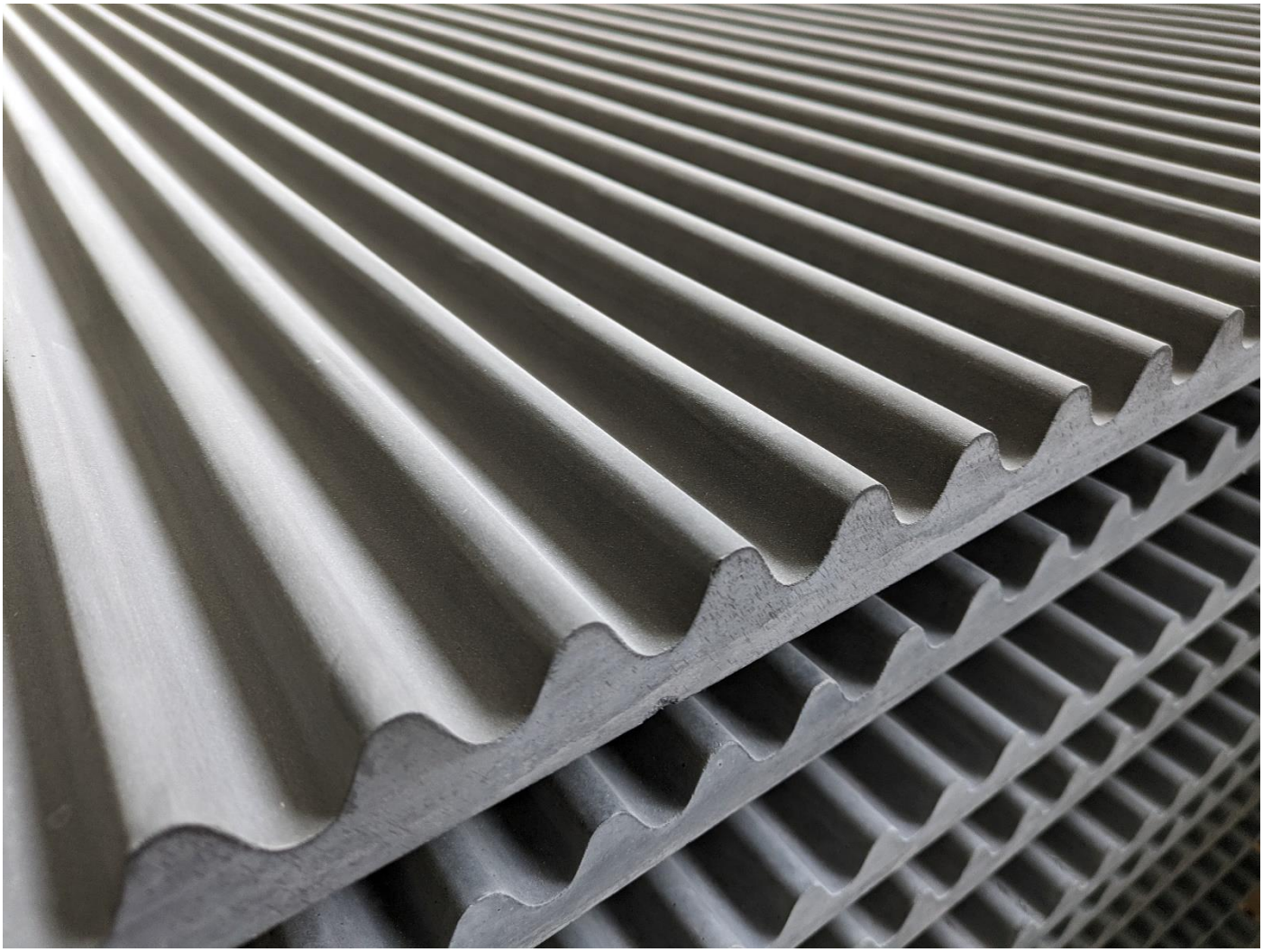
TECHNICAL DATA - UHPC

VERSION: **2023-REV-01**



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TECHNICAL SPECIFICATIONS

Material Characteristics		
Name	**Standard**	**Declared value**
Dry density	EN 1170-6	> 2 000 kg·m^{-3}
Flexural Strength	EN 1170-5	LOP > 7 MPa, MOR > 18 MPa
Absorption of water	EN 1170-6	< 7 %
Freeze-thaw resistance	CSN 73 1322	T100 > 0,9
Cyclic weathering type test	EN 1170-8	L (MOR) > 0,8
Reaction to fire	EN 13501-1+A1	Class A1 of reaction to fire
Index of mass activity of naturally occurring radionuclides	Decree No. 422/2016 Coll.	P: I < 1,0
Type and diameter determination of used fiber	X-ray diffraction analysis on powder test samples	D: Alkali-resistant fiber
Coefficient of thermal expansion	EN 14581	Approx. 10·10^{-6} 1/K
Undercut Anchor – 10 mm Tensile load strength	EAD 090062-00-0404	1,6 kN
Undercut Anchor – 10 mm Shear load strength	EAD 090062-00-0404	3,0 kN
Undercut Anchor – 15 mm Tensile load strength	EAD 090062-00-0404	3,0 kN
Undercut Anchor – 15 mm Shear load strength	EAD 090062-00-0404	6,0 kN
Dimensional deviation Length		± 1 mm / 1 lm
Dimensional deviation Width		± 1 mm / 1 lm
Thickness tolerance		± 1,5 mm

Fastening	
Invisible	Undercut anchor, glueing, cast-in anchors
Visible	Rivets
Under-construction	Aluminium, stainless steel, steel
Joint	Minimal 8 mm

Coating	
Hydrophobic	Standard
Anti-graffiti	On request

Color & Surfaces	
Colors	White, warm grey, cold grey, yellow, anthracite, black
Surfaces	Smooth, washed, matrix (RECKLI, Noe, atypical)

DESCRIPTION

Pucolano Ultra High Performace panels are made by mixing Portland cement, micro aggregates, and additives, which are reinforced with alkali-resistant glass fibers and alkali-resistant glass fiber reinforcement mesh. These panels are engineered to meet the requirements of various facade systems used in different types of building construction. Additionally, Pucolano panels can be utilized for interior applications as well.

Application

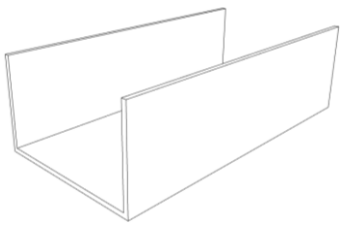
+ New construction and renovation projects, including building enclosure re-cladding.
+ Window sill elements and base elements can also be integrated into the ETICS contact insulation system.
+ The possibility of incorporating panels into the building elements of the block facade.
+ Employed for interior cladding, partitions, and as a finishing material.

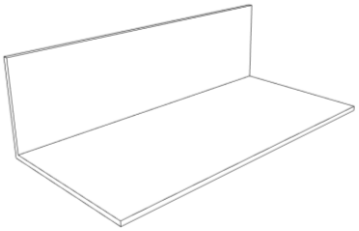
Advantages

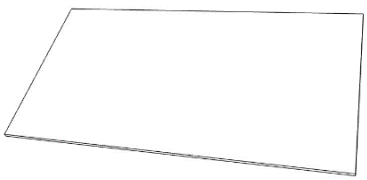
+ Compatible with a wide range of wall assemblies and substrates.
+ Achieves the highest rating for impact resistence
+ Demonstrates excellent resistance to freeze-thaw cycles and maintains its strength over time.
+ Offers the highest strength-to-weight ratio within its category.
+ Non-combustible, with a Class A rating for smoke and flame spread.
+ Comes with a standard hydrofobic sealer.
+ Offers a choice of 3 textures and 6 standard colors.
+ Custom colors, surface textures, mineral face aggregates, and design profiles are available upon request.
+ Easily adaptable for on-site cutting and drilling as necessary.
+ Delivered precut and pre-drilled for attachment, facilitating installation.

Cladding formats

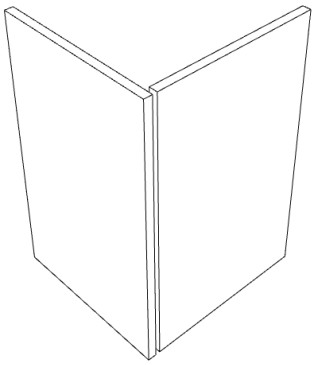
Lenght	Max. 4 200mm (bigger format on request)
Width	Max. 1 980 mm
Thickness	14 – 20 mm (other thickness on request)
Height „L“ „U“ shaped elements	Max. 300 mm
Total area	4,5 m^2 (bigger panels on request)



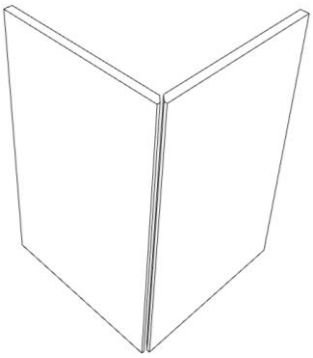




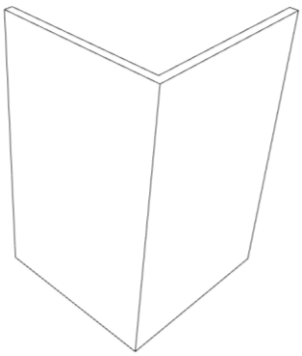
Corner options



*Open corner



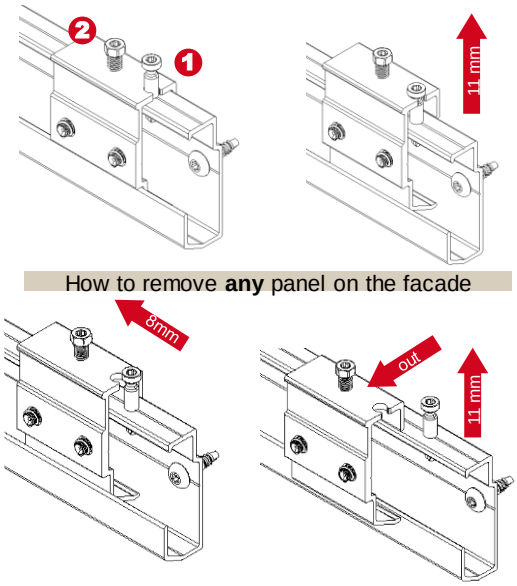
*Mitter corner



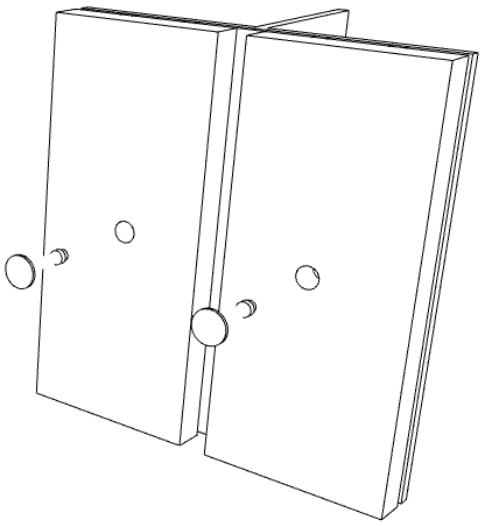
*One piece corner

FASTENING

Pucolano panels constitute an integral component of a wall cladding system that is affixed to either a support assembly, interior wall, or a backup wall, all in accordance with the stipulated code requirements and project design criteria. These panels can be secured using either visible fasteners or concealed fasteners, employing an extruded aluminum or cold-formed steel attachment system, which is often referred to as a subframe.

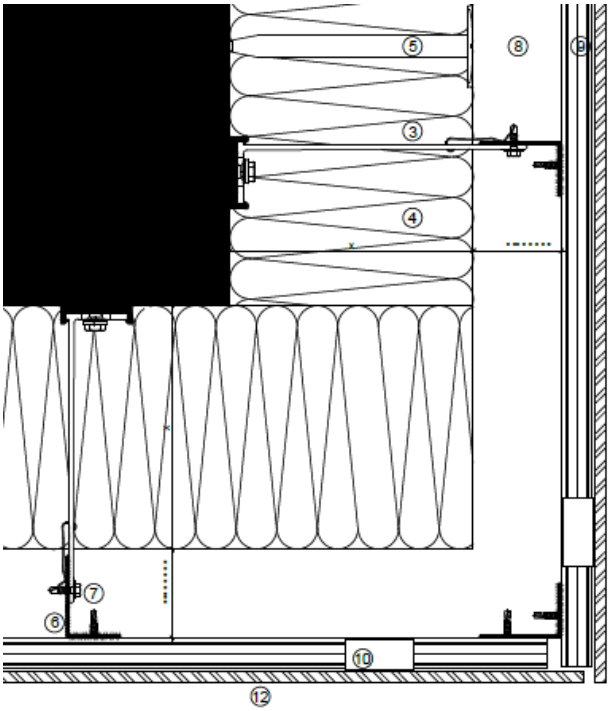


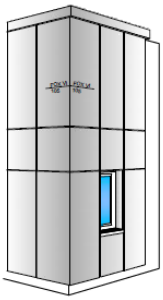
*Invisible fastening (Undercut anchors)



*Visible fastening (Rivets)

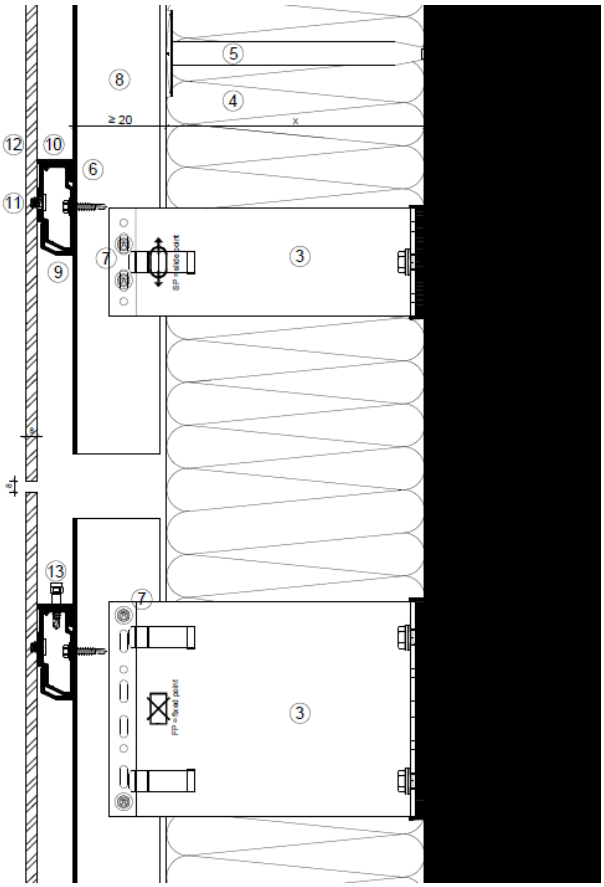
Every fastener used for the panels, including anchors, bolts, and subframe fasteners, must be fabricated from stainless steel, known for its exceptional resistance to corrosion. Additionally, the anchors and support system, which includes the connections to the substrate or backup wall, should undergo a thorough analysis and design process, which must be carried out by a registered engineer.

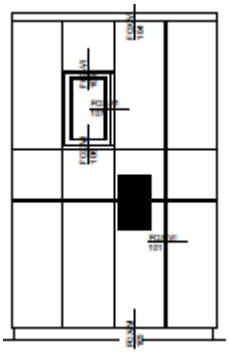




1 – Base material	8 – Ventilation gap
2 – Anchor acc. To static	9 – Load-bearing hanger profile
3 – Bracket + isolator	10 – Hanger
4 – Insulation	11 – Concealed screw fastening
5 – Fixing insulation	12 – UHPC cladding
6 – Profile	13 - Fixing screw
7 – Self drilling screw	

**Horizontal* section – external corner





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*Vertical section – panel joint

COLORS AND SURFACES

Pucolano offers a range of six standard colors tailored for the construction sector, with the flexibility to create custom colors as part of our standard offerings. Both our standard and custom color options incorporate pigments that are UV-stable and meticulously designed for application in concrete. These pigments are dosed during the mixing process, ensuring they become an intrinsic and uniform part of the material matrix.

Standard colors

*Black *Anthracite *Warm grey *Cold grey *White *Yellow

*Atypical color matching is possible upon a customer's request.

Color variations

+ Pucolano is a mineral-based product derived from natural sources, and as such, it typically displays slight variations in color between individual panels.

Surfaces options

*Washed *Smooth *Matrix

*Atypical matrix and surface is possible to deliver upon a customer's request.