AFC Stone (formerly Patina)

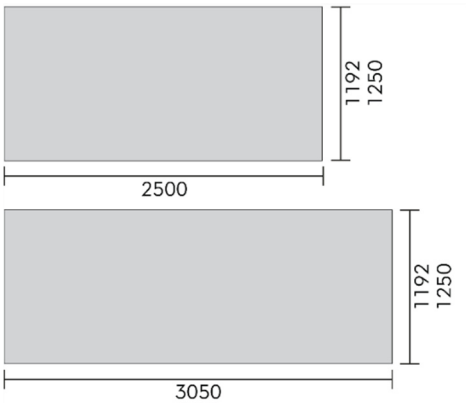
Datasheet - Facade Boards

Stone has a natural, textured surface. You can see the fiber and natural characteristics of the raw materials, and you can see and feel the unique sanding lines on the surface. Natural imperfections like dots and spots can be visible but from 3-5 meters distance the surface will appear homogenous. As the seasons change and the years pass, the natural aging of the fiber cement leaves subtle traces on the surface, and the facade will gradually acquire a distinctive patina.

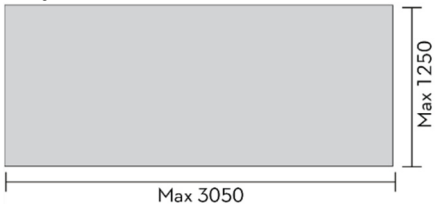
Stone is a through-coloured board. Variations in the color of the board are visible and vary depending on the orientation of the sheet, the viewing angle and level of light and humidity. Measuring the board color's small variations in the lightness are accepted. Stone facade boards are high quality fiber cement products used as part of a ventilated facade solution in all types of construction.

Dimensions (nominal)		Small Module	Standard size
Thickness	mm	8	6 8
Width	mm	292 592	1192 1250
Length	mm	1192 2392 2992	2500 3050

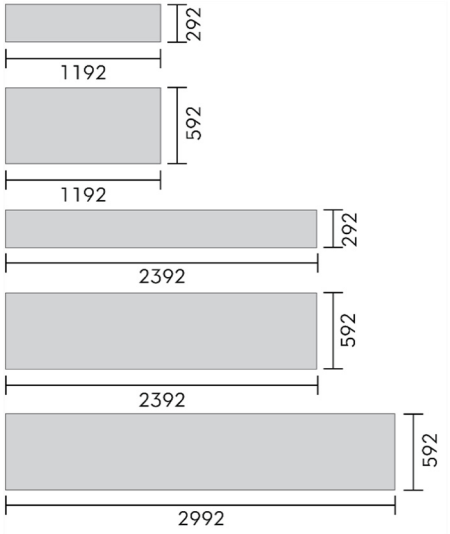
Standard size



Project size



Small Modules



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Stone

Dimension tolerance (EN 12467, Level 1)		Stone 6 mm	Stone 8 mm
Thickness (up to 20 mm)	mm	± 0.6	± 0.8
Width (a ≤ 1000 mm)	mm	± 3.0	± 3.0
Width/Length (1000 mm < a ≤ 1600 mm)	mm	± 0,3% a	± 0,3% a
Length (1600 mm < Length)	mm	± 5.0	± 5.0

* a is the nominal width or length

Physical properties			
Density, dry minimum (EN12467)	kg/m³	≥ 1400	≥ 1475
Density, dry avarage (EN12467)	kg/m³	1450	1550
Weight (incl. 10% moisture)*	kg/m²	9.3	12.4
Moisture content (on dispatch ex works)	%	5-10	5-10

* nominal value may vary depending on the conditions

Mechanical properties (EN 12467)			
Flexural modulus			
E-module along grain, ambient	GPa	12	12
E-module across grain, ambient	GPa	13	14
E-module along grain, wet	GPa	9	9
E-module across grain, wet	GPa	11	11

Bending strength (EN 12467)			
Along grain, ambient	MPa	22	22
Across grain, ambient	MPa	35	35
Along grain, wet	MPa	17	18
Across grain, wet	MPa	26	27

Modified Charpy Pendulum Impact test EN ISO 148-1			
Along grain, dry	kJ/m²	2.2	2.7
Across grain, dry	kJ/m²	2.7	3.6

Thermal properties			
Thermal conductivity (ISO 8301, EN 12667), λ_{10}	W/mK	0.32	0.37
Coefficient of thermal expansion	mm/m °C	0.01	0.01
Frost resistance (average along/across)	R_L	≥ 0.75	≥ 0.75

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Hygrothermal properties			
Water absorption (24 hrs 105°C, 24 hrs in water)	%	28	28
Moisture movement (30/90 % RH, EN 12467)	%	0.08	0.08

Water vapour transmission properties (EN 12572-C)			
Water vapour transmission resistance (Z-value)	GPa m² s/kg	2.4	2.5
Water Vapour transmission resistance (Z-value)	s/m	17700	18500
Water vapour diffusion equivalent air layer thickness, Sd	m	0.5	0.5
Water vapour resistivity	MN s/gm	366	327
Water vapour resistance factor, μ		58	58
Water vapour resistance	MN s/g	2.4	2.5
Water vapour transmission	USPerm	7.2	7.0

Color variation measured on the production line			
CIELAB colour model	ΔL	-2.5/+2.5	-2.5/+2.5

Fire Performance			
Reaction to fire (EN 13501-1)	Rating	NA	A2-s1, d0
Behavior of materials at 750°C (ASTM E136)	Rating	NA	Passed
External thermal insulation for walls (BS 8414-2-2015+A1-2017)*	Rating	NA	Passed

* Tested with special requirements. Contact Product Compliance for further information.

Other properties		
Category, class (EN12467)	NT A4 I	NT A4 I
M1-Classification, VOC emission of building materials	Pass	Pass

Impact resistance test (ETAG 034, ISO 7892), 8 mm					
	Max.	Category IV	Category III	Category II	Category I
Hard body	1 Joule	Passed			
	3 Joules		Passed	Passed	Passed
	10 Joules			Passed	Passed
Soft body	10 Joules	Passed	Passed		
	60 Joules			Passed	Passed
	300 Joules			Not passed	
	400 Joules				Not passed
Evaluation		Passed	Passed	Not passed	Not passed

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Ballwurfsicherheit (DIN 18032-3) - (Impact resistance), Wall and Ceiling, 12 mm					
	Angle of Impact	Number of shots	Subconstruction	Distance, subconstruction	Test result
Handball	90	30	Aluminium	315 mm	Passed as "Ballwurfsicher"
	45	12			
	45	12			
Hockeyball	90	4	Aluminium	315 mm	Passed as "Ballwurfsicher"
	45	4			
	45	4			