

EU Regulation 305/2011

This product is a natural slate rainscreen cladding system fixed with stainless steel nails or clips to a subframe made of an aluminium alloy, according to the ETAG (European Technical Approval Guideline), parts 1 and 2.

The CUPACLAD® natural slate rainscreen cladding system has successfully passed the following tests:

US TESTS

- Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference, *in accordance with ASTM E330/E330M-14*
- Standard Test Method for Behaviour of Materials in a Vertical Tube Furnace at 750° in accordance, *with ASTM E136-16*
- Recommended dynamic and static test method for determining the seismic drift causing glass fallout from a wall system, *in accordance with AAMA 501.6-18 and AAMA 501.4-18*

UE TESTS

- Slate **characterization**, *in line with UNE-EN 12326-1, ASTM C406 and ASTM E136*
- Wind load resistance, *in line with ETAG 034 and ASTM E330*
- **Impact** resistance, *in line with ETAG 034 and Cahier du CSTB 3534*
- Resistance to **vertical load**, *in line with ETAG 034*
- Resistance to **horizontal point loads**, *in line with ETAG 034*
- **Pull-through** resistance of **cladding element**, *in line with ETAG 034*
- **Pull-through** resistance of **fixings** from profiles, *in line with ETAG 034*
- **Hygrothermal** behaviour, *in line with ETAG 034*
- Determination of linear thermal **expansion coefficient**, *in line with UNE-EN 14581: 2006*
- Determination of real and apparent **density** and total and open porosity, *in line with EN 1936: 2007*

Our CUPACLAD® system also holds the following certifications in other parts of the world:

- ETA 16/0351 CUPACLAD® 201 Vanguard, IETcc, Europe
- Agrément Certificate 18/5532 CUPACLAD® 101 and 201 Vanguard, BBA, United Kingdom
- Avis Technique 2.2/19-1800_V1 CUPACLAD® 201 Vanguard, CSTB, France
- Rapport d'expertise Deis/FaCeT-18-530 CUPACLAD® 101, CSTB, France

1 SLATE

Essential characteristics (slate)	CUPACLAD 101 Logic	CUPACLAD 101 Random	CUPACLAD 101 Parallel	CUPACLAD 201 Vanguard	Values of the standard	Harmonised standard
Slate size (in x in)	16"x8"	20"x10" 20"x8" 20"x6"	16"x10"	24"x12"	-	-
System Weight (lb/ft ²)	≤6.25			≤5.5	-	-
Deviation from declared length and width (in)	Complies				< ± 0.2"	UNE-EN 12326-1
Nominal thickness (in)	1/4-3/8"		1/4-3/8"		-	UNE-EN 12326-1
Deviation from nominal thickness	Complies				±25%	
Water absorption	Code W1				< 0.4%	UNE-EN 12326-1
Freeze thaw test	Complies				<0.6%	UNE-EN 12326-1
Thermal cycle test	Code T1				According to the standard	UNE-EN 12326-1
Carbonate content	Complies				<3%	UNE-EN 12326-1
SO ₂ exposure test	Code S1				According to the standard	UNE-EN 12326-1
Non carbonate carbon content	Complies				<1.5%	UNE-EN 12326-1
External fire exposure / Reaction to fire	Code A1				According to the standard	UNE-EN 12326-1
Dangerous substances emission	None in conditions of use as roofing or external cladding				According to the standard	UNE-EN 12326-1
Linear thermal expansion (°C ⁻¹)	4 E-06				-	UNE-EN 14581:2006
Density (kg.m ⁻³)	2818		2815		-	UNE-EN 1936:2007

2 FIXING METHOD

Fixing between elements	Fixing method	Material	Dimension (in)	Tensile strength (Rm)	Yield strength (Rp0,2)	Standard
CUPACLAD 101 (Logic/Random) slate to CUPACLAD 101 Profile	Self-drilling screw with flat head	A2	1/4"x1" (9/16" Ø head)	≥ 500 MPa	≥ 210MPa	EN ISO 1478 EN ISO 4759-1-A EN ISO 3506-1:2010
CUPACLAD 201 slate to CUPACLAD 201 Top Profile			3/16"x1 3/8" (1/2" Ø head)	≥ 660 MPa	≥ 460 MPa	
CUPACLAD 101 Parallel slate to CUPACLAD 101 Profile	Self-drilling screw with hexagonal head	A2	1/4"x1" (3/8" Ø head)	≥ 700 MPa	≥ 450MPa	EN ISO 15480:2000 EN ISO 3506-4:2010
Horizontal to Vertical Profile			Vertical Profile to brackets			
CUPACLAD 201 slate to CUPACLAD 201 Horizontal Profile	CUPACLAD 201 metal clip	A4	2 7/16"x5/8"	540-620 MPa	> 240 MPa	EN 10088-2:2008

3 PROFILES

• Horizontal Profile

Reference	CUPACLAD 101 Horizontal Profile	CUPACLAD 201 Horizontal Profile	CUPACLAD 201 Horizontal Top Profile
Dimensions (in)	1 5/8"x1"	2"x1 3/16"	2 1/2"x1 1/16"
Thickness (in)	1/16"		
Length (ft)	12'	18'	
Alloy	6060 T6	6060 T5	6060 T6
Perimeter (in)	Interior: 5 1/4" Exterior: 6" Total: 11"	7 1/2"	7"
Weight (lb/in)	1/30	1/40	1/45
Section (mm ²)	217	145	143
xc (mm)	10.914	14.67	14.658
lxc (cm ⁴)	1.274	1.54	1.783
yc (mm)	19.308	0.29	5.754
lyc (cm ⁴)	4.302	1.515	3.096
Linear thermal expansion (°C ⁻¹)	23.4 E-06		

• Vertical profile

Reference	Vertical Profile L
Dimensions (in)	2"x2" 3/8"
Thickness (in)	1/16"
Length (ft)	18'
Alloy	6060 T6
Perimeter (in)	8 1/2"
Weight (lb/in)	1/30
Section (mm ²)	216
xc (mm)	12.11
lxc (cm ⁴)	8.08
yc (mm)	42.88
lyc (cm ⁴)	5.18
Linear thermal expansion (°C ⁻¹)	23.4 E-06

4 METAL BRACKETS

Reference	Fixed point brackets	Sliding point brackets
Dimension (in)	4 3/4"x1 9/16"	2 3/8"x1 9/16"
Thickness (in)	1/8"	
Length (in)	3" - 10"	
Alloy	6060 T6	

Reference	4 3/4"x1 9/16"x3"x1/8"	4 3/4"x1 9/16"x6"x1/8"	4 3/4"x1 9/16"x10"x1/8"	2 3/8"x1 9/16"x3"x1/8"	2 3/8"x1 9/16"x6"x1/8"	2 3/8"x1 9/16"x10"x1/8"
Section (mm ²)	330	555	855	330	55	855
xc (mm)	31.75	34.48	35.89	31.75	34.48	35.89
lxc (cm ⁴)	19.7	130	531	19.7	130	531
yc (mm)	26.07	61.12	110	26.1	61.12	110
lyc (cm ⁴)	4.22	4.85	5.18	4.22	4.85	5.18