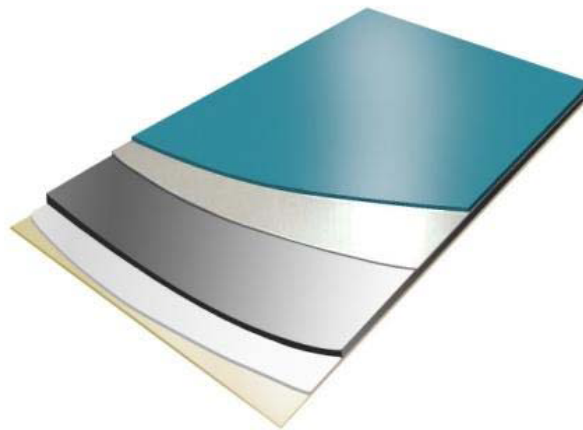


SPECIFICATIONS OF ALCOMEX (PE & FR)



SPECIFICATIONS OF ALCOMEX® & ALCOMEX® / fr

ALCOMEX®

ALCOMEX® is an aluminum composite panel (ACP) with polyethylene core material sandwiched between two aluminum sheets of 0.5mm thickness. It is used as an exterior and interior wall cladding material on new buildings and remodeling applications.

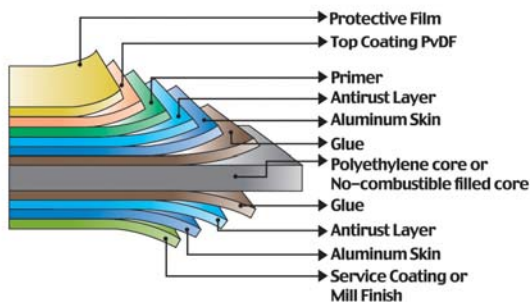
ALCOMEX® / fr

ALCOMEX® / fr is a fire retardant aluminum composite panel (ACP) with non combustible mineral filled core sandwiched between two aluminum sheets of 0.5mm thickness. It is also used as an exterior and interior wall cladding material on high-rise buildings and remodeling applications.

1. Product composition

ALCOMEX® is composed of polyethylene core sandwiched between two sheets of 0.5mm thick aluminum alloy (AA3003/H16):

Core material is polyethylene (LDPE).



The surface is finished with a high-performance resin based PVDF COATING and the back is a mill finish or service coating.

ALCOMEX® is available in three finishes: Solid Colors, Metallic Colors, and Stone Colors.

The rear side of the Panel (which will face the structural wall or steel structure when it is installed as a cladding panel) has a mill finish or service coating to protect it from possible corrosion problems.

And the front surface of the panel is protected with a self-adhesive peel-off protective film. The protective film withstands six months exposure without losing its original peel-off characteristic or causing stains or other damage under normal outdoor conditions.

2. Product dimension

(1) Panel thickness: 3mm, 4 mm and 6 mm

(2) Panel size: Width = 1020mm, 1250mm,1575mm

- Length = longer than 1,800mm and less than 7,000mm can be accepted

(Custom width can be accepted between 800mm and 1575mm subject to minimum order quantity (4,000m²)).

(3) Product tolerance

- Width: +4.0/-0 mm
- Length: +4.0/-0 mm
- Thickness: +0.2/-0 mm
- Bow: Maximum 0.5% of the length and/or width
- Squareness: Maximum 2.0 mm
- Surface defect: The surface shall not have any irregularities such as roughness, buckling and other imperfections in accordance with our visual inspection rules.

3. Mechanical Properties of Cover sheet (0.5mm)

Density	2.72 kg/cm ³
Tensile Strength	Rm ≥ 140N/mm ²
0.2% Rroof Stress	Rp0.2 ≥ 100N/mm ²
Elongation (50mm)	A50 ≥ 1%

4. Principal properties of ALCOMEX[®] & ALCOMEX[®] /fr

4-1. ALCOMEX[®] (4 mm)

Item	Unit	ASTM	4mm
Weight	Kg/m ²	-	5.5
Tensile Strength	MPa	E8	45
Yield Strength	MPa	E8	42
Elongation	%	E8	13
Flatwise Tensile	MPa	C297	4
Drum Peel Strength	MPa	D1781	130
Flatwise Shear	MPa	D1002	8.7
Co-efficient of Expansion	in/in/°F	D696	1.3*10 ⁻⁵
Flexural Elasticity	MPa	C393	65000

4.2. ALCOMEX® /fr (4 mm)

Item	Unit	ASTM	4mm
Weight	Kg/m ²	-	7.5
Tensile Strength	MPa	E8	49
Yield Strength	MPa	E8	44
Elongation	%	E8	6
Flatwise Tensile	MPa	C297	44
Drum Peel Strength	MPa	D1781	110
Flatwise Shear	MPa	D1002	7.3
Co-efficient of Expansion	in/in/°F	D696	1.2*10 ⁻⁵
Flexural Elasticity	MPa	C393	70000

5. PVDF Coating Finish

ALCOMEX® and ALCOMEX®/fr are available with Kynar 500 resin based PVDF coating.

Item	Standard	Description	Remarks
Material	ASTM D1400	AA3003, H16	pass
Dry film thickness	ASTM D1186	25 μm ± 3 μm	Pass (2coat)
External appearance	KSD 6711	No blisters, pinholes, scratches from 1m distance	pass
Color	ASTM D2244	Match the color nominated by customer	-
Gloss (60°)	ASTM D523	35 ± 5%	pass
Adhesion	ASTM D3359	1m/m cross hatch	pass
Durability test for shock	ASTM D2794	1/2" x 0.5kg x 50cm	No removal
Mortar resistance	AAMA 2605	38, 24hrs Pat test	No visual change
Solvent test(MIBK)	ASTM D5402	30 times, gloss loss within 5%	pass
Salt spray test	ASTM B117	5% Nacl x 2,000hrs x 35°C	No blister(field) max 1/32" under cutting (edge)
Weathering test(artificial)	ASTM D2244	2500hrs weather O meter test	Chalking # 8
Natural weathering test	ASTM D 659	Florida 1 year, no chalking	No chalking
Humidity resistance	ASTM D2247	38°C, 98%RH, 35x1000hrs	No #8 blister
Sulfuric dioxide resistance	ASTM D1308	5% Hcl, H ₂ SO ₄ x 72hrs	No effect
Pencil Hardness	ASTM D3363	Mitsubish UNI pencil	H
Durability test for detergent	ASTM D2248	3%detergent water x38°Cx72hrs	No blister, no visual change

6. Surface Burning Characteristics of ALCOMEX® / fr

Test Standard	Specimen	Results / Classification	Country
GOST 31235-2003	4 mm	K0-K1	RUSSIA
UL 94 Burning Test	4 mm	V0	U S A
BS476 : PART6, PART 7	4 mm	Class 0	BRITISH
ASTM E-119	4 mm	Passed	U S A
KS F 4737(ISO 5660-1) (The highest incombustibility test for ACP/fr)	4 mm	Passed	Korea

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