

CERTIFICAT

DE CONSTANȚĂ A PERFORMANȚEI PRODUSULUI

Numărul: CPP-170-2023

GEAM DE STICLĂ SILICO-CALCO-SODICĂ SECURIZAT TERMIC

Utilizare: geamuri termopane, uși din sticlă, vitraje de dimensiuni foarte mari, balustrade cu prindere mecanică punctuală, închideri de lift, pardoseli din sticlă, etc.



Produs de:

FPC CONPLAST - DESIGN SRL,

Republica Moldova, mun. Chișinău, str. Miron Costin, 15/2, ap.2.

Loc de producție: Republica Moldova, mun. Chișinău, str. Sihastrului, 58

Acest certificat atestă:

- îndeplinirea prevederilor privind evaluarea și verificarea constanței performanței descrise în anexa ZA a standardului
SM SR EN 12150-2:2010
- confirmă realizarea performanțelor declarate și evaluarea controlului producției în fabrică efectuat de către producător, pentru asigurarea constanței performanței produselor conform sistemului 1

Acest certificat va rămâne valabil atât timp cât standardul armonizat, produsul pentru construcții, metodele de evaluare a constanței performanței și condițiile de producție în fabrică nu sunt modificate esențial. Acest certificat poate fi suspendat sau retras dacă se constată că nu se mențin condițiile în baza cărora a fost emis.

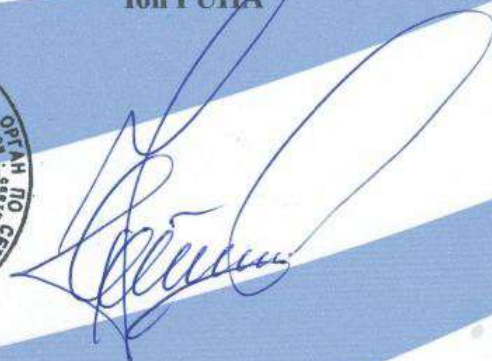
Certificare inițială	22.05.2023
Modificare	19.05.2025
Expirare	21.05.2028

Director General

Ion PUHA



Certificat valabil doar cu condiția vizării anuale.



ALLOYS

Aluminium in its pure form is a very soft metal. Thanks to the addition of alloying elements such as copper, manganese, magnesium, zinc, etc. and thanks to suitable production processes, the physical and mechanical properties can be varied in a wide range to satisfy the requirements of a large number of different applications.

ETEM profiles are extruded from the following alloys:

EN AW-1050 [Al 99.5]
EN AW-6060 [Al Mg Si]
EN AW-6063 [Al Mg_{0,7} Si]
EN AW-6061 [Al Mg₁ Si Cu]
EN AW-6005 [Al Si Mg]
EN AW-6082 [Al Si₁ Mg Mn]

The most common aluminium alloy which is used by ETEM is EN AW 6060.
Here are the properties of this alloy:

MATERIAL PROPERTIES

Aluminium alloy	EN AW 6060 T66
Ultimate tensile strength	$R_m = 195 \text{ N/mm}^2$
Yield strength	$R_{p0.2} = 150 \text{ N/mm}^2$
Modulus of elasticity	$E_{el} = 70\,000 \text{ N/mm}^2$
Coefficient of thermal expansion	$\alpha = 23,4 \times 10^{-6}/^\circ\text{K}$

EXTRUSION PROCESS

ETEM profiles are obtained through extrusion process, which consists of pushing a hot cylindrical bullet of aluminium through a shaped die. The extrusion process offers almost infinite range of forms and sections, allowing our designers to integrate numerous functions into one single profile.

ANODIZING

It is an electrochemical process whereby to reinforce the natural oxide film on the aluminium surface, increasing hardness, corrosion and abrasion resistance. Anodizing gives a very decorative silver matt surface finish, and colored can also be obtained by sealing metallic dyes into the anodized layer.

FINISHING

POWDER COATING

It is a type of paint that is applied as a dry powder. Coating is applied on ETEM profiles electrostatically and then is cured under heat to allow it to flow and form a "skin".

ETEM is authorized to use the quality sign QUALICOAT for powder coatings on aluminium for architectural applications. A wide range of colors and gloss levels can be achieved.

ETEM also offers timber imitations painting, in addition to all RAL colors. The technology EZY provides the following colors: Golden Oak, Acero, Betulla, Mogano, Verde Scuro, Wenge, Noce Fiammato, Noce Chiaro, Ciliegio Rosso, Acacia Scuro, Ciliegio Antico, Noce Reale, Ciliegio Reale.

MAINTENANCE

Apart from routine cleaning for aesthetic reasons, ETEM aluminium profiles do not require any maintenance which translates into a major cost and ecological advantage over lifetime of the product.

RECYCLING

Aluminium scrap can be repeatedly recycled without any loss of value or properties. In many instances, aluminium is combined with other materials such as steel or plastics, which are most frequently mechanically separated from aluminium before being molten.

* Part of the aforementioned information is an extract from report Sustainability of Aluminium in Buildings of the European Aluminium Association

Characteristics and performances of curtain walling according to EN 13830

N°	Designation	Units	Class or Declared value									
1	Reaction to fire of components		npd	F	E	D	C	B	A2	A1		
2	Fire resistance											
	Integrity (E) i→o, o→i, i↔o	min	npd	E15	E30	E60	E90	E15				
	Integrity and insulation (EI) i→o, o→i, i↔o	min	npd	EI15	EI30	EI60	EI90	EI120				
	Integrity and radiation (EW) i→o, o→i, i↔o	min	npd	EW20	EW30	EW60						
3	Fire propagation	min	npd	Declared value								
4	Watertightness Test pressure	Pa	npd	R4 (150)	R5 (300)	R6 (450)	R7 (600)	RE (>600)				
5	Resistance to its own dead loads	kN/m²	npd	Declared value								
6	Wind load resistance	kN/m²	npd	Declared value								
7	Resistance to snow load (only for elements subjected to snow load)	kN/m²	npd	Declared value								
8	Impact resistance/safe breakage											
	Internal Drop height	mm	npd	I0 (n.a.)	I1 (200)	I2 (300)	I3 (450)	I4 (700)	I5 (950)			
	External Drop height	mm	npd	E0 (n.a.)	E1 (200)	E2 (300)	E3 (450)	E4 (700)	E5 (950)			
9	Resistance to live horizontal loads at sill level	kN/m	npd	Declared value								
10	Seismic resistance											
	Serviceability	-	npd	Declared value								
	Safety in use	-	npd	Declared value								
11	Thermal shock resistance	-	npd	Declared type of glass								
12	Direct airborne sound insulation $R_w(C;C_{tr})$	dB	npd	Declared value								
13	Flanking sound transmittance $D_{n,f,w}$	dB	npd	Declared value								
14	Thermal transmittance $U_{t,w}$	W/(m².K)	npd	Declared value								
15	Air permeability Test pressure	Pa	npd	A1 (150)	A2 (300)	A3 (450)	A4 (600)	AE (>600)				
16	Water vapour permeability	-	npd	Declared type of vapour barrier								
17	Radiation properties											
	Total solar energy transmittance (Solar factor)	-	npd	Declared value								
	Light transmittance	-	npd	Declared value								
18	Equipotential bonding	-	npd	Declared value								
19	Durability											
	Durability of watertightness	-	npd	Declared value								
	Durability of thermal transmittance	-	npd	Declared value								
	Durability of air permeability	-	npd	Declared value								

TEST CERTIFICATES SYSTEM E85

Test sample	Characteristic	Result	Standards
E85 Structural glazing	Air permeability	AE	EN 12152 EN 12153
	Water tightness static; dynamic	R7; 200 Pa/600 Pa	EN 12154 EN 12155 EN 13050
	Resistance to wind load design load; safety load	$\pm 1,6 \text{ kN/m}^2$; $\pm 2,4 \text{ kN/m}^2$	EN 13116 EN 12179
	Impact resistance	IS / E 5	EN 14019
	Hose test	pass	AAMA 501.2
E85 with cover caps	Air permeability	AE	EN 12152 EN 12153
	Water tightness static; dynamic	RE 900; 200 Pa/600 Pa	EN 12154 EN 12155 ENV 13050
	Resistance to wind load design load; safety load	$\pm 1,6 \text{ kN/m}^2$; $\pm 2,4 \text{ kN/m}^2$	EN 13116 EN 12179
	Impact resistance	I4 / E4	EN 14019
E85 Curtain wall	Dead load ad glass loads	from 0,50 kN to 6,00 kN	EN 13830 EN 1999-1-1
	Resistance to horizontal loads	0,50 kN/m ² ; 1,00kN/m ² ; 2,00kN/m ²	EN 13830 EN 1999-1-1
E85 with cover caps	Air permeability	class 3	EN 12207 EN 1026
	Water tightness	6A	EN 12208 EN 1027
	Resistance to wind load	C5	EN 12210 EN 12211
	Impact resistance	I2 / E5 I	EN 13049
E85 2 Sided structural glazing	Thermal transmittance	$U_f = 2,1-2,6 \text{ W/m}^2\text{K}$	EN ISO 10077-2 EN 12412-2
E85 4 Sided structural glazing	Thermal transmittance	$U_f = 2,7-3,2 \text{ W/m}^2\text{K}$	EN ISO 10077-2 EN 12412-2
E85 with pressure plate	Thermal transmittance	$U_f = 1,6-2,9 \text{ W/m}^2\text{K}$	EN ISO 10077-2 EN 12412-2
E85 with additional thermal insulation spacer	Thermal transmittance	$U_f = 1,6-2,3 \text{ W/m}^2\text{K}$	EN ISO 10077-2 EN 12412-2
E85 with glazing 6-16-4+4 mm	Sound Insulation	$R_w = 39 \text{ dB}$	EN ISO 717-1 EN ISO 10140-2
E85 with glazing 4-20-6+6 mm	Sound Insulation	$R_w = 41 \text{ dB}$	EN ISO 717-1 EN ISO 10140-2
E85 with cover cap glazing 6-15-5 mm	Sound Insulation	$R_w = 35 \text{ dB}$	EN ISO 717-1 EN ISO 10140-2
E85 with cover cap glazing 13VSG-20-9 VSG	Sound Insulation	$R_w = 44 \text{ dB}$	EN ISO 717-1 EN ISO 10140-2
E85 with cover cap glazing 13-24-9 mm	Sound Insulation	$R_w = 47 \text{ dB}$	EN ISO 717-1 EN ISO 10140-2
E85 with glazing 4+4-24-6+6 mm	Sound Insulation	$R_w = 47 \text{ dB}$	EN ISO 717-1 EN ISO 10140-2
E85 Anti-burglar Façade with glass and panel	Bullet resistance	FB4 NS	EN 1522 EN 1523
E85 Anti-burglar Façade with glass and panel	Bullet resistance	FB3 NS	EN 1522 EN 1523
E85 Anti-burglar Façade with glass and panel	Bullet resistance	FB2 NS	EN 1522 EN 1523
E85 Anti-burglar	Burglar resistance	WK 3	EN 1627 EN 1628 EN 1629 EN 1630
E85 Anti-burglar	Burglar resistance	WK 4	EN 1627 EN 1628 EN 1629 EN 1630
E85	Ageing behaviour of i.g. Units	pass	EN 1279-2
E85	Moisture penetration index-short term climate test Units	Ireq=5.2%	EN 1279-6
E85	Adhesion tests	pass	ETAG 002-1
GLOS ETEM E85RW	Heat exhaust ventilator	pass	EN 12101-2